Wenatchee School District Board of Directors

Regular Board Meeting
April 23rd, 2019
District Office
Agenda
6:00 P.M.

		TIME
I. **PLEDGE OF ALLEGIANCE**		**02 Min**
II. **BOARD PUBLIC COMMENT STATEMENT**		
III. **AGENDA APPROVAL**:		
IV. **CONSENT AGENDA:**		
Minutes: Reg. Bd. Mtg. 4/09/19 & 4/15/19 Workshop	Action	1 +
Vouchers/Payroll	Action	2 +
Personnel Report	Action	3 +
Contracts	Action	4 +
Surplus Report	Action	5 +
Camps/Clinics	Action	6 +
Policies 2nd Reading #'s 3223, 4310, 3144, 5260, 5270, 5271, 5315, 5641	Action	7 +
V. CITIZENS' COMMENTS:	Information	**03 min**
VI. **ASB REPORTS**: WHS, WSHS & WTSC	Information	10 Min
VII. OLD BUSINESS		
Valley Academy Phone System Upgrade Dave Yancey, Director of Operational Technology	Action	05 Min
VIII. **WENATCHEE LEARNS STRATEGIES**		**150 MIN**
Strategy 3: Use the Best Tools and Resources		
Objective 3.3 The Right Tools & Resources for Staff		
Columbia Valley Community Health Update Tim Shepard, Lincoln Principal Dr. Kory Kalahar, WSHS Principal	Information	20 Min
K-8 Math Updates		
1) Ready Math Update Sarah Hanchey, Director of Curriculum	Information	30 min
2) Middle School Math Update Middle School Principals	Information	45 min
3) Instructional Materials Adoption 1st Reading – Pre-calculus Sarah Hanchey, Director of Curriculum	Information	15 min
Policy and Procedure Updates Policies 1st Reading Mark Helm, Assist. Supt. Student Services Brian Flones, Superintendent	Information	10 min
Strategy 4: Balance Change for All with Excellence for All		
Objective: 4.2 Sound Fiscal & Resource Management		
2019 April Enrollment & March Budget Status Reports Larry Mayfield, Executive Director of Finance	Information	20 min
Budget Reduction Implementation Plan Update Cabinet	Information	10 min
IX. BOARD COMMUNICATION School Visit Protocol Discussion		**10 min**
X. SUPERINTENDENT REPORT		**05 min**
XI. ADJOURNMENT		**02 min**

WSD 246
WENATCHEE SCHOOL DISTRICT
235 Sunset Avenue 509.663.8161 509.663.3082 fax

CONSENT AGENDA

Wenatchee School District
Regular Board Meeting

Minutes of April 09, 2019
WSD District Office

Board Members	6:00 PM	Staff Present
Sunny Hemphill, President		Brian Flones, Superintendent
Laura R. Jaecks, Vice President		Cabinet
Sarah Knox, DLT Board Representative		
Michele Sandberg		
Karina Vega-Villa		

II. Regular Meeting 6:00 p.m.

Sunny Hemphill, President, opened the regular board meeting at 6:00 p.m. with the pledge of allegiance.

III. Consent Agenda

President Hemphill, President asked for a motion for the consent agenda.

- Remove Grand Canyon U Contract for discussion on regular agenda.
- Remove item from personnel report for discussion on regular agenda.

MOTION MADE: Director Jaecks made the motion to approve the consent agenda as revised.

- Amended to include the iPad contract off and discussion on the regular agenda.

SECONDED: Director Knox
Discussion:
1) Question on number of days on personnel report on page 16 of the board packet. Those positions in discussion have different #of days on their contract, additional days were removed.

PASSED UNANIMOUSLY

1) Minutes

Consent Agenda included:
MINUTES: Reg. Bd. Mtg. 3/26/19

2) Personnel Report

PERSONNEL REPORT PREPARED BY:
Lisa Turner, HR Executive Director: 4/9/2019 – On file

3) Vouchers/Payroll

PAYROLL PREPARED BY:
Tami Hubensack, Director of Payroll: None

VOUCHERS & CONTRACTS:
4/09/19
General Fund: Check numbers 605427 through 605602 totaling $422,964.57
Capital Projects Fund: 0
ASB Fund: Check numbers 605603 through 605646 totaling $53,047.86

5) Surplus Report & Other Consent Items

Surplus Report on file

4) Contracts

New	N	Washington State Health Care Authority	N/A	HCA to pay Contractor for providing Medicaid related services for IEP Students	N/A	Date of Execution - 6/30/25	Special Ed	Larry Mayfield
Renewal	N	SEEDS Learning Academy	N/A	1st Grade Science Field Experience participation	Revenue $27.00	Date of Execution - 6/14/19	Teresa Hagan	Jon Dejong
New	Y	NCESD	State & Federal Funds	Title 1, LAP, Bilingual/Migrant Consultation	$4,250	8/1/18 - 6/30/19	Mike Lane	Mark Helm
New	N	eDynamics	OSSI Grant	10 Trial seats for additional electives in our CTE classes at WestSide	$150	4/9/19 - 7/30/19	Kory Kalahar	Jon Dejong
New	N	Apple Financial Services	Instructional Technology	Lease, purchase and acquire certain equipment and software	$199,856	Date of Execution - 3/25/22	Ron Brown	Jon Dejong

Field Trip Requests

None

Consent Agenda Items Moved to agenda for discussion:

- **Personnel Report Item**: The process of hiring and backfilling the new Assistant Principal position at Pioneer by a staff person from WHS was discussed. Supt. Flones gave all the details and the process used in hiring. There is no backfill at this time.

MOTION MADE: Director Jaecks made the motion to approve the hiring of Jacob Bucholz for the Assistant Principal's position at Pioneer Middle School.
SECONDED: Director Knox
PASSED UNANIMOUSLY

- **Grand Canyon University Contract:**
  Grand Canyon University contract -- questions regarding the university allowing the use of the Wenatchee School District Logo and student's pictures, etc. Supt. Brian Flones explained that Lisa Turner, Executive Director HR will meet with GCU to revise the contract and he recommended that the contract approval be tabled until after this discussion. Director Sandberg asked to see all of the GCU contracts when this one comes back to be approved after Ms. Turner, Executive Director of HR meets with the representative to discuss the language in the contract.

- **Voucher: Apple – 410 iPads**: Director of Instructional Technology, Ron Brown shared the reasoning behind the need for replacing the 410 iPads and the history leading up to the replacement purchase. He answered questions regarding the iPad refresh. There are 410 iPads replacing as per the refresh schedule. The iPads being replaced are 5 years old. WSD is under contact with Apple to purchase the newest model of iPad. Ron indicated that we save approximately $5,000 by leasing and not purchasing the iPads. There is a mapped out plan with a predictable payments schedule. WSD will refresh 200 devises to keep up with the modernization refresh schedule.

MOTION MADE: Director Knox made the motion to approve the contract for the Apple iPads as presented.
SECONDED: Director Sandberg
Laura mentioned that she saw a contract from another school district, and they were spending approximately the same dollar amount.
PASSED UNANIMOUSLY

WENATCHEE LEARNS STRATEGIES

WENATCHEE LEARNS STRATEGIES

Strategy 3: Use the Best Tools and Resources
Objective 3.4 Facilities That Optimize Learning

2019 CIP DOH Professional Services Agreement Amendment 2

Gregg Herkenrath, WSD Director of Facilities, presented the following:

2019 CAPITAL IMPROVEMENT PROGRAM

THE DOH ASSOCIATES AMENDMENT 2

April 9, 2019

SITUATION

Amendment No. 2 includes changes to the Professional Services Contract for the 2019 Capital Improvement Program Task 2 associated with the Sunnyslope Elementary School portable classroom project and is attached for your review. The changes include consultant design work to extend water, sewer and electrical utilities to the new portable classroom location and connect the main buildings sanitary sewer into recently installed City sewer services in Peters Street.

Original Contract Agreement Amount	$231,732
Previous Amendment No. 1	$24,500
Current Amendment No. 2	$14,300
Total Contract Amount including this Amendment	**$270,532**

RECOMMENDATION

The Board of Directors approves Amendment 2 to The DOH Associates for the Sunnyslope Elementary School portable classroom project in the amount of $14,300 bringing the total contract amount to $270,532.

A Change in Service:
With reference to Paragraph 1, Scope of Work, the Architect shall modify the scope of the project listed as Task 2, to include the work listed below.

Task 2 compensation as outlined in paragraph 2 will be increased 14,300 to a total not-to-exceed fee of $33,320 for Task 3, plus reimbursable expenses. See Exhibit A.

B Scope of Services:
Task 2 -
In addition to the Scope of Work outlined in Exhibit A of the Agreement, add the following:

Prepare the site layout for utility connections for (2) portable classrooms at Sunnyslope. Improvements are to include a new sanitary sewer connection for Sunnyslope Elementary School, bypassing the existing force main.

2019 CIP DOH Professional Services Agreement Amendment 2 – includes Sunnyslope portable connection, etc.
Gregg Herkenrath recommended that the board approve the amendment. We are

MOTION MADE: Director Knox made the motion to approve the Amendment 2 to The DOH Associates for the Sunnyslope Elementary School portable classroom project in the amount to $14,300 bringing the total *not to exceed* $270,532.
SECONDED: Director Sandberg.
DISCUSSION: Director Laura Jaecks asked that the motion be amended to a maximum cost not to exceed of $270, 532.
PASSED UNANIMOUSLY
Walk-on Item:
Long-term lease on the Okanogan Avenue orchard property has come to an end. Fac. Director Herkenrath indicated that they have looked for new leases, however, have been unable to find any due to blight in the orchard. It was decided that demolition of the orchard was in the district's best interest. Could approach $100,000 depending whether burn or chip out. Fac. Director Herkenrath asked that Supt. be allowed to approve a contract for demolition if it were to be finalized prior to the next board meeting.

MOTION MADE: Director Jaecks made the motion that Brian Flones be authorized for negotiation of a contract for demolition of the Okanogan Avenue orchard not to exceed the maximum of $110,000.
SECONDED: Director Sandberg.
DISCUSSION: Director Sandberg had questions regarding budget. Fac. Director Herkenrath indicated he would get 5 bids one opted out.
PASSED UNANIMOUSLY

WHS Telephone Systems Report
Dave Yancey, Director of Operational Technology & Gregg Herkenrath, WSD Director of Facilities presented the following for the board approval.

WHS Telephone Upgrade Overview

History of Existing System
- Installed in mid ~1980's and expanded to capacity in 1999.
- We began adding Shoretel/Mitel phones in 2014 to CTE office when capacity reached limit and assigned district extensions.

Limitations
- Expansion
  - At capacity with no room to expand without adding a completely separate PBX system essentially breaking up building phone numbers and extensions.
- Serviceability
  - Parts
    - Nortel out of business since 2010
    - Supplies diminished, only supports legacy equipment.

Modernization
- Network backbone has been the limiting factor to upgrading in the past, this is now resolved with the 24-strand high-capacity backbone and switches being installed in July, 2019.
- Phone system will carry over in any WHS bond modernization project in a plug and play environment (Voice Over IP utilizes network).
- Two remaining buildings in the district to complete for a unified telephone platform (WHS and VAL)

Safety Enhancements (Shoretel/Mitel)
- E911
  - Used to automatically provide the caller's location to 911 dispatchers.
  - Allows exact location information through the use of Direct Inward Dialing database (example: Rivercom would know that a 911 call originated from Wenatchee High School, 1101 Millerdale, Room 305).
- Lock-down/Shelter in place
  - Admin/Staff could put the building in lockdown from any phone.

NOTE* We cannot do this with the older Nortel system currently in place.

Features
- Internal district extension direct dial: Calls from building to building would not take up a circuit line leaving the system open to public dial-in access in times of high volume use.
- Voicemail accessible on staff computers (internal)
- Improved internal call transfers
- Central backup of messaging/configurations.

Interoperability
- Valcom
  - Mass notification
  - Shelter in place
  - Lockdown
    - All can be initiated from any location, not just office.
  - All-call messaging
    - Single rooms
    - Groups of rooms

Tech Director Yancey presented information regarding the telephone system replacement at Wenatchee High School. Costs of systems discussed- Safety is first issue. The Nortel system has no capability to notify River.com in an emergency. This safety is built into 11 of our other buildings.

- Lockdown procedures would be available on the new system where this is not available on the current system. This includes a public address system and auto notification to the central office at the same.
- The new system also provides cross communication between buildings in real time. WHS would buddy with Pioneer in a lockdown situation. This system would allow a lockdown within a few seconds of each other.
- The old system was designed prior to the 911 availability.
- Shortel systems will be upgraded as items are modernized.
- Cost of the Shortel system has been reduced because the current wiring can be utilized.

The board made points regarding the upgrades:

- All buildings should be equitable
- Would like to use remaining dollars to purchase the phone systems for WHS and Valley Academy.

- Opportunity to improve safety in buildings
- Responsible way to spend money and this is what our public wants, safety in our buildings
- High School needs to be more secure

Questions from the board regarding the time frame for the install, Director Yancey indicted that the system should be ready for the first or second week of school at WHS and perhaps the end of September for Valley Academy. $82,000 estimate WHS and Valley Academy $7000 estimate, correct numbers by the end of the week.

Director Yancey was asked if they wanted until the next board meeting would the tech department still be able to stick with the same schedule. He indicated that the delay until next meeting would not change the schedule for the install.

Objective 3.3 The Right Tools & Resources for Staff

Policy and Procedure Updates 1st Reading

Assist. Supt. Helm presented updates of policies. He was asked where the updates were coming from, and he indicated that the changes come from WSSDA, and if the policies were modified outside of WSSDA's updates, the changes would be channeled through legal counsel's office before being presented to the board.

Policy	Title	Suggested Action	District Recommendation	Rationale
3226	Interviews and Interrogations of Students	Essential	Approve	Intent of Policy is to provide clarity as to the roles and responsibilities of law enforcement and other government agencies.
4310	District Relationship with Law Enforcement	Encouraged	Approve	Intent of Policy is to provide clarity as to the roles and responsibilities of law enforcement and other government agencies.
3144	Release of Information Concerning Student Sex and Kidnapping Offenders	Encouraged	Approve	Minor changes.
3413	Student Immunization And Life Threatening Health Conditions	Essential	Approve	Minor changes.
3413P	Student Immunization And Life Threatening Health Conditions Procedure	FYI		No substantive changes to current practice.

Lisa Turner, Executive Director of Human Resource, presented updates to policies/procedures. She told them her changes also come from WSSDA. Policies and procedures were just some "housekeeping" procedures.

Policy	Title	District Recommendation
5260	Personnel Records	Approve
5260P	Procedure	Information
5270	Resolution of Staff Complaints	Approve
5270P	Procedure	Information
5271	Reporting Improper Governmental Action	Approve
5271P	Procedure	Information
5315	Garnishment & Personal Credit Problems	Approve
5315P	Procedure	Information
5641	Student Teachers	Information
5641P	Procedure	Approve

All policies will go on the consent agenda for 2nd Reading at the next board meeting.

Strategy 4: Balance Change for All with Excellence for All
Objective: 4.2 Sound Fiscal & Resource Management
2019-20 Budget Report Update

Larry Mayfield, Executive Director of Finance shared the following.

Summary:

- Projection is sketchy – there are no handouts, a range of $600,000 to $1M - $1.6M fund balance
- WSD will be in compliance with the K-3 requirements, details shared with the board.
- Exec. Dir. Mayfield talked about the preliminary estimates coming from the Fund Balance may change based upon the legislative changes when the numbers come out from the state.
- Staffing reductions and looking reconciling in classified areas
- Co-funding balancing with BEA right now
- Enrollment projections and changes in trending
- He indicated that he would be looking at the enrollment at WHS –vs- WVTSC, and he felt that this information would be making changes in his numbers. Projection of decline at the high school
- Discussion with board about the proposals for levy changes. Local levy tax could be as high as 4 M dollars
- Tax increases pending to increase to balance funding by state
- Discussion on bills in legislation and that the session is projected to run long, may go into over-time. In negotiation phase.
- President Hemphill asked if he could send a note to them as soon as legislation is finalized, he agreed.
- He shared with the board that additional Special Education funding may be offered that could generate additional funds between $220,000 to $270,000; Version ranges between .9925% House and 1.0% Senate (excess cost multipliers) could be good things, not enough.
- Discussion on the senate's use of dollar allocations may have a negative impact
- Plan for the worse and hope for the best!

Board Communication

- President Hemphill asked about the board's availability in July, and advised them that Dr. Gordon would need a couple of workshops with them. Dr. Gordon will be visiting next week.
- Ms. Akers has setup the calendar of events for them in the portal for the board members.
- NW TURN conference available to attend May 10-11. Sarah Knox indicated that she would like to attend. They asked that the NW TURN conference information be sent to them via email. Ms. Hill agreed to do that.
- Director Villa-Vega attended the Parent Advisory Conference, she and was pleased with the information. She thanked Brian for all of the District's coordination, and she felt that Assist. Director Nadya Bush was fantastic.
- President Hemphill attended the Sweetheart for Kid's Luncheon. She said that she appreciates Brian allowing them to attend and for WSD to be the host for the Children's Home Society Benefit.

Superintendent's Report

- Supt. Flones shared about the Data Dashboard webpage training on April 15, 2019. He told the board that Ron Brown would navigate, Deputy Supt. DeJong and he would present the hands on tour. The meeting is open to the public and they would be happy to take questions as they go through the information.

Meeting Adjourned

President Hemphill adjourned the meeting at 7:03 P.M.

_____ _____Date_____

President **Superintendent**

Wenatchee School District Board of Directors

Board Workshop
April 15, 2019
Minutes
5:00 – 7:00 P.M.
WSD District Office

Board Members	Staff Present
Sunny Hemphill, President	Brian Flones, Superintendent
Laura R. Jaecks, Vice President	Cabinet
Sarah Knox, DLT Board Representative	
Michele Sandberg	
Karina Vega-Villa	

PLEDGE OF ALLEGIANCE

WELCOME:
Board President Sunny Hemphill

Supt Flones gave a summary of how the training will take place. Deputy Supt. Jon DeJong was present to answer questions.

DATA DASHBOARD TRAINING:

Supt. Flones, Deputy Supt. Jon DeJong and Ron Brown, Director of Instructional Technology provided the training.

Supt Flones gave a summary of how the training will run. Deputy Supt. Jon DeJong was present to answer questions and suggestions.

Summary points of training:

- Mr. Brown explained the front page, how to maneuver through the Strategic Plan. Supt. Flones suggested hovering over the page to demonstrate how to find the data that is embedded in the charts and graphs. Dashboard familiarity was the purpose of today's training so the board can more easily find data.
- The data has most of last year's final data, new data in entered as it comes in, but usually a year behind current year.
- They maneuvered through Strategy I, key metrics are built into the system.
- Some board members suggested additional links that would be helpful.
- Mr. Brown has built a tutorial to make it user-friendly if not on site he will re-post it for convenience. We also have a help-desk that is available for the public to ask questions.
- Questions of how it is displayed… how the information comes from the state drives the presentation. Link issues are being worked on by our provider.
- Some of the posted data was labeled in negative statements rather than positive statements; ie., Number failing -vs- Number passing. Those were reworded.
- Questions answered about the programs and the data reported, how much is included, WVTSC data not in some areas, where it is not applicable.
- Request to see the numbers of the CTE or WVTSC job shadows, internships, data is gathered but not in this granular data. That data is available, and will be online. Wenatchee Connect information is available on their website, which will cover these areas.
- There are 17-Key performance measured areas & indicators, how much is too much and how much is enough and how much too little was discussed.
- Discussion on which Strategy to go through, it was decided to use Strategy 4 with 4 Objectives. They perused through test scores on elementary.
- Some of the links are not linking correctly**.** Discussion of using web design class students, possibility of them checking links. Mr. Brown appreciates any feedback on broken links.
- WA-Kids state data is available and we can incorporate it into our data, figuring this out on how to display is difficult because it is so complex.
- Working time taken to maneuver through Dashboard, how to find sites and data, objectives etc.
- Dashboard prefers Chrome browser rather than Safari, sometimes the site will not co-operate.
- Growth indicators on state OSPI is a year behind, good information but not updated. We don't have that one displayed on our site.
- Some information can be displayed but including domains would be huge and more confusing than helpful, that is why we do not have it.

- When you live in this data it is easily understood. But if we are trying to update our Strategic Plan, but including 75 indicators would be a little much for the lay-person, so we will want to tweak it to be understandable.

- The board suggested that we have it more simple and to the point so the public can go to our website and decide where they want their children to go to school, private, charter or public.

- We can display all our internal information, or not… Could it be too much for public and super important to internal staff.

- Board discussed that we want to be open to public but maybe we can have data in a more simple form for the layperson. Other districts are following that model.

- There is no "one-way" or "serve-all" that makes sense because so much of it that is displayed only educators can understand.

- Mediation-rates discussed, it is there as background data. But it can be brought out more available, board will figure out where they want it to show-up.

- Mr. Brown asked the board to let him know what they want to see and after meeting with Dr. Gordon and they discuss the Strategic Plan, we can change some of data that is more available.

- Maneuvered through the behavior data: Male, Female, Special Ed, Ethnicity, etc. , information pulled daily and added.

- Functionality of shortcuts and clickable links were shared with the board.

- Data map discussed; owner, data source, frequency, input process, how to pull data. The more involved the data the more it becomes complex.

- Mr. Brown sent a link to the board to view assessment data, using a short link. You must have WSD account to enter. Leadership and Principals have access to all this information. This is not public information because individual student info is available.

- This is all the data that the educators at WSD use to follow their areas. This is formative assessments showing results, not public friendly. This is confidential information by FERPA laws, not to be shared. Mr. Brown perused through the site.

- Mr. Brown offered help from his department. The board thanked everyone for all the help. He welcomes input and suggestions that the board has from other districts. We have been copied because there is not a lot out there. We have searched the country for examples also to get better ideas and continual improvement.

- Spanish translation is not working on Google Mr. Brown will check into it, we have been intentional to have it available. Very quickly we will be able to provide that service. Mr. Brown will let Supt. Flones know and he will contact the board. Some districts use Board Docs but it is expense. WSSDA uses Board Docs also. A lot of systems out there can give us solutions. Mr. Brown will do that tomorrow.

ADJOURNMENT:

Board President Sunny Hemphill adjourned the meeting at 6:38 pm.

_____ _____Date_____

President **Superintendent**

The following vouchers, as audited and certified by the Auditing Officer as required by RCW 42.24.080, and those expense reimbursement claims certified as required by RCW 42.24.090, are approved for payment. Those payments have been recorded on this listing which has been made available to the board.

As of April 23, 2019, the board, by a _____ vote, approves payments, totaling $400,981.04. The payments are further identified in this document.

Total by Payment Type for Cash Account, AP WARRANTS:
Warrant Numbers 605647 through 605823, totaling $400,981.04

Secretary _____ Board Member _____

Board Member _____ Board Member _____

Board Member _____ Board Member _____

Check Nbr	Vendor Name	Check Date	Check Amount
605647	* DEPT OF RETIREMENT SYS	04/24/2019	220.11
605648	A & A MOTORCOACH	04/24/2019	6,410.00
605649	AG SUPPLY COMPANY	04/24/2019	29.17
605650	AGE LLC	04/24/2019	2,200.00
605651	AMAZON CAPITAL SERVICES	04/24/2019	5,288.75
605652	AMER TIME & SIGNAL	04/24/2019	940.81
605653	AMERICAN PRODUCE EXPRESS, LLC	04/24/2019	1,598.85
605654	AMERIGAS	04/24/2019	181.66
605655	ANGUIANO, LEANDRO	04/24/2019	18.00
605656	APPLE COMPUTER INC	04/24/2019	4,519.48
605657	APPLE VALLEY PUMPING SER INC	04/24/2019	1,544.08
605658	ASUS COMPUTER INTERNATIONAL	04/24/2019	184.59
605659	BAILEY, KATRINA I	04/24/2019	23.20
605660	BEDARD, LISA R	04/24/2019	8.53
605661	BERTOMEU, HEATHER MARTHA	04/24/2019	16.01
605662	BIRKS, RAY R	04/24/2019	45.41
605663	BLACK, MARIA LUISA	04/24/2019	1,000.00
605664	BOUND TO STAY BOUND	04/24/2019	520.06
605665	BREWER, LYNDSAY LEE	04/24/2019	18.15
605666	BRYSON SALES & SERVICE	04/24/2019	640.36
605667	BULLIS, ROBERT W	04/24/2019	28.55
605668	BURROWS TRACTOR INC	04/24/2019	95.26
605669	CAROLINA BIOLOGICAL SUPPLY	04/24/2019	362.65
605670	CARVITTO, JUSTIN JOSEPH	04/24/2019	125.86
605671	CASCADE QUALITY WATER CENTER	04/24/2019	701.04
605672	CASTILLO, MEGAN M	04/24/2019	556.72
605673	CH2O INC.	04/24/2019	623.30
605674	CHILDREN'S HOME SOCIETY OF WA	04/24/2019	23,809.50
605675	CHINOOK MUSIC SERVICE INC	04/24/2019	60.90
605676	CLANCY'S FARM LLC	04/24/2019	1,232.52
605677	COLEMAN OIL	04/24/2019	9,122.19
605678	COMMERCIAL TIRE	04/24/2019	2,741.00
605679	CONSOLIDATED ELECTRICAL DISTRI	04/24/2019	744.05

Check Nbr	Vendor Name	Check Date	Check Amount
605680	COURTYARD BY MARRIOTT BELLEVUE	04/24/2019	338.62
605681	CRAIN, ANNE	04/24/2019	75.00
605682	CTS CASH OFFICE	04/24/2019	7,437.21
605683	CUMMINS INC	04/24/2019	257.60
605684	DAVIS, ARNEIL LAW FIRM LLP	04/24/2019	33,266.30
605685	DELTA EDUCATION INC	04/24/2019	623.19
605686	DICKEY, EILEEN DEVON	04/24/2019	8.99
605687	DOUGLAS, JENNIFER JO	04/24/2019	177.00
605688	EADIE, KAREN R	04/24/2019	43.33
605689	EASTMONT SCHOOL DISTRICT	04/24/2019	6,694.30
605690	EMBASSY SUITES SEA N LYNNWOOD	04/24/2019	256.02
605691	FASTENAL COMPANY	04/24/2019	232.55
605692	FERGUSON ENTERPRISES INC #3007	04/24/2019	383.41
605693	FINEIS, JILL A	04/24/2019	189.40
605694	FOOD SERVICE OF AMERICA	04/24/2019	18,914.12
605695	FRANZ FAMILY BAKERIES	04/24/2019	728.50
605696	FRED MEYER CUSTOMER CHARGES	04/24/2019	87.97
605697	GEAR UP SPORTS MINNISOTA	04/24/2019	184.97
605698	GOVCONNECTION INC	04/24/2019	142.87
605699	GRADUATION ALLIANCE INC	04/24/2019	4,897.34
605700	GRAHAM, ROBERT	04/24/2019	600.00
605701	HANSEN, RANDALL LEE	04/24/2019	1,181.00
605702	HARVEST VALLEY PEST CONTROL	04/24/2019	2,558.24
605703	HEALTH CARE AUTHORITY	04/24/2019	20,084.13
605704	HEATH, MELINDA LEE	04/24/2019	38.05
605705	HERITAGE FOOD SERVICE GROUP	04/24/2019	753.81
605706	HOME DEPOT	04/24/2019	117.84
605707	HOUGHTON MIFFLIN HARCOURT	04/24/2019	2,270.17
605708	ICICLE BROADCASTING INC	04/24/2019	150.00
605709	INLAND PIPE AND SUPPLY	04/24/2019	364.19
605710	ISLAND, NANI CHEREE	04/24/2019	10.00
605711	JERRYS AUTO SUPPLY	04/24/2019	809.46
605712	JOHNSON, ELISA ANN	04/24/2019	16.94
605713	JOHNSTONE SUPPLY INC	04/24/2019	359.90
605714	KING COUNTY DIRECTORS ASSN	04/24/2019	4,583.12
605715	KWLN LA NUEVA/ALPHA MEDIA	04/24/2019	280.00
605716	LD PRODUCTS, INC	04/24/2019	103.84
605717	LEARNING WITHOUT TEARS	04/24/2019	75.74
605718	LEWIN, DEBORAH J	04/24/2019	18.94
605719	LIFESKILLS/BETH SYKES	04/24/2019	96.97
605720	LINK TRANSPORTATION	04/24/2019	150.00
605721	LIQUIDS POWDERS & MACHINES	04/24/2019	38.32
605722	LOCAL TEL COMMUNICATIONS	04/24/2019	27,039.10
605723	LOWES HOME IMPROVEMENT	04/24/2019	215.41
605724	MACKIN LIBRARY MEDIA	04/24/2019	327.61
605725	MADLAND, MARY	04/24/2019	208.33
605726	MAILFINANCE, INC	04/24/2019	1,387.12
605727	MARENEM INC	04/24/2019	398.75
605728	MARIACHI CONNECTION	04/24/2019	500.00
605729	MELOY, STEPHANIE A	04/24/2019	17.52

Check Nbr	Vendor Name	Check Date	Check Amount
605730	MILLER, EMILY E	04/24/2019	9.34
605731	MOON SECURITY SERVICES INC	04/24/2019	2,114.67
605732	MOSAIC COOPERATIVE LLC	04/24/2019	1,500.00
605733	MOUNTAIN HOME BIOLOGICAL	04/24/2019	71.03
605734	NCWMEA	04/24/2019	264.00
605735	NEOFUNDS BY NEOPOST	04/24/2019	1,000.00
605736	NORCO INC	04/24/2019	34.28
605737	NORTH CENTRAL ESD	04/24/2019	63,896.32
605738	NOVAK, SHANNON A	04/24/2019	32.60
605739	NW BEARING-BDI	04/24/2019	746.21
605740	NW VITAL RECORDS CTR INC	04/24/2019	100.00
605741	O'REILLY AUTOMOTIVE STORES	04/24/2019	0.01
605742	OFFICE DEPOT	04/24/2019	4,274.34
605743	ON THE MEND MUSICAL INSTR REPA	04/24/2019	195.12
605744	OSPI AGENCY ACCOUNTING	04/24/2019	18,848.01
605745	OXARC	04/24/2019	190.35
605746	PACIFIC SECURITY	04/24/2019	210.00
605747	PARISH, KELLY S	04/24/2019	11.48
605748	PERFORMING ARTS CENTER	04/24/2019	140.00
605749	PIPKIN INC	04/24/2019	4,811.98
605750	PLATT ELECTRICAL SUPPLY	04/24/2019	63.24
605751	POLTZ FIRE PROTECTION INC	04/24/2019	287.80
605752	PREMIER LIGHTING INC	04/24/2019	8,800.00
605753	PUBLIC CONSULTING GROUP INC	04/24/2019	5,363.94
605754	PUD NO 1 OF CHELAN COUNTY	04/24/2019	5,090.49
605755	ROBOT MESH	04/24/2019	2,595.46
605756	RODDA PAINT	04/24/2019	69.35
605757	RWC INTERNATIONAL LTD	04/24/2019	830.82
605758	S & S WORLDWIDE INC	04/24/2019	541.77
605759	S & W IRRIGATION SUPPLY	04/24/2019	23.28
605760	SAVAGE, SUNNY RAE	04/24/2019	1,217.94
605761	SBS FOODS, INC	04/24/2019	747.01
605762	SCHETKY NORTHWEST SALES	04/24/2019	849.50
605763	SCHOOLS INSURANCE ASSOC OF WA	04/24/2019	25.68
605764	SHAR PRODUCTS	04/24/2019	30.06
605765	SHAW, GINA L	04/24/2019	29.24
605766	SHIPOWICK-SMITH COUNSELING LLC	04/24/2019	208.33
605767	SHORT, CHERYL	04/24/2019	208.33
605768	SIMMONS, DEBORAH L	04/24/2019	18.10
605769	SIX ROBBLEES INC	04/24/2019	155.97
605770	SNAP ON INDUSTRIAL	04/24/2019	1,710.57
605771	SOLID WASTE SYSTEMS INC	04/24/2019	1,699.93
605772	SOUTHEASTERN WA CALVACADE OF B	04/24/2019	300.00
605773	SPRINGBROOK FARMS, INC	04/24/2019	5,542.60
605774	SPRINGWATER LATERAL WATER USER	04/24/2019	3,221.25
605775	STANDARD PAINT	04/24/2019	393.06
605776	STANS MERRY MART	04/24/2019	799.12
605777	STAR RENTALS INC	04/24/2019	55.28
605778	SUPPLYWORKS	04/24/2019	870.24
605779	THE J.CARROLL CORPORATION	04/24/2019	504.85

Check Nbr	Vendor Name	Check Date	Check Amount
605780	TOTAL CARE	04/24/2019	3,300.00
605781	TRONSON, DENNIS HILTON	04/24/2019	16.15
605782	TROXELL COMMUNICATIONS	04/24/2019	123.35
605783	ULINE	04/24/2019	477.39
605784	UNIV OF WA AUTISM CENTER	04/24/2019	3,600.00
605785	UNIV OF WA CNTR FOR EDUC LEAD	04/24/2019	6,552.00
605786	UPS	04/24/2019	79.09
605787	VALENCIA, LAURA	04/24/2019	29.81
605788	VASQUEZ, DAVID	04/24/2019	16.15
605789	WA SCHOOL FOR THE BLIND	04/24/2019	30.00
605790	WEINSTEIN BEVERAGE CO	04/24/2019	3,266.42
605791	WEN RECLAMATION DISTRICT	04/24/2019	8,894.10
605792	WEN TRANSFER STATION	04/24/2019	473.21
605793	WEN VALLEY CHAMBER OF COMMERCE	04/24/2019	550.00
605794	WEN VALLEY HOSPITAL	04/24/2019	980.00
605795	WESCO PAINT & EQUIPMENT SUPPLY	04/24/2019	563.68
605796	WESTERN PSYCHOLOGICAL SERV	04/24/2019	165.00
605797	WHS ASB	04/24/2019	178.25
605798	WILBUR ELLIS COMPANY LLC	04/24/2019	1,684.35
605799	WOMENS RESOURCE CNTR OF NCW	04/24/2019	10,977.53
605800	WOOLSEY, JON MARK	04/24/2019	53.77
605801	WSD ADMIN IMPREST	04/24/2019	122.93
605802	WVTSC	04/24/2019	200.00
605803	YOUNG, DAVID S	04/24/2019	451.04
605804	AMAZON CAPITAL SERVICES	04/24/2019	409.96
605805	BSN SPORTS	04/24/2019	3,447.34
605806	CAFFE D'ARTE	04/24/2019	80.60
605807	CHERRY CREEK RADIO	04/24/2019	110.00
605808	EASTMONT HIGH SCHOOL	04/24/2019	250.00
605809	FLORAFINDER LLC	04/24/2019	1,563.46
605810	GETTMAN, KIM	04/24/2019	100.00
605811	HENRY SCHEIN INC	04/24/2019	76.28
605812	HOME DEPOT	04/24/2019	43.92
605813	JOSTENS	04/24/2019	292.68
605814	LINK TRANSPORTATION	04/24/2019	150.00
605815	NANCYS PARTY RENTALS INC	04/24/2019	227.39
605816	NC HOOPS	04/24/2019	250.00
605817	R & S VENDING	04/24/2019	346.00
605818	SANDERS, MARY	04/24/2019	1,000.00
605819	SEATTLE SCHOOL DIST #1	04/24/2019	275.00
605820	THAYER, JILL N	04/24/2019	95.00
605821	VOITA WEST	04/24/2019	2,780.00
605822	WAHSET DISTRICT 1	04/24/2019	140.00
605823	WSD	04/24/2019	552.29
177	Computer Check(s) For a Total of		400,981.04

	0	Manual	Checks For a Total of	0.00
	0	Wire Transfer	Checks For a Total of	0.00
	0	ACH	Checks For a Total of	0.00
	177	Computer	Checks For a Total of	400,981.04
Total For	177	Manual, Wire Tran, ACH & Computer Checks		400,981.04
Less	0	Voided	Checks For a Total of	0.00
			Net Amount	400,981.04

F U N D S U M M A R Y

Fund	Description	Balance Sheet	Revenue	Expense	Total
10	General Fund	-1,134.86	0.00	389,925.98	388,791.12
40	Associated Stude	0.00	0.00	12,189.92	12,189.92

4/24/19

Wenatchee Public Schools

Approval of vouchers and warrants

The following vouchers as audited and certified by the auditing officer, as required by RCW 42.24.080, and those expense reimbursement claims certified, as required by RCW 42.24.090, are approved for payment

General Fund

Check numbers 605647 through 605803 totaling $388,791.12

Capital Projects Fund

Check numbers

Associated Student Body Fund

Check numbers 605804 through 605823 totaling $12,189.92

Transportation Vehicle Fund

Check number

Check numbers and amount of expenses will be provided at the board meeting.

Certification:

I, the undersigned, do hereby certify under penalty of perjury that the materials have been furnished, the services rendered or the labor performed as described herein and that the claim is a just, due and unpaid obligation against Wenatchee School District, and that I am authorized to authenticate and certify to said claim.

Signature of Auditing Officer Date

Wenatchee School District NO. 246

PAYROLL

APRIL 2019

We, the undersigned Board of Directors of the Wenatchee School District No. 246, Chelan County, Washington, do hereby certify that the persons named in the attached payroll are employed by said school district and entitled to the sums specified in the final payroll register. The payroll is approved for payment in the amount of $ 7,597,574.20 for the month of April 2019.

Secretary: _____

Board Members: _____

_____

_____

_____

_____

WENATCHEE SCHOOL DISTRICT

April 23, 2019

TO:	**BOARD OF EDUCATION**
FROM:	Brian L. Flones, Superintendent
PREPARED BY:	Lisa N. Turner, Executive Director of Human Resources
SUBJECT:	PERSONNEL REPORT

HIRES

Employee Name	Job	FTE	Hours/ day	Building	Effective Start Date	Effective End Date
Classified:						
Cazares, Elizabeth	Nutrition Service Associate I	-	2.00	LNC	4/8/2019	-
Gill, Lori	Middle Kitchen Manager	-	8.00	OMS	4/8/2019	-
Island, Nani	Elementary Lead	-	8.00	COL	4/8/2019	-
Krahenbuhl, Stephanie	Middle Kitchen Manager	-	8.00	PIO	4/8/2019	-
Moran, Tina	Nutrition Service Associate I	-	4.00	COL	4/8/2019	-
Olsen, Peyton	Student Apprentice - Computer Tech	-	-	WHS	4/8/2019	6/14/2019
Techavimol, Amy	Student Apprentice - Computer Tech	-	-	WHS	4/8/2019	6/14/2019

2019-2020 HIRES

Employee Name	Job	FTE	Hours/ day	Building	Effective Start Date	Effective End Date
Certificated:						
Ellis, Crystal	School Psychologist	0.60	-	SPED WHS	8/27/2019	-
Garcia-Garza, Ernesto	Elementary Counselor	1.00	-	NBY	8/27/2019	-

LEAVE OF ABSENCE

Employee Name	Job	FTE	Hours/ day	Building	Effective Start Date	Effective End Date
Classified:						
Akers, Lindee (Partial)	Superintendent's Executive Secretary	-	8.00	DO	04/01/2019	8/31/2019
De Los Reyes, Mickie (Intermittent)	Para Ed	-	6.75	LNC	3/1/2019	6/14/2019
Gabaldo, Rebecca	Sped Para Ed	-	6.25	WA	9/2/2019	12/22/2019
Harris, James	Elementary Lead Custodian	-	8.00	WSHS	3/25/2019	4/10/2019
Rubio-Lopez, Guadalupe	Secretary/ Child Family Advocate	-	8.00	WSHS	5/20/2019	09/06/2019
Snyder, Anahy	Para Ed	-	6.70	SS	8/27/2019	11/12/2019
Certificated:						
Bazan, Noemi	ELL & Migrant Guided Study Teacher	1.00	-	PIO	8/27/2019	9/27/2019

Brewer, Lyndsey	Occupational Therapist	1.00	-	SS/WA/OMS/LNC	04/08/2019	6/14/2019
Rodriguez, Christina	2nd Grade Bilingual Teacher	1.00	-	LNC	4/8/2019	4/30/2019
Solis, Adelita	1st Grade Teacher	1.00	-	L&C	4/25/2019	6/14/2019
RETURN FROM LEAVE OF ABSENCE						
Employee Name	**Job**	**FTE**	**Hours/ day**	**Building**	**Effective Start Date**	**Effective End Date**
Classified:						
Clardy, Billie	Bus Para Ed	-	2.12	Transportation	4/15/2019	-
Grimes, Rickie	Sped Para Ed	-	6.00	LNC	4/8/2019	-
Rose, Lisa	Bus Driver	-	5.75	Transportation	4/8/2019	-
Wisemore, Lori	Para Ed	-	7.00	MV	4/8/2019	-
Certificated:						
Card-Roley, Laurie	2nd Grade Teacher	1.00	-	COL	3/28/2019	-
Garland, Brian	PE Specialist/ Health Teacher	1.00	-	WSHS	8/27/2019	-
Moon, Robyn	4th Grade Teacher	1.00	-	MV	4/8/2019	-
RESIGNATIONS						
Employee Name	**Job**	**FTE**	**Hours/ day**	**Building**	**Effective Start Date**	**Effective End Date**
Classified:						
Pickett, Kalya	Sped Para Ed	-	6.00	Castle	5/17/2019	-
Shaw, Gina	Site Coordinator	-	7.00	MV	4/12/2019	-
Thomas, Mary Ellen (Partial)	Sped Para Ed	-	0.25	PIO	6/15/2018	-
Certificated:						
Bedard, Lisa	Physical Therapist	0.60	-	Castle	06/14/2019	-
Dunn, Heidi	7th Grade Core	1.00	-	FMS	6/14/2019	-
Gaytley, Alicen	TOSA	1.00	-	DO	6/30/2019	-
Marshlain, Kirk	Sped Teacher	1.00	-	FMS	6/14/2019	-
Ramos-Barboza, Maria Isabel	Math Teacher	1.00	-	WHS	6/15/2019	-
RETIREMENTS						
Employee Name	**Job**	**FTE**	**Hours/ day**	**Building**	**Effective Start Date**	**Effective End Date**
Classified:						
Oliver, Regina	Office Manager	-	8.00	SPED	8/31/2019	-
St. John, Connie	Para Ed	-	4.50	FMS	6/14/2019	-
Certificated:						
Chernak, Carol	School Psychologist	1.00	-	SPED	7/1/2019	-

Grothe, Brent	Coordinator of Student Activities	1.00	-	WHS	8/31/2019	-
Miller, Marcus	Counselor	1.00	-	FMS	6/30/2019	-
Ogan, Theresa	Elementary Specialist (Music Teacher)	1.00	-	NBY	6/14/2019	-
Wilson, Dan	Middle School Assistant Principal	1.00	-	PIO	8/1/2019	-
2018-2019 GRANT POSITIONS						
Employee Name	**Job**	**FTE**	**Hours/**	**Building**	**Effective Start Date**	**Effective End Date**
Galvez, Emilia	ASP Staff/Tutor & Enrichment Activity Instructor	-	-	OMS	-	-
Swilley, Angel	ASP Enrichment Activity Inst/ Youth Engagement Staff	-	-	Multiple	-	-
2018-2019 TERMINATIONS (GRANT POSITIONS)						
Employee Name	**Job**	**FTE**	**Hours/**	**Building**	**Effective Start Date**	**Effective End Date**
Benjume, Roger	ASP Enrichment Activity Instructor	-	-	OMS	-	-
Springfield, Jerry	ASP Youth Engagement Staff	-	-	LNC	-	-
2018-2019 SUPPLEMENTAL CONTRACTS						
Employee Name	**Job**	**FTE**	**Hours/ day**	**Building**	**Effective Start Date**	**Effective End Date**
Flitton, Jocelyn	Elementary Track	0.50	-	COL	-	-
Wiggins, Cameron	Elementary Track	0.50	-	COL	-	-
Charles, Katie	Elementary Track	0.50	-	LNC	-	-
Mahler, Cindy	Elementary Track	0.50	-	LNC	-	-
Whipple, Donald	Assistant Boys Soccer	1.00	-	OMS	-	-
Cordes, Joseph	Assistant Track	1.00	-	PIO	-	-
Murie, Cindy	Assistant Track	1.00	-	PIO	-	-
Valeri, Desilee	National Board Facilitator	1.00	-	SS/DO	-	-
Crown, Kim	Elementary Track	1.00	-	WA	-	-
					-	-

WENATCHEE SCHOOL DISTRICT

April, 23, 2019

TO:	**BOARD OF EDUCATION**
FROM:	Brian L. Flones, Superintendent
PREPARED BY:	Lisa N. Turner, Executive Director of Human Resources
SUBJECT:	**PERSONNEL REPORT - School District Response and Support for Non Matched Endorsements to Course Assignment of Teachers**

Individuals with initial, residency, endorsed continuing, or professional teacher certificates who are employed with a school district under RCW 28A.405.210 may be assigned to classes other than in their areas of endorsement. If teachers are so assigned, the following shall apply:

(1) A designated representative of the district and any such teacher so assigned shall mutually develop a written plan which provides for necessary assistance to the teacher, and which provides for a reasonable amount of planning and study time associated specifically with the out-of endorsement assignment;

(2) Such teachers shall not be subject to non-renewal or probation based on evaluations of their teaching effectiveness in the out-of-endorsement assignments;

(3) Such teaching assignments shall be approved by a formal vote of the local school board for each teacher so assigned;

(4) A teacher who has completed twenty-four quarter credit hours (sixteen semester credit hours) of coursework applicable to a special education endorsement shall be eligible for a pre-endorsement waiver from the special education office per chapter 392-172A WAC which will allow that person to be employed as a special education teacher. All remaining requirements for special education endorsement shall be completed within five years.

Districts may continue to employ individuals on conditional or emergency substitute certification. The district will consider these certificates as entry points and partner with preparation programs to enroll them in an alternative route or other form of state-approved preparation program leading of residency certification.

Out of Endorsement, Conditional and Emergency Certificates

Employee Name	Position	FTE	Qualifications	Current Certificat	Plan	Loc	Effective Start Date
Bazan, Noemi	ELL, Migrant Guided Study & Mariachi Dance	1.00	ELL Endorsement and experience working with migrant students	English Language Learner & Middle Level Mathematics	Working toward adding a Dance endorsement to teach mariachi dance	Pioneer	8/29/2018
Hulse, Wendy	Kindergarten and Foreign Language Teacher	0.60	Endorsed in Spanish, ESL & Japanese. Prior experience as a workshop instructor teaching these subjects	Spanish, ESL and Japanese	Working toward adding a K-8 Elementary Ed endorsement	Valley	8/29/2018
Endelman, Rachel	Science and Algebra Teacher	1.00	Endorsed in Biology, Chemistry, Science and Traffic Safety. Science background helps and goes hand-in-hand with Algebra class	Biology, Chemistry, Traffic Safety and Science	Working toward adding a Math endorsement	WHS	8/29/2018
Higgins, Brian	English Language Arts, AVID & Drama/Theater Teacher	1.00	Background in Stage and Puppeteering	English Language Arts	Working toward adding a Drama endorsement	WHS	8/29/2019
Janet, Tara	Science and Algebra Teacher	1.00	Endorsed in Science: Chemistry. Background helps and goes hand-in-hand with Algebra class	Science: Chemistry	Working toward adding a Math endorsement	WHS	8/29/2018
Strong, Olga	4th Grade Teacher	1.00	Certificated Substitute	English as a Second Language & English Language Arts	Long Term Substitute, assignment ends 5/17/2019.	L&C	4/8/2019

WSD 246
WENATCHEE SCHOOL DISTRICT
235 Sunset Avenue 509.663.8161 509.663.3082 fax

April 23, 2019 Board Meeting

Submission Summary Form for District Contracts

New / Renewal / Revision	Federal Yes/No	Agency	Funded By	Purpose	Amount	Effective Dates	Contract Requested By	Reviewed By
New	N	International Society for Technology in Education	N/A	Collaboration between WSD and ISTE	N/A	Date of Execution Until Terminated	Ron Brown	Jon Dejong
New	N	Community Foundation of NCW	N/A	Student sponsorship to Pacific Model United Nations Conference in Seattle	Revenue $1,000	Date of Execution - 11/30/2019	Emily Wilson	Karen Walters
Renewal	N	Central WA Hospital	N/A	Medical Occupations Program affiliation agreement	N/A	4/8/19 - 6/15/22	Mitzi Southard	Jon Dejong

WSD 246
WENATCHEE SCHOOL DISTRICT
235 Sunset Avenue 509.663.8161 509.663.3082 fax

Contract Request Form

Non-Federal

Please submit this form with your **unsigned** contract to Denise Watson 2 weeks before the School Board meeting. Upon review and approval, the contract will be included on the agenda for School Board approval.

All contracts require school board approval.

The only authorized signatures on a contract are Brian Flones, Jon DeJong, Larry Mayfield, or the School Board.

Is this contract New (we do not have a current contract with them), a Renewal (same contract - extending length time) or a Revision (something added, removed or changed from the original).	New ☑ Renewal ☐ Revision ☐

Cost of Contract - If there is no cost put N/A in the box, Revenue - if this is a grant or we are receiving funds, Budget code for contracts with a cost or put in N/A if it is revenue or no cost.

Cost of Contract: $0.00 Or Revenue: N/A Budget code: N/A

Contract is scheduled to begin:	Date of Execution ☑ or Specific Date:	Contract is scheduled to end:	Active until terminated ☐ or Specific Date: 07/31/2019

Contract Details:
Brief Description/Purpose
(If this is a revision what changed:)

The collaboration between Wenatchee School District and ISTE seeks to explore how learning sciences can inform edtech procurement processes and impact classroom practice through professional development.

Agency Contact Information (to whom & where contract needs to be mailed)

Agency Name	International Society for Technology in Education (ISTE)
Attention:	Richard Culatta, Chief Executive Officer
Street address or PO Box	1530 Wilson Blvd., Ste. 730
City, State, Zip Code	Arlington, VA 22209
Email Address	iste@iste.org
Phone Number	(703) 348-4784

Be sure to follow state bid requirements as outlined in RCW 28A.335.190

Contract Requested By: Ron Brown (Print/Type Name) Signature:

I have read this contract and recommend it for board approval.

Requesters Administrator: (Print/Type Name) Signature:

Reviewed by: (District Office) Larry Mayfield (Print/Type Name) Signature:

7/9/18 DW

International Society for Technology in Education

Connected learning.Connected world.

621 S.W. Morrison St., Suite 800
Portland, OR 97205

800.336.5191

iste.org

MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (MOU) is entered into by and between the International Society for Technology in Education (ISTE) and Wenatchee School District (together: the Parties), and sets forth the terms and understanding related to working/piloting products from ISTE's 'Course of Mind' project.

1. Non-Binding Memorandum of Understanding

Except for the last sentence of this Section 1, this MOU is not binding or legally enforceable, imposes no enforceable obligations upon the Parties and does not grant any rights. However, the Parties shall utilize this MOU as the framework for an agreement or agreements, which will be collectively referred to herein as the "Agreement." The parties and signatories to this MOU acknowledge that the Agreement will be subject to approval of and signature by appropriate officers of the parties. This Agreement is nonexclusive, and the parties are not restricted from dealing with other organizations not party to this Agreement with respect to providing services similar to or equivalent to the services which are the subject of this MOU.

2. Background

The collaboration between Wenatchee School District and ISTE seeks to explore how learning sciences can inform edtech procurement processes and impact classroom practice through professional development.

3. Purpose

This MOU will outline each Party's commitment to the pilot of ISTE's Course of Mind project to understand how learning sciences can impact classroom practice and edtech procurement as well as inform design of online modules on learning science. Both Parties will remain in regular communications as we advance our mutually shared priorities.

4. Activities

Wenatchee School District will:

A. Arrange and coordinate a team of 5-10 educators including teachers, administrators, and procurement officer.

B. Provide ISTE with a timeline of general availability.

C. Everyone on the team will:

   i. Listen to at least three podcast episodes (~30 minutes each) about the application of learning sciences and edtech;

   ii. Review at least three blog posts about how learning sciences can shape teaching;

   iii. Attend at least one webinar about learning sciences and edtech; and

   iv. Provide feedback on podcast episodes, blog posts, and webinars via electronic questionnaire and if required, an interview.

D. Teachers on the team will additionally:

i. Review paper prototype of online module interface;

ii. Complete short module activities after reading relevant content provided by ISTE; and

iii. Provide feedback on reviewed content via electronic questionnaire-based survey and/or interview.

E. At least 2 members from the team, representing administrators, edtech specialists, and teachers will attend ISTE 2019 conference and:

i. Participate in a special pre-conference "research & practice" event Saturday, June 22 and associated activities at ISTE 2019 that focuses on learning sciences and edtech procurement;

ii. Provide feedback about their experience with the project in a group interview.

ISTE will:

A. Provide Wenatchee School District with information and the activities to participate in the project. This will include blog posts, podcast episodes, and activities under development.

B. Provide initial training and guidance to team from Wenatchee School District, as needed, to complete activities specified in this memorandum.

C. Provide Wenatchee School District with notice of estimated timeline of activities.

Both ISTE and Wenatchee School District will:

A. Identify primary contact for pilot management: both Parties will designate a primary contact to manage the pilot. For ISTE, this will be NarayanKripa Sundararajan (Kripa Sundar), Learning Science Specialist. For Wenatchee School District, this will be Ron Brown, Director of Instructional Technology. The primary contacts are responsible for communication between ISTE and Wenatchee School District and making sure that responsibilities under this memorandum are fulfilled.

5. Funding

There are no joint funding obligations as part of this MOU. Stipends for the two people attending ISTE 2019 on behalf of the district would be paid directly to the contracted individual.

7. Duration

This MOU is at-will and may be modified by mutual consent of authorized officials from ISTE and Wenatchee School District. This MOU shall become effective upon signature by the authorized officials from the ISTE and Wenatchee School District and will remain in effect until modified or terminated by any one of the partners by mutual consent. In the absence of mutual agreement by the authorized officials from ISTE and Wenatchee School District this MOU shall end on July 31th 2019.

8. Counterparts

This Agreement has been prepared and may be executed in multiple counterparts, as well as via facsimile or electronically transmitted signature, each of which shall constitute an original.

9. Representation of Authority

Each of the parties executing this Agreement, through its undersigned authorized representative, and each representative so executing, hereby warrants and represents to the other parties that the undersigned representative has full authority to execute this Agreement on behalf of the party for whom said authorized representative purports to act.

	ISTE	Other party:	Wenatchee School District
Sign:		Sign:	
Date:	4/1/2019	Date:	
	Richard Culatta	Print name:	
	Chief Executive Officer	Title:	
Address:	1530 Wilson Blvd., Suite 730, Arlington, VA 22209	Address:	

WSD
WENATCHEE SCHOOL DISTRICT
235 Sunset Avenue 509.663.8161 509.663.3082 fax

Contract Request Form

Non-Federal

Please submit this form with your **unsigned** contract to Denise Watson 2 weeks before the School Board meeting. Upon review and approval, the contract will be included on the agenda for School Board approval.

All contracts require school board approval.

The only authorized signatures on a contract are Brian Flones, Jon DeJong, Larry Mayfield, or the School Board.

Is this contract New (we do not have a current contract with them), a Renewal (same contract - extending length time) or a Revision (something added, removed or changed from the original).	New X Renewal ☐ Revision ☐

Cost of Contract - If there is no cost put N/A in the box, Revenue - if this is a grant or we are receiving funds, Budget code for contracts with a cost or put in N/A if it is revenue or no cost.

Cost of Contract: N/A Or Revenue: $1,000.00 Budget code: or PO# N/A

Contract is scheduled to begin:	Date of Execution ☑ or Specific Date:	Contract is	Active until terminated ☐ or Specific Date: 11/30/2019

Contract Details:

Brief Description/Purpose

(If this is a revision what changed:)

Model United Nations- Student sponsorship to Pacific Model United Nations conference in Seattle, Washington. November ' 19

Agency Contact Information (to whom & where contract needs to be mailed)

Agency Name	Community Foundation of NCW
Attention:	Foundation for Youth Grant
Street address or PO Box	9 S Wenatchee Ave
City, State, Zip Code	Wenatchee, WA 98801
Email Address	claire@cfncw.org
Phone Number	509) 663-7716

Be sure to follow state bid requirements as outlined in RCW 28A.335.190

Contract Requested By: Emily Wilson (Print/Type Name) Signature: Emily Wilson

I have read this contract and recommend it for board approval.

Requesters Administrator: KACEY WALTERS Eric Anderson (Print/Type Name) Signature: Eric Anderson

Reviewed by: (District Office) Larry Mayfield (Print/Type Name) Signature:

Attorney Review Needed: Yes / No Date Completed: / /

8/21/18 DW

For Good.
For Ever.
Community Foundation Since 1986
of North Central Washington

March 21, 2019

Wenatchee School District
235 Sunset Ave
Wenatchee, WA 98801

Re: NCW Foundation for Youth Grant - 2019

Dear Wenatchee School District,

Congratulations! You have been awarded a **NCW Foundation for Youth Grant** from the Community Foundation of North Central Washington in the amount of $1,000. Please review the terms of this Grant Agreement below. Once you have submitted your Grant Agreement to us, payment will be processed in approximately two weeks.

Please read this Grant Agreement carefully to assure that there is a mutual understanding as to the purpose of the grant and all the terms thereof. The terms of the grant are:

Grant Amount: **$1,000**

Purpose of Grant: **Model Nations Club – Student Sponsorship (Emily Wilson)**

Terms:

a) The grant shall be used exclusively for the purposes specified in the corresponding application, and any alternative use of funds must be authorized in advance by the Community Foundation of North Central Washington, or funds must be returned. Grant funds may not be used to reimburse previously incurred expenses.
b) Grantee must keep records of receipts and expenditures and make its books and records available to CFNCW if requested.
c) The grant period ends six months after funds are awarded. If additional time is required to complete the project, the Grantee will request, in writing, that CFNCW approve an extension.

Please sign below indicating acceptance of the grant terms.

Sincerely,

Claire Oatey
Director of Community Grants

Acknowledged:

By:
Title:
Date:

Wenatchee Public Schools

Watson, Denise <watson.d@wenatcheeschools.org>

Fwd: New submission from NCW Foundation for Youth Grant

1 message

White, Kimberly <white.k@wenatcheeschools.org> Thu, Apr 11, 2019 at 9:12 AM
To: Karen Walters <walters.k@wenatcheeschools.org>, Denise Watson <watson.d@wenatcheeschools.org>

This is the email regarding Emily Wilson's grant saying she can use the money in November. FYI.

Kim White
Office Manager
Wenatchee High School
509-663-8117, ext. 703
509-663-2573 (fax)

---------- Forwarded message ---------
From: **Wilson, Emily** <wilson.emily@wenatcheeschools.org>
Date: Wed, Apr 10, 2019 at 8:41 AM
Subject: Fwd: New submission from NCW Foundation for Youth Grant
To: Kimberly White <white.k@wenatcheeschools.org>

---------- Forwarded message ---------
From: **Claire Oatey** <claire@cfncw.org>
Date: Mon, Apr 1, 2019 at 8:52 AM
Subject: RE: New submission from NCW Foundation for Youth Grant
To: Wilson, Emily <wilson.emily@wenatcheeschools.org>

Hi Emily,

That would be fine. Hope it's a great conference!

Thank you,

Claire Oatey

Director of Community Grants

Office: Mon – Thurs

(509) 663-7716

www.cfncw.org
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For Good.
For Ever.

Community Foundation
of North Central Washington

From: Wilson, Emily <wilson.emily@wenatcheeschools.org>
Sent: Monday, March 25, 2019 9:21 AM
To: Claire Oatey <claire@cfncw.org>
Subject: Re: New submission from NCW Foundation for Youth Grant

Hi Claire!

Thank you so much!
Unfortunately we had to cancel our Vancouver trip this year due to scheduling conflicts with students. But, we do take an annual trip to a Seattle MUN conference every November. Would it be possible to still accept the grant for our trip in November '19? Or do we need to reapply for it in the fall?

I really appreciate the time the NCW Community Foundation has taken in regards to this grant.

Let me know either way- Thanks!

On Thu, Mar 21, 2019 at 11:29 AM Claire Oatey <claire@cfncw.org> wrote:

> Hi Emily!
>
> Congratulations! Wenatchee High School Model UN has been awarded a $1,000 NCW Foundation for Youth grant. I will be sending a grant agreement to the Wenatchee School District and once I have that returned and signed, your payment will be processed approximately two weeks after that.
>
> Thank you,
>
> **Claire Oatey**
>
> Director of Community Grants
>
> Office: Mon – Thurs
>
> (509) 663-7716
>
> www.cfncw.org
> Follow us on Facebook
>
> Join our Mailing List
>
> Apply for Scholarships
>
> For Good. For Ever.
> Community Foundation
> of North Central Washington

From: No Reply <noreply@cfncw.org>
Sent: Tuesday, January 22, 2019 12:32 PM
To: Claire Oatey <claire@cfncw.org>

WENATCHEE SCHOOL DISTRICT
235 Sunset Avenue 509.663.8161 509.663.3082 fax

Contract Request Form

Non-Federal

Please submit this form with your **unsigned** contract to Denise Watson 2 weeks before the School Board meeting. Upon review and approval, the contract will be included on the agenda for School Board approval.

All contracts require school board approval.

The only authorized signatures on a contract are Brian Flones, Jon DeJong, Larry Mayfield, or the School Board.

Is this contract New (we do not have a current contract with them), a Renewal (same contract - extending length time) or a Revision (something added, removed or changed from the original).	New ☐ Renewal ☑ Revision ☐

Cost of Contract - If there is no cost put N/A in the box, Revenue - if this is a grant or we are receiving funds, Budget code for contracts with a cost or put in N/A if it is revenue or no cost.

Cost of Contract: $0.00 Or Revenue: $0.00 Budget code: or PO# N?A

Contract is scheduled to begin:	Date of Execution ☐ or Specific Date: 4/8/19	Contract is scheduled to end:	Active until terminated ☐ or Specific Date: 6/15/22

Contract Details: Brief Description/Purpose (If this is a revision what changed:)	Renewal of agreement with Central Wa Hospital for WHS Medical occupation program

Agency Contact Information (to whom & where contract needs to be mailed)

Agency Name	Central WA. Hospital
Attention:	Casey Vogt
Street address or PO Box	609 Highline drive
City, State, Zip Code	East Wenatchee, WA 98802
Email Address	casey.vogt@confluencehealth.org
Phone Number	509-436-6899

Be sure to follow state bid requirements as outlined in RCW 28A.335.190

Contract Requested By: Mitzi Southard Print/Type Name Signature:

I have read this contract and recommend it for board approval.

Requesters Administrator: Dennis Conger Print/Type Name Signature:

Reviewed by: (District Office) Print/Type Name Signature:

Attorney Review Needed: Yes / (No) Date Completed: / /

Larry Mayfield

8/21/18DW

MASTER CLINICAL AFFILIATION AGREEMENT

This Master Clinical Affiliation Agreement ("**Agreement**") is made and entered into as of 8 day of April, 2019 ("**Effective Date**") by and between Confluence Health, a Washington nonprofit corporation; Central Washington Health Services Association, a Washington nonprofit corporation d/b/a Central Washington Hospital; Wenatchee Valley Hospital, a Washington nonprofit corporation (hereinafter collectively referred to as "**Network**") and_____ (hereinafter referred to as "**School**"). Network and School may be referred to collectively as the "**Parties**" or individually as "**Party**."

WHEREAS, Network owns and operates multiple hospital and clinic facilities throughout North Central Washington (each a "**Facility**" and in any combination the "**Facilities**");

WHEREAS, the School wishes to provide educational opportunities at Network ("**Educational Experiences**") for its students studying certain health professions or seeking to obtain certain certificates or degrees;

WHEREAS, Network is willing to cooperate with School with respect to the Educational Experiences and the students participating therein ("**Students**");

WHEREAS, Network and School desire to set forth the terms and conditions which shall govern any and all Educational Experiences; and

WHEREAS, Network and School will work together to agree on the details of the Educational Experiences in each area or program of study;

NOW, THEREFORE, in contemplation of the relationship to be established between the Parties and in consideration of the mutual covenants contained herein, the Parties agree as follows:

I. STRUCTURE OF AGREEMENT

A. The Parties expressly acknowledge and agree that the Students to whom Educational Experiences are made available pursuant to this Master Agreement might represent more than one (1) health profession and/or more than one (1) certificate or degree program at School. Network and School mutually desire to and do set forth in this Master Agreement certain terms and conditions applicable to all such Educational Experiences.

B. Any Educational Experiences under this Master Agreement shall be identified in a separate Program Agreement ("**Program Agreement**") in substantially the same form as that attached hereto as Exhibit A. Each Program Agreement shall be executed by the Parties and appended hereto as part of Exhibit A (*e.g.*, Exhibit A-1 Program Agreement). The Program Agreement shall set forth the primary

elements of the Educational Experience including, but not limited to: (i) the number of Students that will participate in an Educational Experience, (ii) the Facility(s) and departments thereof to be utilized for the Educational Experience, (iii) the dates and hours of each Student's assignment to the Educational Experience, including the dates of vacations and holidays to be observed. In addition, each Party shall designate in each Program Agreement its liaison to facilitate the Educational Experience and to receive notices under the Agreement ("**Liaison**"). Each Party may replace its own Liaison at any time by a writing delivered to the other Party.

C. Each Program Agreement shall be subject to all the terms and conditions of this Agreement, in addition to the specific details set forth in the Program Agreement. In case of a conflict between this Master Agreement and any Program Agreement, the conflicting term or condition of this Master Agreement shall control.

II. SCHOOL'S RESPONSIBILITIES

A. School will plan and determine the adequacy of the educational background of the Students in theoretical background, basic skill, professional ethics, attitude and behavior and shall assign to Network only those students who have satisfactorily completed the prerequisite didactic portions of the School's curriculum and who have not been, at any time, excluded from participating in any government-funded health care program, including but not limited to Medicare or Medicaid, or convicted for found to have violated any federal or state fraud and abuse law or illegal remuneration law.

B. School will be responsible for academic affairs and the education, instruction, assessment, and administration of the Students' academic program. School is responsible for developing the Educational Experience so that it can be conducted at and accomplished with the Network, and with the scope of health care services provided by Network.

C. School's Liaison will be the primary contact with Network's Liaison with regard to the Educational Experience. The School's Liaison will be responsible for student teaching and assessment provided pursuant to this Agreement. If requested by Network, School will provide instruction to Network staff with respect to School's expectations regarding assessment of Students.

D. School will advise all Students regarding the confidentiality of patient/client records and patient/client information imparted during the training experience. School also will advise all Students that the confidentiality requirements survive the termination or expiration of this Agreement.

E. School shall comply with, and shall advise Students that they are required to comply with all Network rules, regulations, and procedures as applicable to the Students' participation in the Educational Experiences, especially but not limited to those policies and procedures pertaining to patient care, patient rights, infection control, and proprietary information.

F. School will inform Students that Network requires students to maintain health insurance and provide proof of health insurance to School. Network may request Students provide proof of health insurance prior to the beginning of the Educational Experience.

G. School shall notify Network not less than twenty-one (21) days before the start of an Education Experience

H. School will require each Student to have completed, and will provide to Network at least two (2) weeks prior to the commencement of the Educational Experience documentation evidencing, the following:

1. A current (within 12 months) negative background check including a seven (7) year nationwide criminal history check.

2. Completion of the Disclosure & Authorization form, authorizing Network to perform a Washington State Police background check.

3. A current (within 12 months) negative drug screen which drug screen tests for at least the same controlled substances for which applicants for employment at Network are then tested. A listing of the drugs to be included in the drug screen test is available upon request.

4. Tuberculosis screening and disease immunity and vaccinations which are the same as those required of employees of Network. A listing of the requisite disease immunity and vaccinations is available upon request.

5. Completion of the Confluence Health Terms and Conditions of Student Participation form and Confluence Health Workforce Confidentiality and Security Agreement.

I. School shall provide to Network at least two (2) weeks prior to the commencement of the Educational Experience the legal name, date of birth, address and telephone number as well as information pertaining to relevant education and training for all Students who will participate in the Educational Experience.

J. School shall not allow any Student to commence or continue an Educational Experience who has not satisfied the requirements identified in Section II(H) or who proves, in Network's sole determination, to be undesirable through incompetence and/or uncooperativeness, or if there is reasonable evidence of non-professional conduct or inappropriate personal-professional appearance.

K. School shall promptly notify Network of any fact or circumstance that might preclude a Student's participation, or continuing participation, in the Educational Experience, including but not limited to a breach of the requirements identified in Section II(H).

III. NETWORK'S RESPONSIBILITIES.

A. Network has a responsibility to maintain a positive, respectful, and adequately resourced learning environment so that sound educational experiences can occur. Therefore, Network will provide Students with access to appropriate resources for each Educational Experience, including: (i) access to patients at Facilities in an appropriately supervised environment, in which Students can complete the School's curriculum; (ii) security badges or other means of secure access to patient care areas; (iii) access and required training for Students in the proper use of electronic medical records or paper charts, as applicable; (iv) computer access; (v) secure storage space for Student personal items when at Facilities; and (vi) access to call rooms, if necessary.

B. Network will retain full authority and responsibility for patient care and quality standards, and will maintain a level of care that meets generally accepted standards conducive to satisfactory instruction. While in Facilities, Students will have the status of trainees, are not to replace Network staff, and are not to render unsupervised patient care and/or services. All services rendered by Students must have educational value and meet the goals of the Educational Experience. Network and its staff will provide such supervision of the educational and clinical activities as is reasonable and appropriate to the circumstances and to the individual Student's level of training.

C. Network staff will, upon request, assist School in the assessment of the learning and performance of Students by completing assessment forms provided by School and returned to School in a timely fashion.

D. Network will provide for the orientation of Students as to Network's rules, regulations, policies, and procedures.

E. Network agrees to comply with applicable state and federal workplace safety laws and regulations. In the event a Student is exposed to an infectious or environmental hazard or other occupation injury (i.e., needle stick) while at Network, Network, upon notice of such incident from the involved Student, will provide such emergency care as is provided its employees, including, where applicable: examination and evaluation by Network's emergency department or other appropriate facility as soon as possible after the injury; emergency medical care immediately following the injury as necessary; initiation of the HBV, Hepatitis C (HCV), and/or HIV protocol as necessary; and HIV counseling and appropriate testing as necessary. In the event that Network does not have the resources to provide such emergency care, Network will refer such Student to the nearest emergency facility. School will define, for its Students, who bears financial responsibility for any charges generated.

F. To the extent Network, generates or maintains educational records related to Students, Network agrees to comply with the Family Educational Rights and Privacy Act ("**FERPA**"), to the same extent as such laws and regulations apply to School and shall limit access to only those employees or agents with a need to know. For the purposes of this Agreement, pursuant to FERPA, School hereby designates Network as a school official with a legitimate educational interest in the educational records of Students to the extent that access to School's records is required by Network to carry out the Educational Experience.

G. Upon request, Network will provide proof that it maintains liability insurance in an amount that is commercially reasonable.

H. Network will provide written notification to School promptly if a claim arises involving a Student. Network and School agree to share such information in a manner that protects such disclosures from discovery to the extent possible under applicable federal and state peer review and joint defense laws.

I. Network may immediately remove from the premises and retains the right to suspend or terminate any Student's participation in an Educational Experience. Network will promptly notify School if such an action is required and the reasons for such action. All final resolutions of the Student's academic status in such situations will be made solely by School after reviewing the matter and considering whatever written factual information Network provides to School. Network reserves the right to terminate the use of its facilities by a Student where necessary to maintain its operations free of disruption to ensure the quality of patient care and patient safety.

J. Anything in this Agreement to the contrary notwithstanding, if at any time Network, in its sole discretion, determines that the Educational Experience, or

Students, may adversely affect the safety of its patients or employees, or otherwise adversely affect Network operations, Network may reject or terminate the Educational Experience or Students.

IV. MUTUAL RESPONSIBILITIES

A. The Parties will work together to maintain an environment of high quality patient care. At the request of either Party, a meeting or conference will promptly be held between School and Network representatives to resolve any problems or develop any improvements in the operation of the clinical training program.

B. School will provide qualified and competent individuals in adequate number for the instruction, assessment, and supervision of Students using School facilities. Network will provide qualified and competent staff members in adequate number for the instruction and supervision of Students using Facilities.

C. Neither School nor Network will discriminate against an employee, applicant or Student enrolled in their respective program because of age, creed, gender identity, national origin, race, sex, sexual orientation or any other basis protected by law.

D. School and Network share responsibility for creating and maintaining an appropriate learning environment for students participating in the clinical education program. This includes both formal learning activities and the attitudes, values, and information "lessons" conveyed by individuals who interact with Students. The Parties will cooperate to evaluate the learning environment to identify positive and negative influences on the maintenance of professional standards, and to conduct and develop appropriate strategies to enhance the positive and mitigate the negative influences.

V. PROFESSIONAL LIABILITY INSURANCE.

A. School acknowledges that Network requires professional liability insurance adequately covering each Student's activities in the Educational Experience for the entire period of such Student's participation in the Educational Experience ("**Required Insurance**"), whether such Required Insurance is obtained by the Student or the School on the Student's behalf.

B. Not less than twenty-one (21) days before the start of the Student's participation in the Educational Experience and again thirty (30) days prior to the expiration of, or any change in, the Required Insurance, Student or School shall deliver to

Network evidence, reasonably satisfactory to Network in its sole discretion, of the Required Insurance.

C. Notwithstanding anything in Section IV(B) to the contrary, professional liability insurance covering the Student's activities in the Educational Experience in the amounts of not less than $1,000,000 for each occurrence and $3,000,000 annual aggregate shall necessarily be "adequate" for purposes of Section IV(A).

D. The requirements of this Section IV shall be a precondition to and an ongoing condition for each Student's participation in the Educational Experience.

VI. INDEMNIFICATION.

A. School Indemnification. School hereby agrees to defend, indemnify, and save and hold harmless Network, its officers, directors, employees, and agents from and against any and all claims, demands, damages, losses, liabilities, costs, and expenses, including attorney's fees, that they might incur, or for which suit against them might be brought, due to the acts or omissions of: (1) School or (2) any School employee, officer, agent, Student(s).

B. Network Indemnification. Network hereby agrees to defend, indemnify, and save and hold harmless School, its officers, directors, employees, and agents from and against any and all claims, demands, damages, losses, liabilities, costs, and expenses, including attorney's fees, that they might incur, or for which suit against them might be brought, due to the acts or omissions of: (1) Network or (2) any Network employee, officer, or agent for activities under this Agreement.

VII. TERM AND TERMINATION.

A. This Agreement shall commence on the Effective Date for an initial term of three (3) years ("**Initial Term**"), unless terminated sooner as provided herein. This Agreement shall automatically renew for successive one (1) year terms (each a "**Renewal Term**") thereafter, unless terminated sooner as provided herein. All Students participating in an Educational Experience at the time a Notice of Termination is sent shall be allowed to finish the Educational Experience in which s/he/they are then participating.

B. This Agreement and/or any Program Agreement may be terminated prior to its expiration by either Party, with or without cause, upon thirty (30) days' written notice to the other Party; provided, however, that any Student participating in an Educational Experience at the time such notice is given may complete his/her Educational Experience.

VIII. **MISCELLANEOUS PROVISIONS.**

A. Employment Disclaimer. Students participating in Educational Experiences will not be considered employees or agents of Network or School for any purpose. Students will not be entitled to receive any compensation from Network or School or any benefits of employment from Network or School, including but not limited to health care or workers' compensation benefits, vacation, sick time, or any other benefit of employment, indirect or indirect. Network will not be required to purchase any form of insurance for the benefit or protection of any Student.

B. Health Insurance Portability and Accountability Act. Students participating in clinical training pursuant to this Agreement are members of Network's workforce for purposes of the Health Insurance Portability and Accountability Act ("HIPAA") within the definition of "health care operations" and, therefore, may have access to patient medical information as provided for in the Privacy Rule of HIPAA. Therefore, additional agreements are not necessary for HIPAA compliance purposes. This paragraph applies solely to HIPAA privacy and security regulations applicable to Network and, as stated in Section VII(A), above, does not establish an employment relationship.

C. No Agency. Nothing in this Agreement is intended to or shall be construed to constitute or establish an agency, employer/employee, partnership, franchise, or fiduciary relationship between the Parties; neither Party shall have the right or authority or shall hold itself out to have the right or authority to bind the other Party, nor shall either Party be responsible for the acts or omissions of the other except as provided specifically to the contrary herein.

D. Survival. Anything herein to the contrary notwithstanding, the provisions of the Agreement relating to liability and any other provisions which by their nature should survive termination or expiration of this Agreement shall so survive.

E. Headings. The Section headings in this Agreement are for convenience only. They form no part of this Agreement and shall not affect its interpretation.

F. Severability. If any part of the Agreement or any Program Agreement is held to be invalid, illegal, or unenforceable in any respect, that provision shall be limited or eliminated or conformed to the minimum requirements of law so that this Agreement or the Program Agreement otherwise remains in full force and effect.

G. Governing Law. This Agreement shall be governed by the laws of the state of Washington.

H. Assignment. Neither Party may assign its rights or obligations under this Agreement or any Program Agreement without the prior written consent of the other Party. Any assignment in violation of this provision is void and without effect.

I. Entire Agreement, Amendment and Waiver. The Agreement contains the entire understanding between the Parties and supersedes all prior representations and agreements, either oral or in writing, with respect to the subject matter of this Agreement. Unless otherwise specifically provided in this Agreement, this Agreement may be amended or changed only by mutual written consent of the duly authorized representatives of Network and School. Any waiver of any of the terms and conditions hereof or any Program Agreement must be in writing to be enforceable, and shall not be construed as a waiver of any other terms and conditions hereof.

J. Notices. All notices required by this Agreement to be given to or by Network or School shall be given in writing and shall be delivered by (a) personal hand delivery, (b) delivery by messenger, express or air courier or similar courier, or (c) delivery by U.S. mail, registered or certified, postage prepaid with receipt requested, at the address specified below. Notices delivered personally or by messenger, express or air courier or similar courier shall be deemed communicated as of actual delivery or refusal of delivery; mailed notices shall be deemed communicated seventy-two (72) hours after mailing. Either Network or School may change the address to which such written notices must be sent by notifying the other Party of the change of address in the manner set forth above.

TO NETWORK: Confluence Health
1201 S. Miller St.
Wenatchee, WA 98801
Attn: Jim Wood, CAO

With a copy to: Confluence Health
1201 S. Miller St.
Wenatchee, WA 98801
Attn: General Counsel

TO SCHOOL:

With a copy to:

K. Third Party Beneficiaries. This Agreement is not intended to and shall not be construed to give any third party any interest or rights (including, without limitation, any third party beneficiary rights) with respect to or in connection

with any agreement or provision contained herein or contemplated hereby, except as otherwise expressly provided for in this Agreement.

L. Counterparts. This Agreement may be executed and delivered by facsimile or .pdf copy and the signature of any Party to this Agreement delivered by facsimile or .pdf copy shall be deemed an original signature for all purposes. This Agreement may be executed in counterparts, each of which will be deemed an original, but all of which shall constitute one and the same instrument. The partially executed signature page of any counterpart of this Agreement may be attached to any other partially executed counterpart of this Agreement without impairing the legal effect of the signature(s) on such signature page.

M. Attorney's Fees. If any legal action is commenced to enforce any terms of this Agreement or in any way pertaining to the interpretation or performance of this Agreement, the prevailing Party shall be entitled to recover all costs and reasonable attorneys' fees incurred in such action.

N. Authority. Each party represents and warrants that the individual signing this Agreement and Program Agreement on such Party's behalf has all requisite authority and approvals to do so and to bind such Party. Each Party further represents and warrants that it has done and will do all thigs necessary so that this Agreement and any Program Agreement will be valid, binding, and legally enforceable upon such Party.

O. Non-Discrimination. School and any of School's subcontractors shall abide by the requirements of 41 CFR §§60-1.4(a), 60-300.5(a) and 60-741.5(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, color, religion, sex, sexual orientation, gender identity or national origin. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability or veteran status.

[REMAINDER OF PAGE INTENTIONALY LEFT BLANK; SIGNATURE PAGE FOLLOWS.]

IN WITNESS WHEREOF, each Party has caused this Master Agreement to be executed as of the date set forth below.

CONFLUENCE HEALTH:

By:_____

Name:_____

Title_____

Date:_____

SCHOOL

By:_____

Name:_____

Title:_____

Date:_____

CENTRAL WASHINGTON HEALTH SERVICES ASSOCIATION

By:_____

Name:_____

Title_____

Date:_____

WENATCHEE VALLEY HOSPITAL

By:_____

Name:_____

Title_____

Date:_____

EXHIBIT A
TEMPLATE PROGRAM AGREEMENT

PROGRAM AFFILIATION AGREEMENT NO. _____

This Program Affiliation Agreement No. _____ ("**Program Agreement**") is made and entered into this __8___ day of ___April_____, 2019____ ("**Program Effective Date**") by and between Confluence Health, a Washington nonprofit corporation; Central Washington Health Services Association, a Washington nonprofit corporation d/b/a Central Washington Hospital; Wenatchee Valley Hospital, a Washington nonprofit corporation (hereinafter collectively referred to as "**Network**") and__WHS MEDICAL OCCUPATIONS_____ (hereinafter referred to as "**School**") pursuant and subject to said Parties' Master Affiliation Agreement dated the ___8__ day of ___APRIL_____, 2019____. This Program Agreement describes a specific health profession and/or a specific certificate or degree for which Students in the Educational Experiences will be studying.

Program Name:

Network Liaison:
Name: _Casey Vogt
Address: 609 Highline Drive
East Wenatchee, WA 98802
Phone: 509-436-6825
Fax: 509-436-6899
Email: casey.vogt@confluencehealth.org

School Liaison:
Name: Mitzi Southard
Address: 1101 Millerdale
Wenatchee, WA 98801
Phone: (509) 663-8117 EXT 550
Fax:
Email: southard.m@wenatcheeschools.org

Primary Responsibility for Teaching: (select only one option per line)

▪ in inpatient settings:	□ N/A	X□ Network	□ School
▪ in outpatient settings:	□ N/A	X□ Network	□ School
▪ other teaching arrangement (describe):			

Length of Clinical Experiences: (select any and all that apply; don't use a line that doesn't apply)
X□ ___3__ weeks per semester or rotation period
X□ __2___ groups of Students on [days of week]
X□ _1.5____ hours per group per day/rotation period (circle one)
□ other (describe):

Maximum Number of Students: (select any and all that apply; don't use a line that doesn't apply)
X□ _37____ per semester or rotation period
X□ __24___ per group in inpatient settings
□ _____ per group in outpatient settings
□ other (describe):

Start Date of First Semester or Rotation Period: _April 24_____, 2019

Facility(ies): Confluence Health /Central Washington Hospital

This Program Agreement expires: (select only one)
□ 12 months after the Program Effective Date.
□ at the end of _____ semesters or rotation periods.
X□ on _____June 15_____, 2022____.

V. 11.09.17

IN WITNESS WHEREOF, each Party has caused this Program Agreement to be executed by its authorized representative on the date set forth below.

CONFLUENCE HEALTH:

By:_____

Name:_____

Title_____

Date:_____

SCHOOL

By:_____

Name:_____

Title:_____

Date:_____

CENTRAL WASHINGTON HEALTH SERVICES ASSOCIATION

By:_____

Name:_____

Title_____

Date:_____

WENATCHEE VALLEY HOSPITAL

By:_____

Name:_____

Title_____

Date:_____

WSD 246
WENATCHEE SCHOOL DISTRICT
235 Sunset Avenue 509.663.8161 509.663.3082 fax

Contract Request Form

Non-Federal

Please submit this form with your unsigned contract to Denise Watson 2 weeks before the School Board meeting.
Upon review and approval, the contract will be included on the agenda for School Board approval.
All contracts require school board approval.
The only authorized signatures on a contract are Brian Flones, Jon DeJong, Larry Mayfield, or the School Board.

Is this contract New (we do not have a current contract with them), a Renewal (same contract - extending length time) or a Revision (something added, removed or changed from the original).	New ☒ Renewal ☐ Revision ☐

Cost of Contract - If there is no cost put N/A in the box, Revenue - if this is a grant or we are receiving funds, Budget code for contracts with a cost or put in N/A if it is revenue or no cost.

Cost of Contract: $3,295.00 or Revenue: _____ Budget code: 0100-28-7000-402

Contract is scheduled to begin:	Date of Execution ☐ or Specific Date: Twice Yearly	Contract is scheduled to end:	Active until terminated ☐ or Specific Date: _____

Contract Details:
Brief Description/Purpose
(If this is a revision what changed:)

Maintenance service to the turf at the apple bowl on a twice year basis. The group does a general sweeping to remove foreign objects, do a deep groom to de-compact infill, inspect and analyze infill depth and consistency and check all seams. Program 1 (one visit) to be chosen.

Agency Contact Information (to whom & where contract needs to be mailed)

Agency Name	Fieldturf USA, Inc
Attention:	Lisa Kerwin
Street address or PO Box	7445 Cote-de-Liesse Road Suite 200
City, State, Zip Code	Montreal Quebec H4T 1G2
Email Address	lisa.kerwin@fieldturf.com
Phone Number	514-375-2632

Be sure to follow state bid requirements as outlined in RCW 28A.335.190

Contract Requested By: Jim Beeson (Print/Type Name) Signature: _____

I have read this contract and recommend it for board approval.

Requesters Administrator: _____ (Print/Type Name) Signature: _____

Reviewed by: (District Office) Larry Mayfield (Print/Type Name) Signature: [signature]

7/9/18 DW

FieldTurf
A Tarkett Sports Company

THE ULTIMATE
SURFACE EXPERIENCE

To: **Jim Beeson** **3/28/2019**
District Athletic Director
Wenatchee High School
1101 Millerdale Avenue
Wenatchee, WA 98801
(509) 663-3384
Email: beeson.j@wenatcheeschools.org

Re: MAINTENANCE PROPOSAL FOR WENATCHEE HIGH SCHOOL

1-FieldTurf offers to provide maintenance services for the following FieldTurf field(s):

Field Name:	Apple Bowl Stadium
Size:	92,660 SqFt
Product:	FTRV – 2.5"
Install Date:	8/3/2015

The scope of services under this proposal shall consist of the following on each visit offered herein:

ADVANCED CARE MAINTENANCE- SMG SportChamp maintenance sessions including: (a) a general sweeping to remove foreign objects such as dirt, leaves, bird droppings, gum and other debris that may collect on the field surface; and (b) a deep groom, sweep and rejuvenation to de-compact infill in an effort to maintain appropriate G-Max levels. This is a three step process: decompaction, brushing and infill cleaning with a vacuum rotary brush and fine groom with a power surface brush.

Overall analysis and inspection of the field and its applicable systems, including infill depth and consistency, infill migration, field edging attachments, sewn and glued seams, line verification and field inserts (inlays).

Up to eight (8) minor repairs (including sewing/adhesive failures, inlay separation, and general workmanship) to the FieldTurf surface, in the discretion of the FieldCare crew at time of visit. If necessary, additional repairs can be performed on a separate visit and at an additional cost, if applicable. Additionally, any additional warranty repairs discovered during the maintenance visit may need to be performed on a separate visit, to be scheduled on a mutually agreeable date, as the time set aside for the proposed services may not provide enough time to complete all required repairs discovered during the performance of the services.

This offer does not include the repair of *any damage to the field as a result of acts of vandalism and/or neglect.* The price includes normal wear and tear; any major repairs or necessary maintenance as a result of damage due to abnormal wear and tear, abuse, vandalism, or neglect are subject to additional cost.

Program 1- One (1) Year Agreement: One (1) site visit to Apple Bowl Stadium

Includes:
-One (1) **Advanced Care Visit**
-Pre and Post Field Inspection with written Field Maintenance Summary
-Minor Seam and Inlay Repairs, not to exceed eight (8) repairs up to fifteen (15) linear SqFt
-Field Magnet Sweep
-Light Infill added to High Traffic Areas

Program 2- One (1) Year Agreement: Two (2) site visits to Apple Bowl Stadium

Includes:
-Two (2) **Advanced Care Visits**
-Pre and Post Field Inspection with written Field Maintenance Summary

Full/Spring

FieldTurf
A Tarkett Sports Company

THE ULTIMATE
SURFACE EXPERIENCE

-Minor Seam and Inlay Repairs, not to exceed eight (8) repairs up to fifteen (15) linear SqFt
-Field Magnet Sweep

2-The price offered is the following:

PROGRAM 1:	**TOTAL COST PROGRAM 1:**	**$3,295.00**
PROGRAM 2:	**TOTAL COST PROGRAM 2:**	**$6,590.00**

The price is subject to an increase without notice in the event that there is an increase in raw materials, freight, or direct expenses in maintaining the grass surface. The Price is valid for a period of sixty (60) days.

3- Notwithstanding any other document or agreement entered into by FieldTurf in connection with the supply and installation only of its product pursuant to the present proposal, the following shall apply:

a) This bid proposal and its acceptance is subject to strikes, accidents, delays beyond our control and force majeure;
b) Payment shall be due within thirty (30) days of completion of each scheduled maintenance visit;
c) Unless otherwise agreed upon and noted herein, the maintenance visit shall be performed as scheduled by the parties on an agreed-upon date;
d) FieldTurf requires suitable access to all fields proposed herein. The suitable access area must be at least five (5) feet wide and comprised of a hard, stable or paved surface. To the extent suitable access is not provided, additional costs may apply and service delays may occur. Additionally, FieldTurf will not be responsible for damage to any access or surrounding area due to unsuitable conditions.
e) Accounts overdue beyond 30 days of billing will be charged at an interest rate of 1.5% per month (19.56% per annum);
f) This proposal is based on a single mobilization. If the site is not ready and additional mobilizations are necessary additional charges will apply;
g) The proposed price does not include any applicable sales or use taxes; and
h) In the event that FieldTurf is ultimately obliged to take collection procedures for payment, acceptor of this bid shall be liable for FieldTurf's collection costs including attorney fees and costs.

FieldTurf USA, Inc.

Per: Lisa Kerwin

Lisa Kerwin, Customer Service Coordinator

P: 514.375.2632
E: lisa.kerwin@fieldturf.com

READ, AGREED, AND ACCEPTED BY ADDRESSEE

Signature: _____

Print Name: _____
Date: _____
PO #: _____
Program Selection: _____

For FieldTurf to schedule and execute above services, a signed agreement and/or PO from the customer must be sent to FieldTurf directly.

RETURN SIGNED AGREEMENT AND/OR PO TO:

FieldTurf USA, Inc.
Fax: 541.633.7808
Email: lisa.kerwin@fiedturf.com

PO/Agreement can be mailed, emailed and/or faxed

All payments should be mailed to:

FieldTurf Tarkett
7445 Cote-de-Liesse Road
Suite 200
Montreal, Quebec H4T 1G2

MEMORANDUM: Inventory Surplus

To:	Board of Education
From:	Karen Walters, Director of Accounting
Date:	April 23, 2019
Subject:	Declaration of Surplus

The Administration recommends that the items on the attached list be declared surplus and requests authorization to dispose of them.

Building	Quantity	Item
Orchard MS	1 Box	Headphones
	4 Box	Misc. Books
District Office	2 Boxes	Cell Phones
	1	Plantronics Headset
Technology		
Special Programs	1	Brother HL

Wenatchee School District
Sports Camp/Clinic Application

This application must be completed and approved by the school board prior to the start of any activity including pre-registration. Please include a prior year's camp flyer if you have one.

1. Team Soccer Camp
   Type of Camp

2. Play Games, Improve Skill & Bonding
   Purpose of Camp

3. WHS Girls Soccer Program
   Group Sponsoring Camp

4. Apple Bowl & Triangle Park
   Camp Location

5. John Spring and WHS Coaches
   Name of Clinicians

6. John Springer & Coaches to be Hired
   WHS Coaches Attending

7. July 26-27, 2019 or July 30-31, 2019
   Date(s) of Camp

8. Games All Day Long Both Days
   Number & Types of Sessions

9. Next Years Grades 9th – 12th
   Age (Grade) of Participants

10. $300 Per Team
    Cost Per Participant

11. 0
    Anticipated Number of Male Campers

12. 100+
    Anticipated Number of Female Campers

13. Is the insurance/liability statement to the parent/legal guardian included on the pupil registration form?
    X Yes ____ No

Camp Sponsor Signature	Building Principal Signature	District AD Signature
4/11/2017	4-11-19	4/11/19
Date of Signature	Date of Signature	Date of Signature

School Board Section

____ Approved

____ Rejected

Reason for Rejection:

WSD Administrative Signature _____ Date _____

Wenatchee School District
Sports Tournament Application

This application must be completed and approved by the school board prior to the start of any activity including pre-registration. Please include a prior year's camp flyer if you have one.

1. High School Girls Soccer
   Type of Tournament

2. Play Games/Improve/Team Bonding
   Purpose of Tournament

3. Wenatchee Valley College Tourney
   Tournament Location

4. John Springer & David Vazquez
   Name of Coaches

5. June 28 & 29, 2019
   Date(s) of Tournament

6. $375 per Team
   Tournament Cost

7. Next Year's 9-12 Grade Girls
   Age (Grade) of Participants

8. Tournament Details: The WHS girls' soccer coaches will be taking one junior varsity level team and one varsity team to WVC for a tournament. The players will transport themselves to and from the games.

Coach's Signature	Building Principal Signature	District AD Signature
4/11/2017	4-11-19	4/11/19
Date of Signature	Date of Signature	Date of Signature

School Board Section

____ Approved

____ Rejected

Reason for Rejection:

WSD Administrative Signature _____ Date _____

Wenatchee School District
Summer League Application

This application must be completed and approved by the school board prior to the start of any activity including pre-registration. Please include a prior year's camp flyer if you have one.

1. High School Girls Soccer
   Type of League

2. Play Games/Improve/Team Bonding
   Purpose of League

3. Apple Bowl, Cashmere & Eastmont
   League Location

4. John Springer & David Vazquez
   Name of Coaches

5. June 20th – July 25th Tues & Thur
   Date(s) of League

6. TBD – Officials if Used
   League Cost

7. Next Year's 9-12 Grade Girls
   Age (Grade) of Participants

8. Tournament Details: The local girls' soccer programs are forming a summer league to play games on Tuesdays and Thursdays at various school sites. The girls will transport themselves to games in Wenatchee and parent volunteers will transport kids to out of town venues.

Coach's Signature	Building Principal Signature	District AD Signature
4/11/2017	4-11-19	4/11/19
Date of Signature	Date of Signature	Date of Signature

School Board Section

____ Approved

____ Rejected

Reason for Rejection:

_____ _____

WSD Administrative Signature Date

UCA CAMPS
DAILY SCHEDULE

4 Day-3 Night

UCA Summer Camp listings are online at uca.varsity.com

UCA OVERNIGHT CAMP HAS EVERYTHING YOU NEED TO SUCCEED THIS SEASON.

UCA's mission is to inspire leadership on and off the field. Our camps and our company are committed to making that happen. Well-curriculum centered on game cheerleading and squad leadership, there's no better place to master our effective "Cheer With Us" approach than at a UCA Overnight Camp. The environment is always low pressure, high-energy fun and our focus is squarely on the needs of your squad.

Camp Spirit Theme: GREATEST SHOW OF SUMMER!

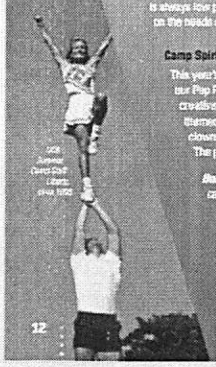
This year's theme is the Greatest Show of Summer featuring our Pep Rally: **Circus in the Stands!** On night three, get creative and dress up with your team for an interactive, circus-themed rally! Some costume ideas include: circus animals, clowns, carnival food, ring masters, tightrope walkers and more. The possibilities are spectacular!

Bonus— *your Varsity Spirit Fashion Rep even has spirit-themed camp wear for your squad to order.*

***Elective Classes:**

Customize your UCA Camp experience with your choice of optional classes:

- Additional Stunts
- NEW– Fight Song
- NEW– Fight Song Critique
- Basket Toss Class (Must have extension pop cradle to qualify)



- Check-In & Registration
- **Opening Staff Demo: *It's Show Time!***
- **Coaches' Meeting #1** & Spirit Prep Workshop / Game Day Class: Sidelines
- RALLY ROUTINE
- Safety Awareness
- Stunt Class
- **UCA Staff Sideline Demo**
- Situational Sideline Private Coaching
- DINNER
- **Captains' Leadership Training** / First Time Coaches' Meeting
- Pyramid Class
- **UCA Staff Cheer Demonstration**
- Game Day Class: Cheers
- Cheer Private Coaching Prep
- **Squad Leadership Training** & Class Yells / Coaches' Stunt Workshop #1
- Coaches' Goal Setting / St. Jude Letters
- Big Brother / Big Sister & Daily Awards

- BREAKFAST
- **Coaches' Meeting #2** & Big Brother / Big Sister Check-In / Game Day Class: Band Chant & General Sidelines
- Group A– Cheer Private Coaching
  Group B– **FNL Frenzy** & Squad Credentialing
- Group A– **FNL Frenzy** & Squad Credentialing
  Group B– Cheer Private Coaching
- LUNCH
- Cheer Evaluations
- Group A– Hip Hop Timeout & Jumps
  Group B– Stunts & Pyramids
- Group A– Stunts & Pyramids
  Group B– Hip Hop Timeout & Jumps
- DINNER
- **UCA Staff Game Day Demonstration**
- Game Day Practice
- Rally Routine Private Coaching Prep
- Jump Off
- Big Brother / Big Sister & Daily Awards

- BREAKFAST
- **Coaches' Meeting #3**– *Powered by Spirit Works* & Big Brother / Big Sister Check-In / **Game Day Review**
- Personalized Pyramid Class
- Group A– Rally Routine Private Coaching
  Group B– **Team Unity** & Squad Credentialing
- Group A– **Team Unity** & Squad Credentialing
  Group B– Rally Routine Private Coaching
- LUNCH
- Rally Routine Evaluations
- Stunt Class
- **Elective Classes***
- All-American Set Up / Material Review / Coaches' Stunt Workshop #2
- All-American Tryouts
- DINNER
- **Coaches' & Captains' Corner**
- Sideline Stunts
- **Gatorade Break**
- **Pep Rally: Circus in the Stands!**
- Daily Awards & Pin It Forward
- Final Coaches' Q&A

- BREAKFAST
- **Team Time: Big Brother / Big Sister**
- **Rally Routine Championship**
- **Game Day Championships**
- **Squad Credentialing Presentation**
- **Meet the UCA Staff**
- **Final Awards & Pin It Forward**

UNIVERSITY OF UTAH
Salt Lake City, Utah

		RESIDENT:		INSTRUCTION ONLY:	
		STUDENT	ADVISOR	STUDENT	ADVISOR
	JUNE 19-22*	$379	$379	$230	$180
EL	JULY 8-11**	$389	$389	$240	$180
	JULY 8-11*	$379	$379	$230	$180

The university requires 1 adult per 12 youth.

**Instruction Only with lunches and dinners rate is $285 for participants and $230 for coaches.*

***Instruction Only with lunches and dinners rate is $295 for participants and $230 for coaches.*

VIRGINIA

RS **GREAT WOLF LODGE**
Williamsburg, Virginia

AUGUST 6-9

See Resort Listings for more information.

JAMES MADISON UNIVERSITY
Harrisonburg, Virginia

	RESIDENT:		INSTRUCTION ONLY:	
	STUDENT	ADVISOR	STUDENT	ADVISOR
JULY 24-27	$372	$372	$235	$180

THE COLLEGE OF WILLIAM AND MARY
Williamsburg, Virginia

		RESIDENT:		INSTRUCTION ONLY:	
		STUDENT	ADVISOR	STUDENT	ADVISOR
TN	JULY 29-31	$325	$325	$217	$163

The university requires 1 adult per 15 youth and 1 supervisor per floor who is 21 years or older. The university requires all adults to complete a background check.

WASHINGTON

RS **GREAT WOLF LODGE**
Centralia, Washington

JUNE 26-29
MS 1:1 JUNE 29-JULY 2 *Powered by VIROC*
ST JULY 8-11
JULY 24-27
AUGUST 6-9

See Resort Listings for more information.

UNIVERSITY OF PUGET SOUND
Tacoma, Washington

		RESIDENT:		INSTRUCTION ONLY:	
		STUDENT	ADVISOR	STUDENT	ADVISOR
	JUNE 26-29	$390	$390	$251	$180
EL	JULY 19-22	$400	$400	$261	$180
	JULY 19-22	$390	$390	$251	$180
	AUGUST 1-4	$390	$390	$251	$180

WASHINGTON STATE UNIVERSITY
Pullman, Washington

		RESIDENT:		INSTRUCTION ONLY:	
		STUDENT	ADVISOR	STUDENT	ADVISOR
	JULY 15-18	$374	$374	$235	$180
EL	JULY 15-18	$384	$384	$245	$180

WISCONSIN

RS **CHULA VISTA RESORT**
Wisconsin Dells, Wisconsin

MS 1:1 JUNE 25-27 *Powered by VIROC*
CO JULY 11-14
ST JULY 15-18
JULY 15-18

See Resort Listings for more information.

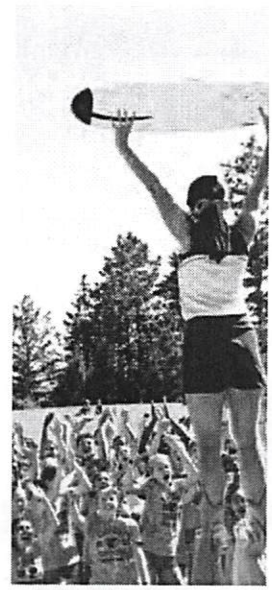
MARQUETTE UNIVERSITY
Milwaukee, Wisconsin

		RESIDENT:		INSTRUCTION ONLY:	
		STUDENT	ADVISOR	STUDENT	ADVISOR
TN	JULY 9-11	$335	$335	$217	$163

WYOMING

UNIVERSITY OF WYOMING
Laramie, Wyoming

	RESIDENT:		INSTRUCTION ONLY:	
	STUDENT	ADVISOR	STUDENT	ADVISOR
JULY 29-AUGUST 1	$335	$335	$235	$180



CAMP AWARDS

Best **GAME DAY CHAMPIONSHIP** performances including Sideline, Cheer and overall Game Day

Top placings for the **RALLY ROUTINE CHAMPIONSHIP**

Most Improved

All-American Medals

Pin It Forward

Leadership Award

Traditions Award

And of course, **Spirit Awards** including the TOP BANANA!

Wenatchee School District
Sports Camp/Clinic Application

This application must be completed and approved by the school board prior to the start of any activity including pre-registration. Please include a prior year's camp flyer if you have one.

1. Cheerleading Camp
   Type of Camp

2. Teach Basic & Advanced Cheer Skills
   Purpose of Camp

3. Universial Cheerleading Assoc.
   Group Sponsoring Camp

4. University of Puget Sound
   Camp Location

5. Employees of Univ. Cheer Assoc.
   Name of Clinicians

6. Dani Schafer-Cloke & Nikki Buzzell
   WHS Coaches Attending

7. August 1-4, 2019
   Date(s) of Camp

8. All Day Sessions for the Duration
   Number & Types of Sessions

9. Next Years Grades 9th – 12th
   Age (Grade) of Participants

10. $400 Per Cheerleader & Coach
    Cost Per Participant

11. 2
    Anticipated Number of Male Campers

12. 25
    Anticipated Number of Female Campers

13. Is the insurance/liability statement to the parent/legal guardian included on the pupil registration form?
    X Yes ____ No

Camp Sponsor Signature	Building Principal Signature	District AD Signature
4/9/19	4/11/19	4/11/19
Date of Signature	Date of Signature	Date of Signature

School Board Section

____ Approved

____ Rejected

Reason for Rejection:

WSD Administrative Signature _____ Date _____

Wenatchee School District
Sports Tournament Application

This application must be completed and approved by the school board prior to the start of any activity including pre-registration. Please include a prior year's camp flyer if you have one.

1. High School Boys Basketball
   Type of Tournament

2. Play Games/Improve/Team Bonding
   Purpose of Tournament

3. Ballard High School in Seattle
   Tournament Location

4. Travis Williams & Don Whipple
   Name of Coaches

5. June 7-9, 2019
   Date(s) of Tournament

6. $275 per Team
   Tournament Cost

7. Next Year's 9-12 Grade Boys
   Age (Grade) of Participants

8. Tournament Details: The WHS boys' basketball coaches will be taking one varsity level team to Seattle for a tournament. The group will be staying in a hotel two nights and using school district vehicles for transportation.

Coach's Signature	Building Principal Signature	District AD Signature
4/9/19	4/11/19	4/10/19
Date of Signature	Date of Signature	Date of Signature

School Board Section

____ Approved

____ Rejected

Reason for Rejection:

WSD Administrative Signature _____ Date _____

Wenatchee School District
Sports Tournament Application

This application must be completed and approved by the school board prior to the start of any activity including pre-registration. Please include a prior year's camp flyer if you have one.

1. High School Boys Basketball
   Type of Tournament

2. Play Games/Improve/Team Bonding
   Purpose of Tournament

3. North Central & Mead HS in Spokane
   Tournament Location

4. Travis Williams & Don Whipple
   Name of Coaches

5. June 1 & 2, 2019
   Date(s) of Tournament

6. $250 per Team
   Tournament Cost

7. Next Year's 9-12 Grade Boys
   Age (Grade) of Participants

8. Tournament Details: The WHS boys' basketball coaches will be taking one varsity level and jv level team to Spokane for a tournament. The group will be staying in a hotel one night and using school district vehicles for transportation.

Coach's Signature	Building Principal Signature	District AD Signature
4/9/19	4/11/19	4/10/19
Date of Signature	Date of Signature	Date of Signature

School Board Section

____ Approved

____ Rejected

Reason for Rejection:

WSD Administrative Signature _____ Date _____

Wenatchee School District
Sports Tournament Application

This application must be completed and approved by the school board prior to the start of any activity including pre-registration. Please include a prior year's camp flyer if you have one.

1. High School Boys Basketball
   Type of Tournament

2. Play Games/Improve/Team Bonding
   Purpose of Tournament

3. Ellensburg High School Tourney
   Tournament Location

4. Travis Williams & Don Whipple
   Name of Coaches

5. June 14-16, 2019
   Date(s) of Tournament

6. $300 per Team
   Tournament Cost

7. Next Year's 9-12 Grade Boys
   Age (Grade) of Participants

8. Tournament Details: The WHS boys' basketball coaches will be taking one varsity level team to Ellensburg for a tournament. The players will be transported in school district vehicles or parent volunteers.

Coach's Signature	Building Principal Signature	District AD Signature
4/9/19	4/11/19	4/11/19
Date of Signature	Date of Signature	Date of Signature

School Board Section

____ Approved

____ Rejected

Reason for Rejection:

WSD Administrative Signature _____ Date _____

Wenatchee School District
Sports Tournament Application

This application must be completed and approved by the school board prior to the start of any activity including pre-registration. Please include a prior year's camp flyer if you have one.

1. High School Boys Basketball
   Type of Tournament

2. Play Games/Improve/Team Bonding
   Purpose of Tournament

3. Cashmere High School Tourney
   Tournament Location

4. Travis Williams & Don Whipple
   Name of Coaches

5. TBA
   Date(s) of Tournament

6. TBD
   Tournament Cost

7. Next Year's 9-12 Grade Boys
   Age (Grade) of Participants

8. Tournament Details: The WHS boys' basketball coaches will be taking one junior varsity level team and one varsity team to Cashmere for a tournament. The players will be transported in school district vehicles or parent volunteers.

Coach's Signature	Building Principal Signature	District AD Signature
4/9/19	4/10/19	4/10/19
Date of Signature	Date of Signature	Date of Signature

School Board Section

____ Approved

____ Rejected

Reason for Rejection:

_____ _____

WSD Administrative Signature Date

Wenatchee School District
Sports Tournament Application

This application must be completed and approved by the school board prior to the start of any activity including pre-registration. Please include a prior year's camp flyer if you have one.

1. High School Boys Basketball
   Type of Tournament

2. Play Games/Improve/Team Bonding
   Purpose of Tournament

3. Wenatchee Valley College Tourney
   Tournament Location

4. Travis Williams & Don Whipple
   Name of Coaches

5. TBA
   Date(s) of Tournament

6. TBD
   Tournament Cost

7. Next Year's 9-11 Grade Boys
   Age (Grade) of Participants

8. Tournament Details: The WHS boys' basketball coaches will be taking one junior varsity level team to Wenatchee Valley College for a tournament. The players will transport themselves to and from the game.

Coach's Signature	Building Principal Signature	District AD Signature
4/9/19	4/4/19	4/4/19
Date of Signature	Date of Signature	Date of Signature

School Board Section

____ Approved

____ Rejected

Reason for Rejection:

WSD Administrative Signature _____ Date _____

Wenatchee School District
Sports Tournament Application

This application must be completed and approved by the school board prior to the start of any activity including pre-registration. Please include a prior year's camp flyer if you have one.

1. High School Boys Basketball
   Type of Tournament

2. Play Games/Improve/Team Bonding
   Purpose of Tournament

3. Eastmont High School JV Tourney
   Tournament Location

4. Travis Williams & Don Whipple
   Name of Coaches

5. June 8 & 9, 2019
   Date(s) of Tournament

6. $250 per Team
   Tournament Cost

7. Next Year's 9-11 Grade Boys
   Age (Grade) of Participants

8. Tournament Details: The WHS boys' basketball coaches will be taking one junior varsity level team to Eastmont for a tournament. Players will provide their own transportation to and from the games.

Coach's Signature	Building Principal Signature	District AD Signature
4/9/19	4/11/19	4/11/19
Date of Signature	Date of Signature	Date of Signature

School Board Section

____ Approved

____ Rejected

Reason for Rejection:

WSD Administrative Signature _____ Date _____

Wenatchee School District
Sports Camp/Clinic Application

This application must be completed and approved by the school board prior to the start of any activity including pre-registration. Please include a prior year's camp flyer if you have one.

1. Youth Volleyball Camp
   Type of Camp

2. Raise Money & Teach Basic Skills
   Purpose of Camp

3. High School Vball Team & Coaches
   Group Sponsoring Camp

4. Wenatchee High School Main Gym
   Camp Location

5. Connor Metcalf & Marni McMahan
   Name of Clinician

6. WHS- 1101 Millerdale: Wenatchee
   Address of Clinician

7. June 17 – 19, 2019
   Date(s) of Camp

8. 2 Sessions: 8-11 am & 12:30-3:30 pm
   Number & Types of Sessions

9. Grades 2nd -5th & 6th – 8th
   Age (Grade) of Participants

10. Grade 2-5, $75; Grades 6-8, $100
    Cost Per Participant

11. 0-5
    Anticipated Number of Male Campers

12. 75+
    Anticipated Number of Female Campers

13. Is the insurance/liability statement to the parent/legal guardian included on the pupil registration form?
    X Yes ____ No

Camp Sponsor Signature	Building Principal Signature	District AD Signature
Connor Metcalf		
4/10/19	4/11/19	4/1.19
Date of Signature	Date of Signature	Date of Signature

School Board Section

____ Approved

____ Rejected

Reason for Rejection:

WSD Administrative Signature _____ Date _____

WHS PANTHERS

VOLLEYBALL CAMP

Enroll Early!
CAMP SIZE IS LIMITED!

Grades 2-5 $75.00

Grades 6-8 $100.00

Monday: Bright Colored Shirt Day

Tuesday: Crazy Pony Tail Day

Wednesday: Crazy Sock & Camp T-Shirt Day

June 17 - 19, 2019

Incoming Grades 2-5
8:00 -11:00 am

Incoming Grades 6-8
12:30-3:30 pm

Bring a water bottle, snack & good shoes for volleyball!

T-SHIRT SIZES GUARANTEED FOR ALL CAMP REGISTRATIONS PRIOR TO JUNE 10TH.

Come Join the Fun

Wenatchee Panther Volleyball Camp

Athletic Camp Clearance

Return this form to Wenatchee Athletic Department (1101 Millerdale Avenue, Wenatchee, WA, 98801)
C/o Volleyball Camp
Write Check to: WHS ASB.
Check out the Panther Athletic Webpage to print additional flyers.

Panther Athletic Activity: Volleyball Camp – June 17, 18 & 19, 2019
Incoming Grades 2-5 - $75.00
Incoming Grades 6-8 - $100.00

Participant Name: _____ Parent Phone: _____

Address: _____

Parent Email: _____

Grade Entering in Fall 2019: _____ School Attending: _____

Shirt Size (CIRCLE ONE): YS YM YL YXL S M L XL XXL

Emergency Contacts:

Name: _____ Relation: _____ Phone: _____

Medical Insurance Co: _____ Policy #: _____

My child is in good physical condition and is cleared to participate in this activity.

☐ Medical/physical information we should be aware of: _____

_____

☐ I give permission for my child to participate in the ASB sponsored camp and hold harmless the WHS ASB and any representative thereof from any and all liability that may arise from my child's participation in this activity.

☐ I understand that injuries can occur during participation in this activity. I recognize that conditioning, nutrition, proper technique, safety procedures and well-fitting equipment are important aspects of this training program.

☐ I authorize the staff of this WHS ASB activity to obtain medical care if necessary and acknowledge that I am responsible for any and all medical expenses due to an injury or illness that occurs while at camp.

Parent Name: _____ Date: _____

Parent Signature: _____

Athletic Office Use Only Date Received: Payment Received:
Check # (if applicable):

Wenatchee School District
Sports Tournament Application

This application must be completed and approved by the school board prior to the start of any activity including pre-registration. Please include a prior year's camp flyer if you have one.

1. High School Basketball Tourney
   Type of Tournament

2. Play Games/Improve/Team Bonding
   Purpose of Tournament

3. WHS Girls Basketball Program
   Group Sponsoring Tournament

4. Ellensburg High School
   Tournament Location

5. Pat Loftus & Maranda Smith
   Name of Coaches Attending

6. June 14th – 16th, 2019
   Date(s) of Tournament

7. Next Year's 9-12 Grade Girls
   Age (Grade) of Participants

8. $300 per team
   Cost to Participate

9. Tournament Details: The WHS girls' basketball coaches will be taking one varsity level team to Ellensburg for a tournament. The kids will be transporting back and forth to the game in school district vehicles or with parent volunteers.

Coaches Signature	Building Principal Signature	District AD Signature
4/16/19	4/16/19	4/16/19
Date of Signature	Date of Signature	Date of Signature

School Board Section

____ Approved

____ Rejected

Reason for Rejection:

_____ _____

WSD Administrative Signature Date

Wenatchee School District
Sports Camp/Clinic Application

This application must be completed and approved by the school board prior to the start of any activity including pre-registration. Please include a prior year's camp flyer if you have one.

1. Basketball Skill Development
   Type of Camp

2. Teach & Improve on Skills
   Purpose of Camp

3. WHS Girls Basketball Program
   Group Sponsoring Camp

4. Wenatchee High School Main Gym
   Camp Location

5. Pat Loftus & Other WHS Coaches
   Name of Clinicians

6. Pat Loftus & Othe WHS Coaches
   WHS Coaches Attending

7. June 26th & 27th, 2019
   Date(s) of Camp

8. Two Each Day
   Number & Types of Sessions

9. Next Years Grades 9th – 12th
   Age (Grade) of Participants

10. Free
    Cost Per Participant

11. 0
    Anticipated Number of Male Campers

12. 40
    Anticipated Number of Female Campers

13. Is the insurance/liability statement to the parent/legal guardian included on the pupil registration form?

X Yes ____ No

Camp Sponsor Signature	Building Principal Signature	District AD Signature
4/16/19	4/16/19	4/16/19
Date of Signature	Date of Signature	Date of Signature

School Board Section

____ Approved

____ Rejected

Reason for Rejection:

WSD Administrative Signature _____ Date _____

Wenatchee School District
Sports Tournament Application

This application must be completed and approved by the school board prior to the start of any activity including pre-registration. Please include a prior year's camp flyer if you have one.

1. High School Basketball
   Type of Tournament

2. Play Games/Improve/Team Bonding
   Purpose of Tournament

3. WHS Girls Basketball Program
   Group Sponsoring Tournament

4. Eastmont High School
   Tournament Location

5. Pat Loftus & Maranda Smith
   Name of Coaches Attending

6. June 8th & 9th, 2019
   Date(s) of Tournament

7. Next Year's 9-12 Grade Girls
   Age (Grade) of Participants

8. $300 per team
   Cost to Participate

9. Tournament Details: The WHS girls' basketball coaches will be taking one varsity and one jv level team to East Wenatchee for a tournament. The kids will be transporting themselves back and forth to the game.

Coaches Signature	Building Principal Signature	District AD Signature
4/16/19	4/16/19	4/16/19
Date of Signature	Date of Signature	Date of Signature

School Board Section

____ Approved

____ Rejected

Reason for Rejection:

WSD Administrative Signature _____ Date _____

Wenatchee School District
Sports Tournament Application

This application must be completed and approved by the school board prior to the start of any activity including pre-registration. Please include a prior year's camp flyer if you have one.

1. High School Basketball
   Type of Tournament

2. Play Games/Improve/Team Bonding
   Purpose of Tournament

3. WHS Girls Basketball Program
   Group Sponsoring Tournament

4. Cashmere High School & WVC
   Tournament Location

5. Pat Loftus & Maranda Smith
   Name of Coaches Attending

6. June 28th – 30th, 2019
   Date(s) of Tournament

7. Next Year's 9-12 Grade Girls
   Age (Grade) of Participants

8. $300 per team
   Cost to Participate

9. Tournament Details: The WHS girls' basketball coaches will be taking one varsity team to Cashmere and one jv level team to Wenatchee Valley College for a tournament. The kids playing at WVC will be transporting themselves back and forth to the game and the kids playing at Cashmere will be transported in school district vehicles or with parent volunteers.

Coaches Signature	Building Principal Signature	District AD Signature
4/16/19	4/16/19	4/4/19
Date of Signature	Date of Signature	Date of Signature

School Board Section

____ Approved

____ Rejected

Reason for Rejection:

_____ _____

WSD Administrative Signature Date

Wenatchee School District
Sports Tournament Application

This application must be completed and approved by the school board prior to the start of any activity including pre-registration. Please include a prior year's camp flyer if you have one.

1. High School Basketball
   Type of Tournament

2. Play Games/Improve/Team Bonding
   Purpose of Tournament

3. WHS Girls Basketball Program
   Group Sponsoring Tournament

4. Seattle
   Tournament Location

5. Pat Loftus & Maranda Smith
   Name of Coaches Attending

6. July 7th – 10th, 2019
   Date(s) of Tournament

7. Next Year's 9-12 Grade Girls
   Age (Grade) of Participants

8. $75 per Kid
   Cost to Participate

9. Tournament Details: The WHS girls' basketball coaches will be taking one varsity team to Seattle to play in a tournament. The kids will be staying in hotels with the coaches supervising and they will use district vehicles to transport the kids.

Coaches Signature	Building Principal Signature	District AD Signature
4/16/19	4/16/19	4/16/19
Date of Signature	Date of Signature	Date of Signature

School Board Section

____ Approved

____ Rejected

Reason for Rejection:

WSD Administrative Signature _____ Date _____

Wenatchee School District
Sports Camp/Clinic Application

This application must be completed and approved by the school board prior to the start of any activity including pre-registration. Please include a prior year's camp flyer if you have one.

1. Track – Pole Vault
   Type of Camp

2. Teach & Improve on Skills
   Purpose of Camp

3. WHS Boys & Girls Track Program
   Group Sponsoring Camp

4. Wenatchee High School Track
   Camp Location

5. Dave Morris & Other WHS Coaches
   Name of Clinicians

6. Dave Morris & Othe WHS Coaches
   WHS Coaches Attending

7. June 3, 2019 – July 31, 2019
   Date(s) of Camp

8. Daily Sessions from 6 – 8 pm
   Number & Types of Sessions

9. Next Years Grades 9th – 12th
   Age (Grade) of Participants

10. $75 per Athlete
    Cost Per Participant

11. 10
    Anticipated Number of Male Campers

12. 10
    Anticipated Number of Female Campers

13. Is the insurance/liability statement to the parent/legal guardian included on the pupil registration form?
    X Yes ____ No

Camp Sponsor Signature	Building Principal Signature	District AD Signature
4/16/19		4/16/19
Date of Signature	Date of Signature	Date of Signature

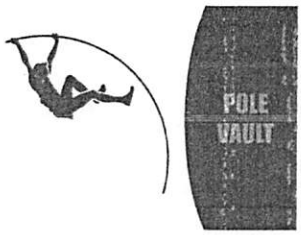
School Board Section

____ Approved

____ Rejected

Reason for Rejection:

WSD Administrative Signature _____ Date _____



WHS Summer Pole Vault

Monday - Wednesday - Friday

Date:June 3 - July 31

Time: 6 to 8 pm.

Location: WHS Track

Return this form to ***David Morris*** (WHS Athletic Office, 1101 Millerdale Ave.)

Participant Name_____ Phone _____

Address _____ Age _____

City _____ Date of Birth _____

e-mail_____ T shirt size _____

Emergency Contact

Name _____ Relation _____ Phone _____

Medical Insurance _____ Policy # _____

Medical / Physical information we should be aware of _____

_____

____ I give permission for my son / daughter to participate in the WHS Summer Pole Vault Camp and hold harmless WHS School district and any representative thereof from any and all liability that may arise from my son / daughter participating in this activity.

_____ I understand that injuries can occur during participation in this activity. I recognize that conditioning, nutrition, proper technique, safety procedures and well fitting equipment are important aspects of this event.

_____ I authorize the staff of WHS Summer Pole Vault Camp to obtain medical care if necessary and acknowledge that I am responsible for any and all medical expenses due to injury or illness that occur while participating.

_____ Attached is a copy of current physical form.

Parent Name _____ Date _____

Signature _____

official/coach use only Date Received Payment Received

THIS GROUP OF POLICIES/PROCEDURES HAVE BEEN RECOMMENDED BY WSSDA FOR REVISIONS & Possible WSD Changes Added

_3000___ Policy Series Review

Policy	Title	Suggested Action	District Recommendation	Rationale
3226	Interviews and Interrogations of Students	Essential	Approve	Intent of Policy is to provide clarity as to the roles and responsibilities of law enforcement and other government agencies.
4310	District Relationship with Law Enforcement	Encouraged	Approve	Intent of Policy is to provide clarity as to the roles and responsibilities of law enforcement and other government agencies.
3144	Release of Information Concerning Student Sex and Kidnapping Offenders	Encouraged	Approve	Minor changes.
3413	Student Immunization And Life Threatening Health Conditions	Essential	Approve	Minor changes.
3413P	Student Immunization And Life Threatening Health Conditions Procedure	FYI		No substantive changes to current practice.
				4/2019

Policy	Title	District Recommendation
5260	Personnel Records	Approve
5260P	Procedure	Information
5270	Resolution of Staff Complaints	Approve
5270P	Procedure	Information
5271	Reporting Improper Governmental Action	Approve
5271P	Procedure	Information
5315	Garnishment & Personal Credit Problems	Approve
5315P	Procedure	Information
5641	Student Teachers	Information
5641P	Procedure	Approve

WSD 246
WENATCHEE SCHOOL DISTRICT
235 Sunset Avenue 509.663.8161 509.663.3082 fax

OLD BUSINESS

LocalTel Communications

QUOTATION

WENATCHEE SCHOOL DISTRICT
235 SUNSET **MUST GET VERBAL FROM DAVE YANCEY**
PO BOX 1767
WENATCHEE, WA 98807
Bus: (509) 663-8161
Fax: (509) 663-3082

Quote #: 9DF30711
Consultant: BMD

Date: 04-10-19
Expiration: 05-10-19

Part No.	Qty	Description	Unit	Price
.		VALLEY ACADEMY	.00	.00
MITL-10576-EDSP	3	CONNECT IP Phone IP480 EDUCATIONAL PRICING	199.95	599.85
MITL-10573-EDSP	19	CONNECT IP420 * Educational special pricing *	119.95	2279.05
SHTL-10523	1	CONNECT VOICE SWITCH ST50A	2200.00	2200.00
SHTL-94111	640	ShoreCare Partner Support (1 yr. NO phones)	1.00	640.00
SHTL-30044-EDSP	1	ADDITIONAL SITE LICENSE - EDUCATIONAL PRICING	495.00	495.00

Parts will be available within 30 days of signed PO.

Comments :

Subtotal:	6213.90
Sales Tax:	521.96
Total:	6735.86

Authorized Signature : _____ PO Number : _____
I have reviewed & approved purchase of the above products/services

341 GRANT ROAD - EAST WENATCHEE, WA 98802
COMPUTER DIVISION (509) 884-0611 (800) 992-2112 FAX (509) 888-4455
TELEPHONE DIVISION (509) 662-3283 (800) 544-0566 FAX (509) 888-4455

WSD 246
WENATCHEE SCHOOL DISTRICT
235 Sunset Avenue 509.663.8161 509.663.3082 fax

WENATCHEE LEARNS

STRATEGIES

- ***Strategy One - Personalized Learning***
- ***Strategy Two – Tapping into the Power of the Community***
- ***Strategy Three – Use Best Tools & Resources to Advance Learning***
- ***Strategy Four – Balance Change for All with Excellence for All***

Wenatchee School District #246
April 23rd, 2019

To: Board of Directors

From: Brian Flones
Superintendent

Prepared By: Tim Sheppard, Principal , Lincoln Elementary
Kory Kalahar, Principal, Westside High School

Re: School Health Clinic Update

Tim Sheppard and Kory Kalahar will be providing the school board with an update on the clinical services be provided to students by Columbia Valley Community Health. Lincoln is in the second year of clinical services and Westside is starting the program this school year.

Topics to be discussed include:

1. Overview of Services: Medical, Behavioral Health, Dental, and Girls on the Run
2. Number of Referrals
3. Sustainability- Program Specific Guidelines (attached reference letter from Columbia Valley Community Health)

3/29/2019

Lincoln Elementary School
1224 Methow St
Wenatchee, WA 98801

Dear Colleague,

Happy Spring! Columbia Valley Community Health is committed to our Mission of partnering to achieve optimal health and wellness by increasing our ability to provide access to clinical services for your students. We are writing today to outline the requirements for having continued on-site School-Based Health Center (SBHC) services at your school for the 2019-2020 school year. This is such a busy time of year, we will keep this brief and request that if you have additional questions for us, please don't hesitate to reach out at your convenience so we can discuss further.

What you need to know:

- Over the summer, CVCH will create (or update existing) a Memorandum of Understanding (MOU) for each school in our local districts that receive Behavioral, Dental, Medical, Health Education or a combination of those services
- These MOUs will be ready for review at the commencement of the 2019-2020 school year
- The MOU will outline the parameters of the partnership to ensure the sustainability of these services
- To be considered for any service we are requiring a minimum of 25% of the school's student population are enrolled in our SBHC program.
- In addition, we want to share some basic program specific guidelines:
    - For **Behavioral Health**, basic requirements will include that the school is able to provide:
        - A private, HIPAA-compliant, consistently available space
        - Ability for school staff to coordinate punctual student attendance at scheduled therapy sessions
        - A minimum of 6 students referred to CVCH Behavioral Health before on-site services can occur
    - For **Dental**, a minimum of 40 students will need to be registered for a scheduled screening day
    - For **Medical**, frequency of onsite clinics will be adjusted to meet the demand of enrolled students for services
    - For **Girls on the Run**, a minimum of two coaches are available for the school team

We look forward to continuing to partner with our local schools for preventive and ongoing healthcare services. Again, please don't hesitate to reach out for additional information, as some of the requirements for services have changed from the 2018-2019 school year.

Yours in Partnership,

Dulce Negrete
Manager, Community Services

Megan Kappler, LMHC, ACS
Clinic Administrator, Behavioral Health

Caroll Opel
Clinic Administrator, Medical

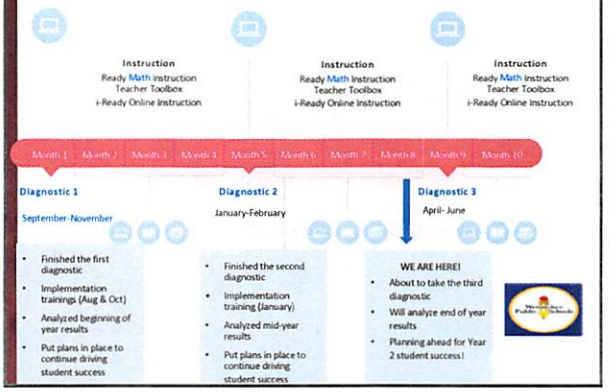
Miryam Nossa
Operations Manager, Dental

K-5 Math Implementation & Data Review

April 23, 2019

Sarah Hanchey, Director of Curriculum & Instruction

Where We've Been, Where We're Headed



IMPLEMENTATION REVIEW

3

SETTING UP FOR SUCCESS

- Materials
- Professional Learning Trainings
- Pacing
- Diagnostic Assessment Planning
- Embedded Support for Teachers

4

PROFESSIONAL LEARNING TRAININGS

- **#1: June 2018:** Introducing the *Ready Mathematics* and i-Ready Programs
- **#2: August 2018:** Establishing Routines to Develop Mathematical Thinkers
- **#3: October 2018:** Leading a Data-driven Math Implementation with Leaders & Coaches
- **#4: October 2018:** Planning and Pacing Data-Driven Mathematics Instruction
- **#5: January 2019:** Tailored Support. Building understanding of how to use the diagnostic data, and implementation needs for each school.

5

I-READY DIAGNOSTIC ASSESSMENTS

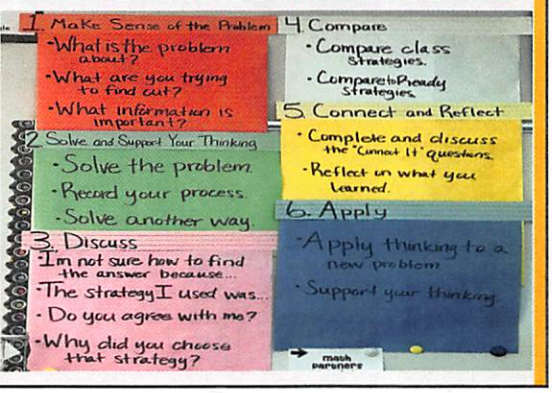
3 per year:

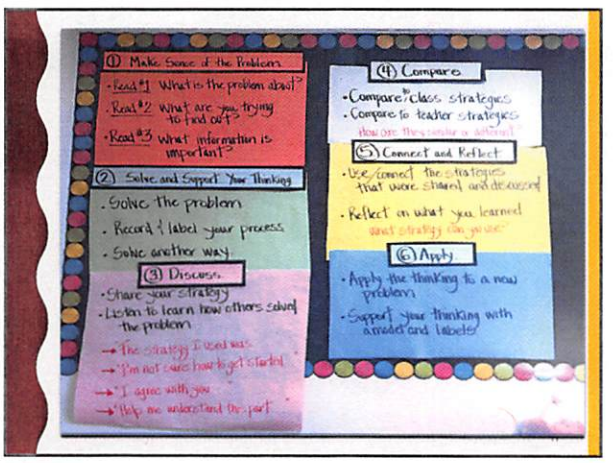
- Fall – Grades 1-5 in September; Kindergarten in November.
- Winter- All Grades in January
- Spring- All Grades in May

INSTRUCTIONAL SHIFTS: STUDENT DISCOURSE

SHARING my thinking...	LISTENING to someone's thinking...
I know that... so I...	I agree with... because...
I started by...	My strategy is like yours because...
I solved this problem by using...	This makes sense because...
My strategy was to...	I have a different idea...
I know that... and I am not sure what to do next...	I thought about it in a different way...
I am not sure how to get started...	My strategy is different. Here's how I solved...
Can you show me how you got started?	I have a question about...
	Can you help me understand this part better...?
	Could you please explain how...

THINK-SHARE-COMPARE ROUTINE





WINDOW INTO A TEACHER'S CLASSROOM...

2018-19 MID YEAR DATA

- Where are students exceeding expectations or doing especially well?
- Are ALL students on track to meet growth goals?
- Where do students need more support?

13

GROWTH FROM FALL TO WINTER

Overall Placement

14

FALL & WINTER PERFORMANCE

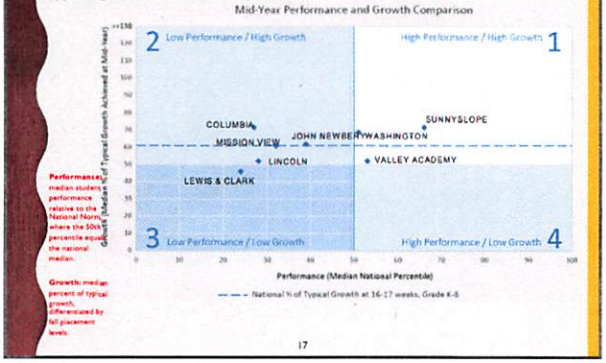
OUR GROWTH MODEL

- video

16

Performance and Growth by School

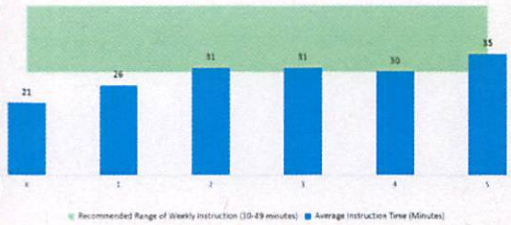
Comparison of median student performance and median percent of typical growth at midyear, by school.



17

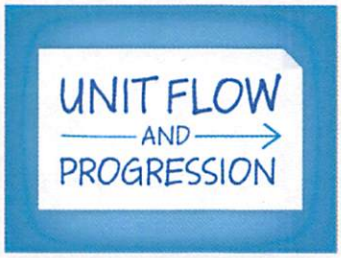
i-Ready Instruction Usage

Average weekly usage of i-Ready Instruction, by grade.



18

UNIT PROGRESSION VIDEO



Grade 5

19

COURTNEY HOLLAND, KINDERGARTEN TEACHER, SUNNYSLOPE

"The new Ready Math curriculum has helped me immensely in regards to my classroom math discourse. Using sentence stems, my students are able to explain their ideas, reasoning and representation to their peers. Students are able to see different strategies, and gain a better understanding of how it works as well as identify different approaches to solving a task. At the kindergarten level, I would not expect to witness the type of math discourse that is happening within my classroom. The questions that promote the discourse are age appropriate and give my students the ability to relate to real-world situations and learn problem solving strategies that will help them be successful in future grades."

20

THANK YOU FOR YOUR SUPPORT!

21

Middle School Math Journey

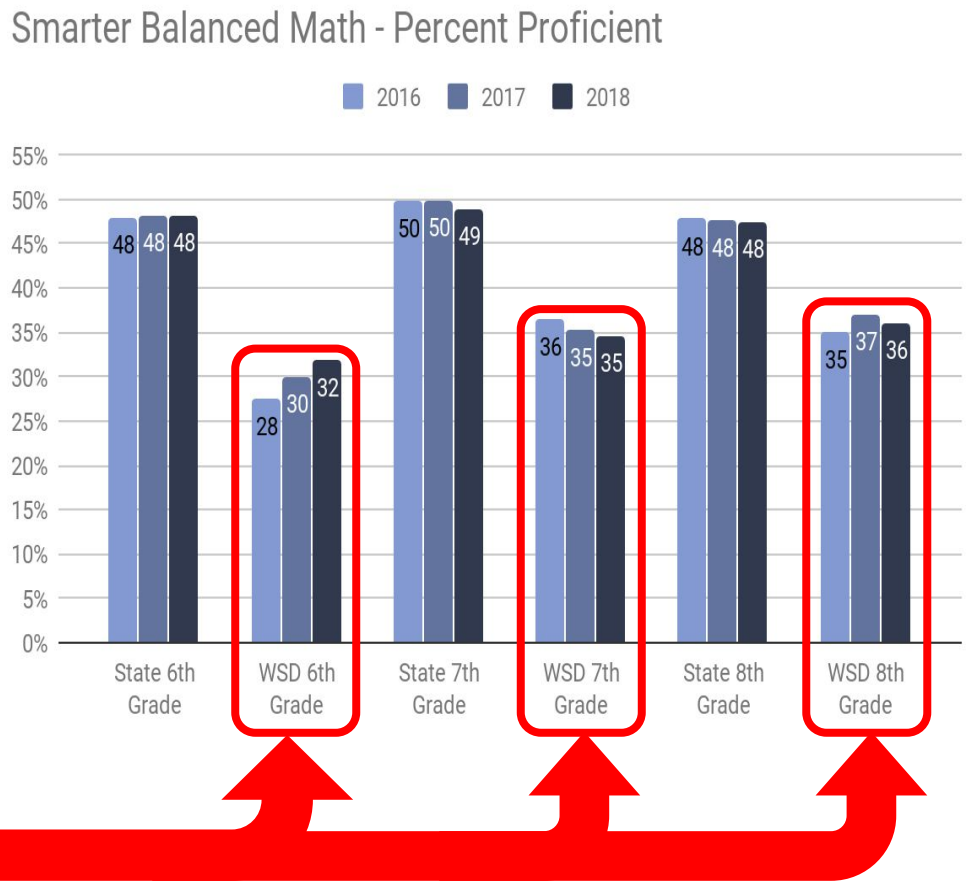
April 23, 2019

Working collaboratively to instill problem solving skills and the confidence to do math.

Our “Why” for Researching Options

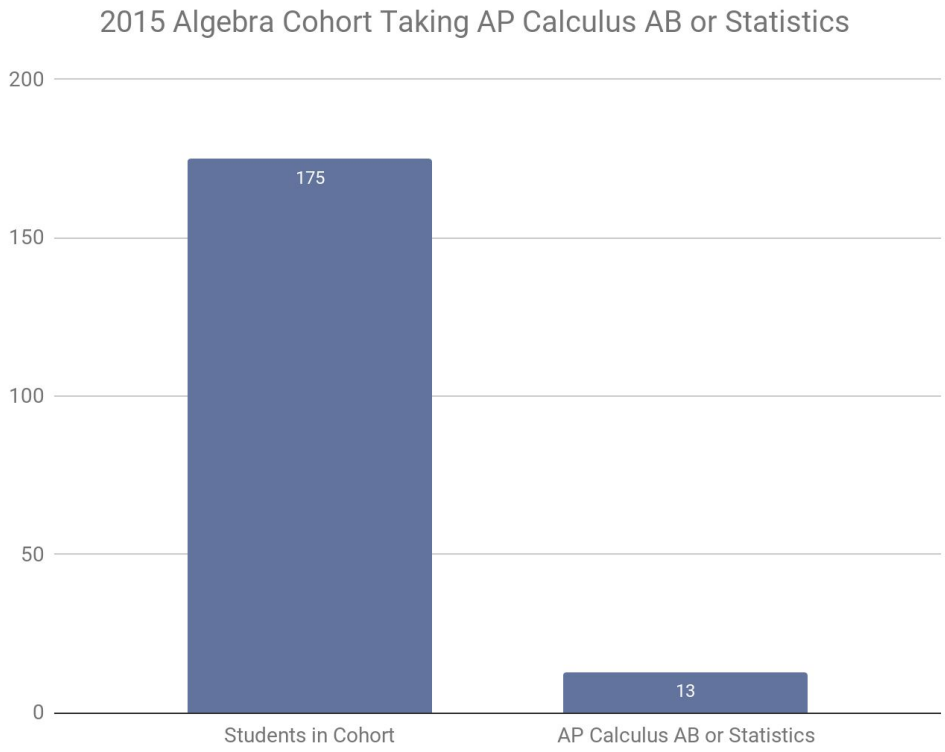
- Stagnant test scores and lagging behind the state
- Not all students had access to grade level mathematical standards
- Not all students having access to mathematical practices at high levels
- Students quitting math at the high school
- Disparity of access for underrepresented groups to higher level math

WSD Middle School Math Data



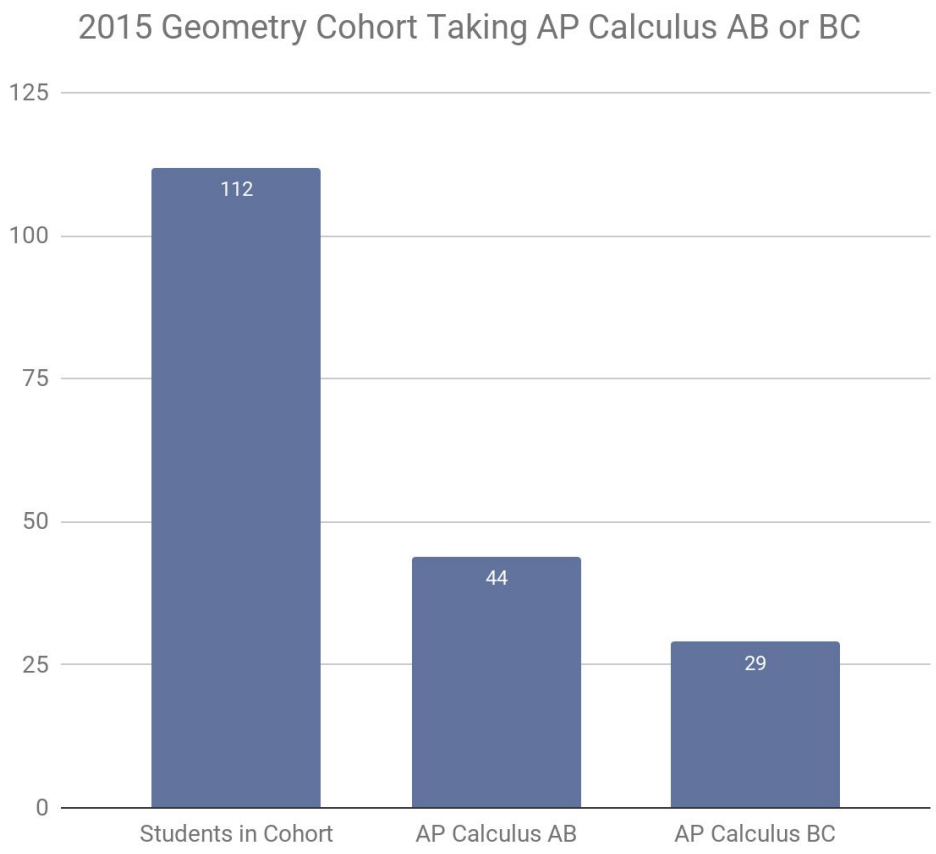
Senior Data

2015 Algebra Cohort (took Algebra in 8th grade)



Senior Data

2015 Geometry Cohort (took Geometry in 8th grade)



Timeline of Events

2017-2018

- Book study on Dr. Jo Boaler's Mathematical Mindset
- Purchase Making Number Talk Matter by Kathy Humphreys and Ruth Parker
- Work with NCESD on engagement strategies and increasing student dialogue

2018-19

- Eliminated Math 180 classes - we were supplanting
- Taunya and Rob attend Mindset Mathematics Leadership Summit (used LAP high poverty $)
- MS math teachers attend Youcubed Mindset Mathematics training at Stanford (used LAP high poverty $)
- NCESD partnering, model lessons, planning lessons, engagement strategies and mathematical discourse (using LAP high poverty $)
- MS math teachers developing common Unit plans - 2 common assessments per year

Ongoing Support for Teacher Change of Practice

Dr. Andy Boyd

(NCESD Math and Science Specialist)

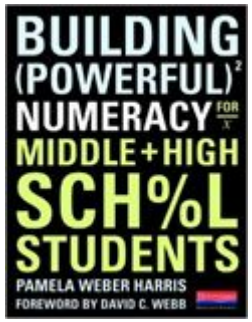
The collaborative work plan

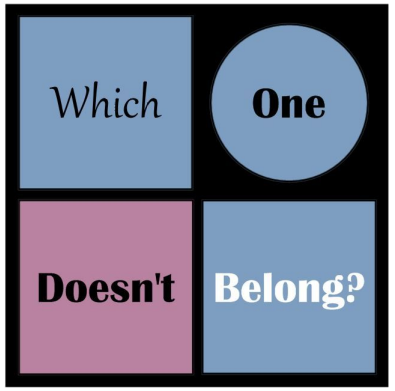
- Beginning Fall 2017
- Use of District PD days
- Classroom Support days
- Importance of Collaboration Time
- Shift towards Mathematical Mindset

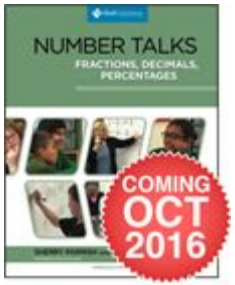
Ongoing Support for Teacher Change of Practice

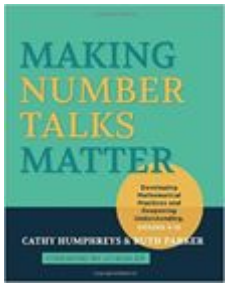
Dr. Andy Boyd

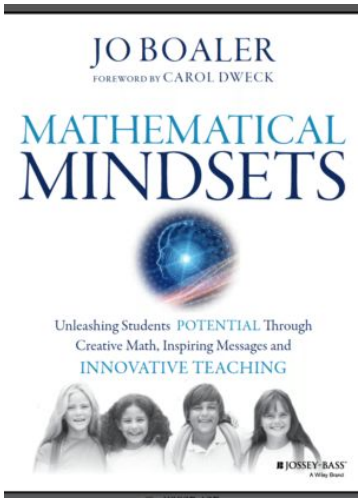
Example of math







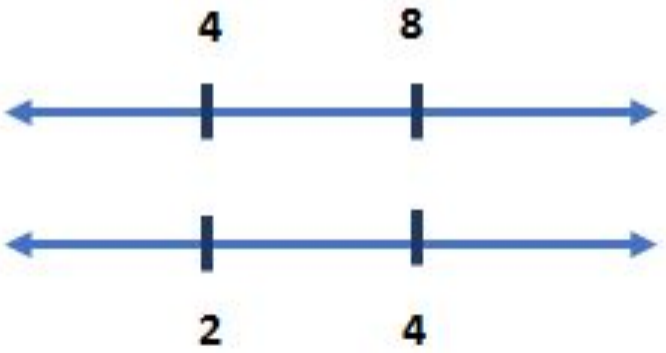




Which one doesn’t belong?

http://wodb.ca/index.html

1	2
2	4
3	6
4	8
5	10



2n

Ongoing Support for Teacher Change of Practice

Dr. Andy Boyd

Current Outcomes in Wenatchee Middles Schools

- Middle School Administration Collaboration
- Student Discourse around Mathematics
- Student mathematical mindset
- Physical Classroom space
- Unit Plans
- Common District Assessments

Dr. Jo Boaler

Mathematical Mindsets

Stanford University

Rethinking Giftedness

https://vimeo.com/241875015

Dr. Jo Boaler
Mathematical Mindsets
Stanford University

1)Special Education:

https://www.youcubed.org/special-education/

2)Mixed Ability Grouping:

https://www.youcubed.org/resource/ability-grouping/

3)Brain Science:

https://www.youcubed.org/resource/brain-science/

4)Depth not Speed:

https://www.youcubed.org/resource/depth-not-speed/

5)Impact Papers:

https://www.youcubed.org/resource/short-impact-papers/

6)Research:

https://www.youcubed.org/evidence/research-articles/

San Francisco Unified

New data show 10.4% more high school students taking advanced math courses in 2018-19 school year

- 34.7% increase in African American students taking courses beyond Algebra 2
- 32.7% increase in Filipino students
- 20.1% increase in Latino students
- 25.2% increase in Pacific Islander

San Francisco Unified

- 16.7% increase in white students
- Additionally, there is a 31.6% increase in English Language Learners
- A 10% increase in students with an Individual Education Program (IEP)
- A 11.9% increase in students who qualify for free and reduced price lunches.

Research Articles

Railside HS

SFUSD Math Enrollment

The Mathematics of Hope

SEEING AS UNDERSTANDING: The Importance of Visual Mathematics.

Questions from Jo Boaler Night in SFUSD

Girls and Stem - White house presentation

Next steps

- **Bring more researchers and problem solvers to the table**
- **Bring in people from Stanford for parent and family math nights**
- **Community exposure and engagement**
- **Continue working with elementary and high school for alignment of pedagogy**

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SEEING AS UNDERSTANDING: The Importance of Visual Mathematics for our Brain and Learning.

Jo Boaler, Professor of Mathematics Education
with Lang Chen, Stanford Cognitive and Systems Neuroscience Lab
Cathy Williams & Montserrat Cordero, youcubed.
Stanford University

Introduction

A few weeks ago the silence of my Stanford office was interrupted by a phone call. A mother called to tell me that her 5-year old daughter had come home from school crying because her teacher had not allowed her to count on her fingers. A few weeks afterwards, when I told my undergraduate mathematics class that visual mathematics was really important, one of them asked: but it is only for low levels of math, isn't it?

The teacher and student referenced above are reflecting what is a common belief in education - that visual mathematics is for lower level work, and for struggling or younger students, and that students should only work visually as a prelude to more advanced or abstract mathematics. As Thomas West, author, states, there is a centuries-old belief that words and mathematical symbols are "for serious professionals – whereas pictures and diagrams" are "for the lay public and children" (2004). This idea is an example of a damaging myth in education, and this paper will present compelling brain evidence to help dispel the myth. We will also provide examples of ways that visual mathematics may be integrated into curriculum materials and teaching ideas across grades K-16. The provision of ways to *see, understand and extend* mathematical ideas has been under developed or missed in most curriculum and standards in the US, that continue to present mathematics as an almost entirely numerical and abstract subject. Yet when students learn through visual approaches, mathematics changes for them, and they are given access to deep and new understandings. The brain evidence we will share, helps us understand the impact of visualizing and seeing, to all levels of mathematics, and suggests an urgent need for change in the ways mathematics is offered to learners.

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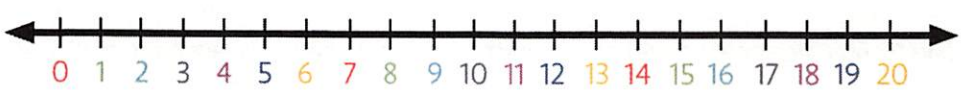
Good mathematics teachers typically use visuals, manipulatives and motion to enhance students' understanding of mathematical concepts, and the US national organizations for mathematics, such as the National Council for the Teaching of Mathematics (NCTM) and the Mathematical Association of America (MAA) have long advocated for the use of multiple representations in students' learning of mathematics. But for millions of students in US mathematics classes, mathematics is presented as an almost entirely numeric and symbolic subject, with a multitude of missed opportunities to develop visual understandings. Students who display a preference for visual thinking are often labeled as having special educational needs in schools, and many young children hide their counting on fingers, as they have been led to believe that finger counting is babyish or just wrong. This short paper, a collaboration between a neuroscientist and mathematics educators, shares stunning new evidence from the science of the brain, showing the necessity and importance of visual thinking – and, interestingly, finger representations - to all levels of mathematics.

What Does the Brain Science Say?

In recent years, scientists have developed a more nuanced understanding of the ways our brains work when we study and learn mathematics. Our brains are made up of 'distributed networks', and when we handle knowledge, different areas of the brain light up and communicate with each other. When we work on mathematics, in particular, brain activity is distributed between many different networks, which include two visual pathways: the ventral and dorsal visual pathways (see fig 1). Neuroimaging has shown that even when people work on a number calculation, such as 12 x 25, with symbolic digits (12 and 25) our mathematical thinking is grounded in visual processing.

Figure 1.

A widely distributed brain network underpins the mental processing of mathematics knowledge (Menon, 2014). The area of the brain shown in green, which is part of the dorsal visual pathway, has reliably been shown to be involved when both children and adults work on mathematics tasks. This area of the brain particularly comes into play when students consider visual or spatial representations of quantity, such as a number line. A number line representation of number quantity has been shown in cognitive studies to be particularly important for the development of numerical knowledge and a precursor of children's academic success (Kucian et al., 2011; Hubbard et al., 2005, Booth & Siegler 2004; Schneider et al., 2009).



Researchers even found that after four 15-minute sessions of playing a game with a number line, differences in knowledge between students from low-income backgrounds and those from middle-income backgrounds were eliminated (Siegler & Ramani, 2008).

The researchers in the study highlighted the importance of students learning numerical knowledge through linear representations and visuals. This is just one of many studies that show that visual mathematics problems help students and raise achievement (see for example Reimer, 2005). The brain research sheds light on this, as it is showing that the dorsal visual pathway is the core brain region for representing the knowledge of quantity.

One yet-to-be published study from our colleagues at Stanford, with children between the ages of 8 and 14, showed that as children get older they develop part of the ventral visual pathway, shown in orange in figure 1, and the brain becomes more sensitive and specialized in representing visual number forms. The study also showed an important and increased interaction between the two visual pathways. This indicates that as children learn and develop, the brain becomes more interactive, connecting the visual processing of symbolic number forms, such as the number 10, with visuo-spatial knowledge of quantity, such as an array of dots or another visual representation (Battista et al., unpublished). Different areas of the brain are involved when we think mathematically, including the frontal networks shown in red and purple, the medial temporal lobe and, importantly, the hippocampus - the horseshoe shaped area in red. The important point that we want to stress in this paper is that the neurobiological basis of mathematics cognition involves complicated and dynamic communication between the brain systems for memory, control and detection and the *visual processing regions of the brain.*

A compelling and rather surprising example of the visual nature of mathematical activity in the brain comes from a new study on the ways that the brain uses representations of fingers, well beyond the time and age that people use their fingers to count. The different studies on the brain's use of finger representations give fascinating insights into human learning and clear implications for mathematics classrooms.

Mathematical Understanding and Fingers

Ilaria Berteletti and James R. Booth (2015) studied one specific region of our brain that is dedicated to the perception and representation of fingers, known as the somatosensory finger area of the brain. Remarkably brain researchers know that we "see" a representation of our fingers in our brains, even when we do not use fingers in a calculation. Berteletti and Booth found that when 8-13 year olds were given complex subtraction problems, the somatosensory finger area lit up, even though the students did not use their fingers. The researchers also found that this finger representation area was involved to a greater extent with more complex problems that involved higher numbers and more manipulation. Penner-Wilger (2013) found that even university students' somatosensory knowledge of fingers predicts their calculation scores. She also found that finger perceptions in Grade 1 predict performance on number comparison and estimation in Grade 2 (2009). Researchers assess whether children have a good awareness of their fingers by touching the finger of a student - without the student seeing which finger is touched - and asking them which finger is being touched.

We "see" a representation of fingers in our brains when we calculate.

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Evidence from both behavioral and neuroscience studies shows that when people receive training on ways to perceive and represent their own fingers, they develop better representations of their fingers, which leads to higher mathematics achievement (Ladda et al., 2014; Gracia-Bafally and Noël, 2008). Researchers found that when 6 year old's improved the quality of their finger representation they improved in arithmetic knowledge, particularly subitizing[1], counting and number ordering. Remarkably the 6 year old's finger representation was a better predictor of future mathematics success than their scores on tests of cognitive processing.

6 year old's finger representation was a better predictor of future mathematics success than their scores on tests of cognitive processing.

One of the recommendations of the neuroscientists conducting these important studies is that schools focus on *finger discrimination*. The researchers not only point out the importance of number counting on fingers, for brain development and future mathematics success, they advocate that schools help students' discriminate between their fingers. This seems particularly significant to us given that schools pay no attention to finger discrimination now and no published curriculum that we know of encourages this kind of mathematical work. Instead, many teachers have been led to believe that finger use is baby-ish or to be moved on from, as quickly as possible. Kumon, an after school program used by thousands of parents in 49 countries, tells parents that finger counting is a "no no" and parents who see children counting on their fingers should report them to the instructor (Kumon, 2014).

There is debate among neuroscientists about the precise mechanisms by which finger knowledge improves mathematics achievement, but clear agreement on one thing, development of finger representations is critically important. Brian Butterworth, leading brain researcher in this area, states that if students are not learning about numbers through thinking about their fingers, numbers "will never have a normal representation in the brain" (Butterworth, 1999, pp. 249-250). Despite the clear evidence on the importance of finger use, dangerous instructions to ban finger use are communicated to teachers and parents. Telling students not to use their fingers to count or represent quantities is akin to halting their mathematical development. Fingers are probably our most useful visual aid, critical to mathematical understanding, and brain development, that endures well into adulthood. The need for and importance of finger perception could even be a part of the reason that pianists, and other musicians, often display higher mathematical understanding (see http://www.livescience.com/51370-does-music-give-you-math-skills.html). The neuroscientists recommend that fingers be regarded as the *link* between numbers and their symbolic representation, and an external support for learning arithmetic problems.

No US curriculum materials that we know of include activities for helping students develop finger discrimination, so we have developed a range of activities for use in classroom and homes, that can be accessed in the appendix below and at https://www.youcubed.org/category/visual-math/, to help this development in children and prompt further ideas and work in this area. Importantly teachers should celebrate and encourage finger use among younger learners and enable learners of any age to strengthen this brain capacity through finger counting and use. This does not mean that learners should keep counting on fingers as they move through school, it means that anyone who needs to advance their perception and knowledge of their fingers and count on their fingers should do so, at any age, as it is critical for their brain development. It is important to remove the stigma from counting on fingers and to see this activity as inherently important and valuable.

1 Subitizing is the process of estimating small quantities such as 1, 2 or 3 without counting.

Embodied Cognition

The evidence that is accumulating, showing the importance of visual pathways and the connections between different pathways in the brain, resonates with an area of research that is known as 'embodied cognition'. Most people think of the mind and the body as completely separate entities with the mind holding knowledge and abstractions, and the body passively taking ideas from the mind to the physical world by, for example, saying ideas out loud or writing them down. But embodied cognition researchers point out that many of our mathematical concepts are held in visual and sensory motor memories.

Embodied cognition researchers note the ways we posture, gaze, gesture, point, and use tools when expressing mathematical ideas as evidence of our holding mathematical ideas in the motor and perceptual areas of the brain (Nemirovsky et al, 2012) – which is now supported by brain evidence. The researchers point out that when we explain ideas, even when we don't have the words we need, we tend to draw shapes in the air. We might also use space around us to "spread out" our ideas. For example, deciding that one side of a table represents an idea, and pointing back to it when we want to refer to that idea even though there is nothing actually there, just our previous motions designating the space (Alibali & Nathan, 2012). The researchers in this field don't assume the separation of mind and body, and have concluded that the body is an intrinsic part of cognition, that the parts of our brain that control perception and movement of our bodies, are also involved in knowledge representation (Hall & Nemirovsky, 2011). It is fairly well known that knowledge of dance, or sport is held in sensory motor areas of our brain but many would be surprised to learn that mathematics knowledge is also held in sensory motor memories.

Figure 2: A teacher drawing a circle in the air when describing circumference to students

Some embodied cognition researchers have concluded that as we use gestures when we think mathematically, teachers should use gestures to ground mathematical thinking, alongside their verbal explanations (Alibali & Nathan, 2012) but researchers do not advocate 'giving' gesture schemes to students in mathematics classrooms and prefer that students be given opportunities to develop their own. We gesture because we see, experience and remember mathematics physically and visually, and greater emphasis on visual and physical mathematics will help students understand mathematics. Giving students someone else's gestures seems counter productive in this regard. Instead we should give students more experiences of visual and even physical mathematics, as we expand upon below.

Implications for Classrooms and Homes

The new knowledge that we have, showing the visual processing of mathematical ideas, may explain the many research studies indicating that teachers who emphasize visual mathematics and who use well chosen manipulatives encourage higher achievement for students, not only in elementary school (see for example Reimer, 2005) but middle school, high school and college (Sowell, 1989). Consistent with this, if we ask the best teachers about the importance of visual representations they will usually share the rich knowledge they hold, of the deep understanding that is enabled – both from teachers introducing mathematical ideas visually, and students using visuals to think and make sense of mathematics. Entire volumes

from the Mathematical Association of America (MAA) have been devoted to the encouragement of visual mathematics in college (see eg Zimmermann & Cunningham, 1991). When our team at youcubed (a Stanford center dedicated to giving research based mathematics resources to teachers and parents) created a free set of visual mathematics lessons for grades 3-9 last summer, they were downloaded one quarter of a million times by teachers and used in every state across the US. Eighty-eight per cent of teachers said they would like more of the activities, and 83% of students reported that the visual activities enhanced their learning of mathematics.

Despite the prevalence of the idea that drawing, visualizing or working with models is low level or for young children, some of the most interesting and high level mathematics is predominantly visual. Maryam Mirzakhani made headlines across the world recently when she became the first woman to win the coveted Field's medal, the greatest prize in mathematics. Her work is almost entirely visual. Other mathematicians described her theories as "beautiful", "stunning" and connecting previously unconnected theories in mathematics. Children may go through hundreds of hours of calculating only ever seeing numbers and symbols but mathematicians rarely if ever, solve a problem without visual representations. As West reflects: "It's masochism for a mathematician to do without pictures" (2004, p 27).

Yet another reason that visual mathematics should be used in schools to a greater extent is the nature of the knowledge needed for today's high-tech world. Years ago workplace knowledge was based on words and numbers, but the new knowledge of the world is based largely on images, that are 'rich in content and information' (West, 2004). Most companies now have large amounts of data, known as "big data" and the largest growing job of the future is the task of making sense of the data, including seeing data patterns, visually. Computer scientists and mathematicians at Stanford and elsewhere now *see* patterns in data that could never have been picked up by statistical techniques.

When we trialed our visual mathematics activities that we shared on youcubed.org in a local middle school, a parent stopped me and asked what we had done in class that week. She told me that her daughter had always said she disliked and couldn't do math, but after working on our visual tasks she came home saying she had changed her mind and she could see a future in math. Why? The math was open, creative and visual (for further examples see Boaler, 2016). Such activities not only offer deep engagement, new understandings, and visual brain activity, but they show students that mathematics can be an open and beautiful subject, rather than a fixed, closed and impenetrable subject. Visual mathematics is not important only for some students - struggling or so called "visual" thinkers, nor is it only a prelude for abstract mathematics – visual mathematics is important for everyone, at all levels of mathematics.

It is hardly surprising that students feel that mathematics is inaccessible and uninteresting when they are plunged into a world of abstraction and numbers. This is particularly ironic when a different teaching approach - of visual, creative mathematics – is available to all teachers and learners (https://www.youcubed.org/week-of-inspirational-math/). Mathematics classes in the US do not reflect the knowledge we have of the importance of visual mathematics approaches, as most curriculum standards and published textbooks do not invite visual thinking. Many textbooks provide pictures but these are often irrelevant to the mathematical ideas presented. The Common Core pays more attention to visual work in the K-8 standards, than many previous sets of standards, but the high school content of the Common Core leads teachers to remain

committed to numerical and abstract thinking. Where the Common Core does encourage visual work, it is usually encouraged as a prelude to the development of abstract ideas, rather than a tool for seeing and extending mathematical ideas and strengthening important brain networks.

A few years ago Howard Gardner proposed a theory of multiple intelligences (2008/2011), suggesting that people have different approaches to learning, such as a visual, kinesthetic or logical approach. This idea helpfully expanded people's thinking about intelligence and competence, but was often used in unfortunate ways in schools, leading to the labeling of students as particular type of learners who were then taught in different ways. But people who are not strong visual thinkers probably need visual thinking more than anyone. Everyone uses visual pathways when we work on mathematics and we all need to develop the visual areas of our brains. The problem of mathematics in schools is it has been presented, for decades, as a subject of numbers and symbols, ignoring the potential of visual mathematics for transforming students' mathematical experiences and developing important brain pathways.

Everyone uses visual pathways when we work on mathematics and we all need to develop the visual areas of our brains.

The new brain research showing the importance of visual thinking should also prompt changes in the ways we view students in schools. Mathematics classrooms promote the students who memorize and calculate well, even when these students are weak at visualizing, modeling or thinking about concepts visually. When the converse is true and students are weak memorizers or number users, but produce strong visual ideas and representations, they are often referred to special education classes. This could be the reason that some of our greatest scientists - Albert Einstein and Thomas Edison for example - were written off by teachers and even labeled as "stupid." Einstein often shared that all of his thinking was visual - and he struggled, later, to turn his visual ideas into words and symbols (West, 2004). Visual mathematics is widely thought of as being appropriate for younger or struggling students and as a prelude to the "more important" abstract mathematics. It is true that abstract ideas can come from and be aided by visual mathematics, but visual ideas can also come from abstract mathematics and extend them to much higher levels. They can also inspire students and teachers, to see mathematics differently, to see the creativity and beauty in mathematics and to understand mathematical ideas.

Putting Research Ideas into Practice

Over recent years I have worked with colleagues, teaching math summer camps to 7th and 8th grade students. Last summer we ran a math camp at Stanford, in which students had 18 math lessons with myself, Cathy Williams, and other teachers. At the end of camp the students described their experiences as transforming their views of mathematics and, importantly, their own potential. When they were given a district test that they had taken at the end of the school year there was an average of 50% improvement in test scores across the 81 students. A video of the camp can be seen here (https://www.youcubed.org/youcubed-summer-camp-2015/). In our math camps we teach the students visual algebra through pattern study and generalization, exploring the worlds of linear and quadratic functions.

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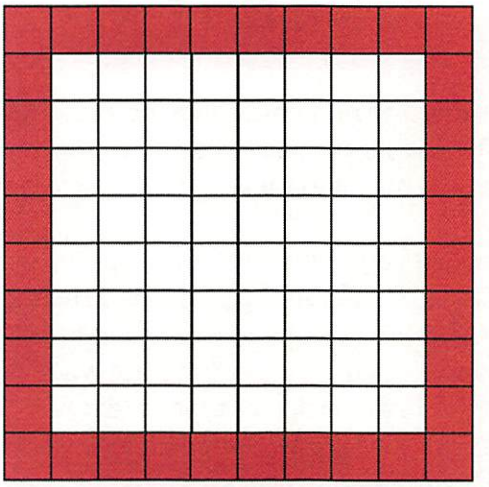
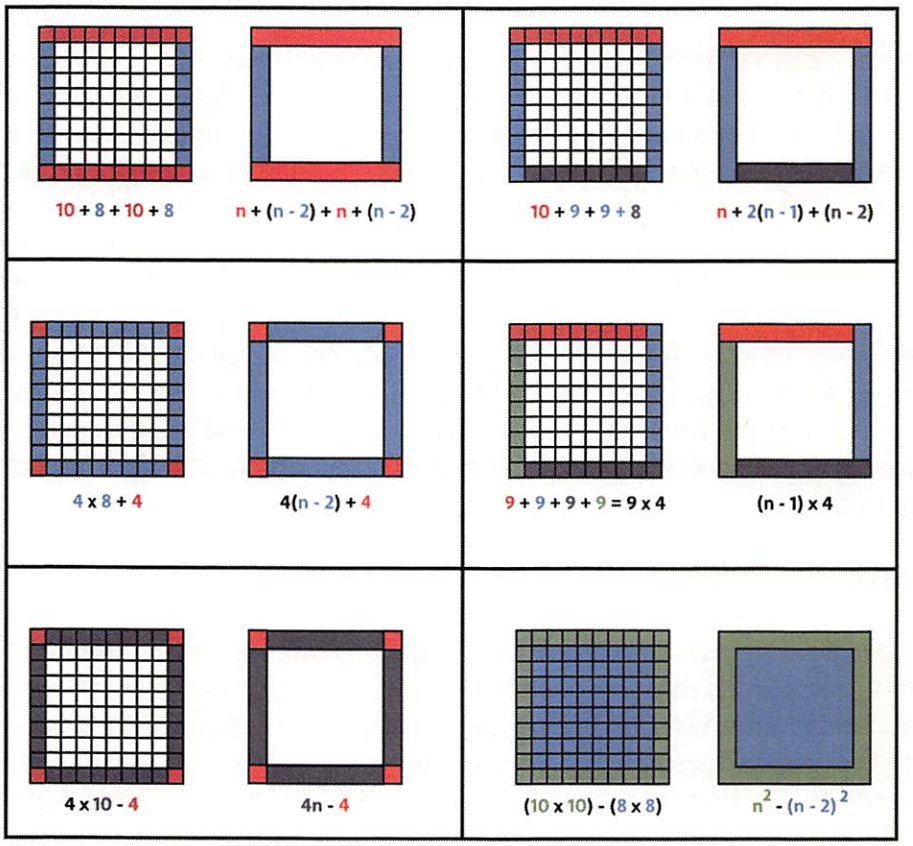
Algebra classes are often dedicated to students rearranging symbols, and students approach important mathematical concepts, such as functions, through numbers and symbols, without any visual understandings. In our teaching we approached algebra visually, as well as numerically and symbolically. In one activity, for example, we asked students to look briefly at a border around a square and work out how many squares were in the border, without counting them (see also, Boaler & Humphreys, 2005):



The students thought about the number of squares in the border in many different ways, shown below, which they described at first numerically and then algebraically.



The students' different ways of seeing were a resource for engaging discussions between students and the development of different algebraic generalizations, which students learned were equivalent. When students see patterns growing in different ways (Boaler, 2016), they are equally fascinated and engaged, and they learn, deeply, about functional growth, a major area of the US curriculum.

In one striking example of powerful mathematics learning we asked the students to consider distance-time graphs, which is an area that is notoriously challenging, even for college students (Clement, 1989). We invited students to learn about distance, time, and velocity, through actually walking the line of a distance-time graph, using a motion sensor that tracked their movement. Further details of this activities are given here (https://www.youcubed.org/category/visual-math/).

The students stunned district visitors when a girl, who was one of the lowest achievers in her grade, gave a perfect explanation of the graphing of velocity, rejecting a common misconception that is held by millions of students. When the students explained the concept they gestured, with their hands, to show the movement, again showing that their understanding of the concept was held in sensory-motor memories. The teaching of velocity through movement was clearly powerful for the students and motion is a helpful resource for teachers. But other visual teaching is just as important.

To engage students in productive visual thinking, they should be asked, at regular intervals, how they *see* mathematical ideas, and to draw what they see. Drawing mathematical ideas helps mathematics users of any level, including mathematicians, to formulate ideas and develop understandings. Students can be given activities with visual questions and they can be asked to provide visual solutions to questions (examples across K-16 grades can be seen in Visual Mathematics Activities and our Youcubed task page). New dynamic software and high quality apps and games (see https://www.youcubed.org/category/teaching-ideas/math-apps/), are also powerful in developing students' visual brain pathways. Other suggestions teachers can give to students are to represent ideas in a multitude of ways, such as through pictures, models, graphs, even doodles (see Vi Hart) or cartoons. More ideas for the visualization of mathematics are given in Boaler (2016) and on youcubed.org.

At the end of camp one girl reflected that she had:

> "Never before *seen* a mathematical idea"

This seems to be a sad indictment of her US mathematics education. Another student reflected:

> "It's like the way, the way our schools did it. It's like very black and white. And the way people do it here (in summer camp), it's like very colorful, very bright. You have very different varieties you're looking at. You can look at it one way, turn your head, and all of a sudden you see a whole different picture."

When mathematics classrooms focus on numbers, status differences between students often emerge, to the detriment of classroom culture and learning, with some students stating that work is "easy" or "hard" or announcing they have "finished" after racing through a worksheet. But when the same content is taught visually, it is our experience that the status differences that so often beleaguer mathematics classrooms, disappear. Thomas West also notes the equalizing effect of visual work, describing the time that various experts from academic disciplines came together to think visually, showing mutual respect towards each other and to different ideas, in ways that rarely happen when work is numerical (West, 2014). It seems possible that visual mathematics may contribute to equity, in valuing students' thinking in different ways, as well as encouraging deep engagement, as we have found all students to be excited *to see* mathematical ideas, and from there they have developed higher levels of understanding and performance.

When content is taught visually status differences in classrooms often disappear.

In our extensive work with school districts, teachers have also been inspired by visual and open mathematics. When we give teachers visual experiences of ideas that they have only previously encountered numerically and abstractly, such as multiplication facts or algebra, they gain insights into mathematical concepts and ideas they had never before experienced, and start to understand more deeply. They also feel empowered. Inviting people to think visually about mathematics is liberating for teachers and students alike. Mathematics is a multi-dimensional subject, and problems can be solved with numeric, abstract or visual mathematical pathways – we now know that our brain networks are correspondingly multi-dimensional and need to be developed and used. It is our belief that learners would develop stronger mathematical understanding if we helped them develop the visual networks in their brains, increasing their ability to work mathematically with a fully developed brain network.

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Conclusion: Three recommendations for teaching and parenting.

The classroom and parental implications of the emerging science of the brain that shows that mathematical thinking centrally involves visual pathways - and finger representations –are important to consider. Here are 3 recommendations for educators and parents:

1

Encourage and celebrate students' visual approaches and replace the idea that strong mathematics learners are those who memorize and calculate well. Recent PISA evidence, from millions of students, tells us that the students who approach mathematics with a memorization approach are the lowest achieving students in the world (OECD, 2016). We also need to end the myth that good mathematics performance is about calculating fast; a number of mathematicians are working to change this idea, explaining how they think slowly and deeply about mathematics, (see, for example, Laurent Schwartz; Keith Devlin). Fast calculation is not what is needed in high-level mathematics work. Strong mathematics learners are those who think deeply, make connections and visualize. When I introduce math problems to my Stanford students I say – "I don't care about speed, in fact I am unimpressed by those who finish quickly, that shows you are not thinking deeply. Instead I would like to see interesting and creative representations of ideas". After a few lessons the students broaden their views of mathematics, and they start to blow me away with their creative thinking and insightful representations, and the new understandings they develop.

2

Focus on finger discrimination and encourage finger use. Successful mathematics users have well developed finger representations in their brains that they use into adulthood. Finger discrimination even predicts mathematics success. When we stop students using fingers we stop an important part of their mathematical development. Teachers who have stopped students using fingers are doing what they thought was best for children, as the idea that finger use is babyish, and needs to be discouraged, is widespread. But we now have the knowledge that should change this and encourage teachers to focus on finger discrimination and use in classrooms to a much greater extent.

3

Importantly, mathematics teaching and learning needs to become more visual - there is not a single idea or concept that cannot be illustrated or thought about visually. Elementary school, ironically more than higher-grade levels, is often obsessively numerical. Students are made to memorize math facts, and plough through worksheets of numbers, with few visual or creative representations of mathematics or invitations to work visually, often because of policy directives and faulty curriculum guides. By the time most students leave elementary school they have developed the idea that visuals and manipulatives are babyish, fingers should never be used, and mathematical success is about memorizing numerical methods. As students move up through the grades they continue on overly numerical and symbolic pathways. Algebra classes are often composed entirely of symbol manipulation and the idea that visuals or manipulatives are a mere prelude to abstract mathematics becomes instantiated. What would mathematics look like if it were visual, instead of merely numerical? Our appendix and companion document, Visual Mathematics Activities, shows a range of examples, for different grade levels.

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Some scholars note that it will be those who have developed visual thinking that will be 'at the top of the class' in our new high-tech workplace that increasingly draws upon information visualization technologies and techniques, in business, technology, art and science (West, 2004, p17). In our education system it is important not to prioritize any 'type of learner' over others or even to give the idea that it is productive to take one learning approach and focus upon it. The brain science supports this – work on mathematics draws from different areas of the brain and we want students to be strong with visuals, numbers, symbols and words. One of the aims of this paper is to point out that many schools are not encouraging this broad development in mathematics now and we urgently need to expand the ways we think about mathematics, and to teach it as the visual and multidimensional subject that it is.

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Cathy Williams is co-founder and director of youcubed.

Monsterrat Cordero is an undergraduate student at Stanford University pursuing a BS in mathematics and interdisciplinary honors in education and a founding youcubed member.

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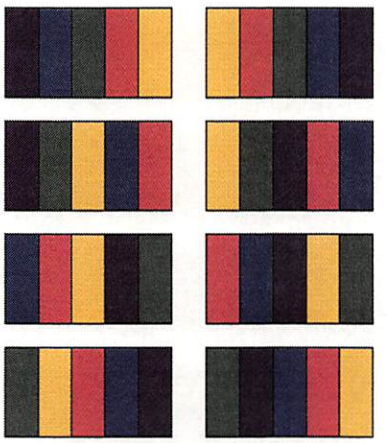
Appendix

A sample of visual activities and solutions. For the full page activities and other examples go to https://www.youcubed.org/category/visual-math/

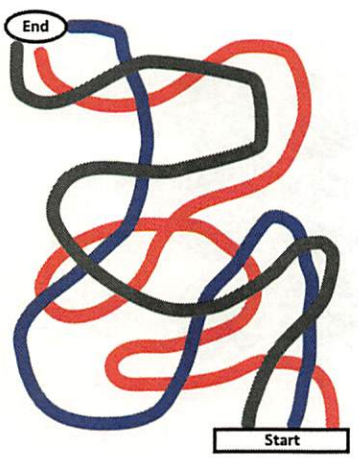
Rockin' the Piano

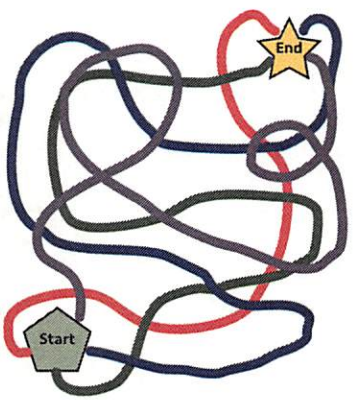
Give students colored dots on their fingers and ask them to touch the corresponding piano keys:

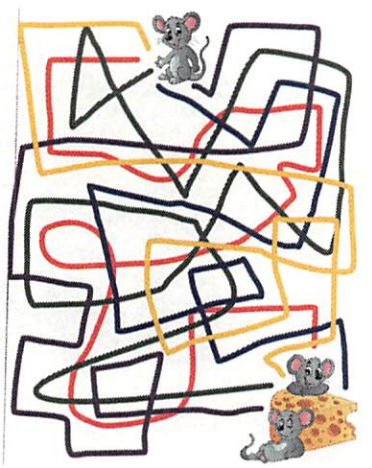


Finger Maze

Give students colored dots for their fingers and ask them to follow the lines on increasingly difficult mazes:







Adapted from Gracia-Bafalluy, M., & Noël, M. P. (2008). Does finger training increase young children's numerical performance? Cortex, 44(4), 368-375.

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Appendix

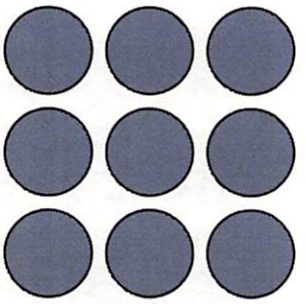
Three surprising visual solutions. For the full activities and other examples go to https://www.youcubed.org/category/visual-math/

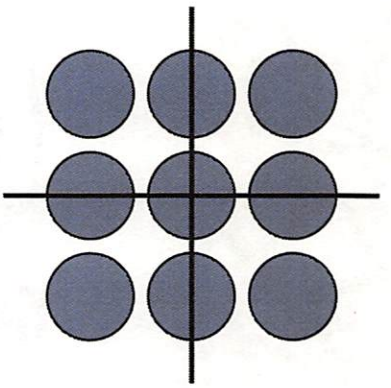
18 x 5

from Jo Boaler. Mathematical Mindsets (2016)

The Turkey Problem

A man is on a diet and goes into a shop to buy some turkey slices. He is given 3 slices which together weigh ⅓ of a pound but his diet says that he is allowed to eat only ¼ of a pound. How much of the 3 slices he bought can he eat while staying true to his diet?





from Jo Boaler. Mathematical Mindsets (2016)

youcubed at Stanford University

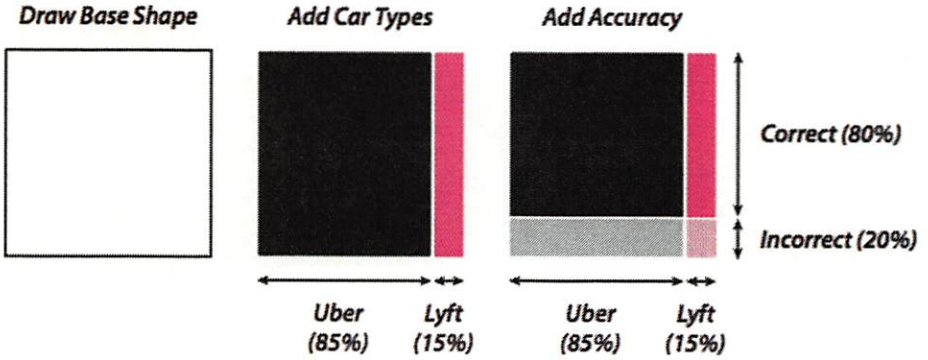
Appendix

Uber/Lyft

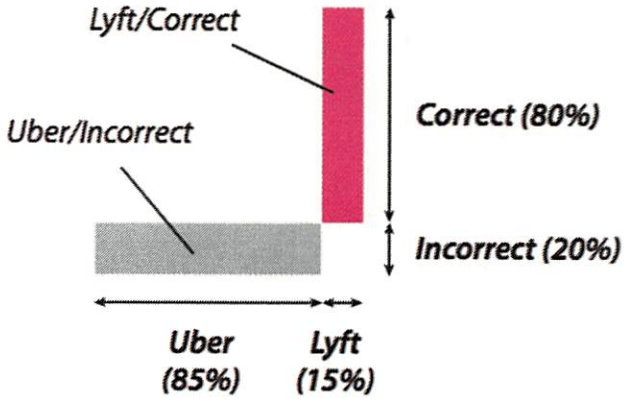
In your city there are two ride-share companies: Uber and Lyft. Your father uses one of these to get back from the airport, but leaves his phone in the car! You are given the following data:

- 85% of the cabs in the city are Uber and 15% are Lyft.
- Your dad thinks he left his phone in a Lyft car, but he's not sure. In your experience your dad is correct about 80% of the time, and incorrect about 20% of the time.

He wants to get his phone back. Which company should he call first? That is, is it more likely that he left his phone in an Uber car or a Lyft car?



41%. So he should call Uber first.



Problem provided by Gary Antonick, http://wordplay.blogs.nytimes.com/tag/visual-thinking/

Parent Questions from Jo Boaler Night

Questions about the Common Core approach

- *We got to where we are in math and science using the old ways of teaching math. Why would this new way be more successful?*
- *You're spending a lot of time distinguishing between computation/calculation and deeper math. Don't you think both are important?*
- *Do you mean that practicing is obsolete at this era? Computers can do calculating and kids should not focus on computing numbers? What if they do practice problem solving but still have the ability to compute fast? What if technology is not available?*
- *I get the idea of the video making the math problem a "word problem," but don't they have to know the formulas to apply? And how do they remember them?*
- *What is your thinking on homework? Is it still valuable? Should teachers be correcting it?*

Traditionally, math education provided access to a small number of students who were perceived as "good at math." The new approach provides access to all students to learn the mathematics they need for day-to-day life and to increase the number of students that enter fields in science, technology, engineering, and math (STEM). The Common Core State Standards for Mathematics and the Next Generation Science Standards emphasize practices that are valued in STEM careers: careful questioning, deep understanding, creative problem solving, and application of ideas. When all students see that math is something they can make sense of and do, they are better prepared to address the challenges of math and science in the real world.

The Common Core provides a set of standards that are focused, coherent, and rigorous. Focusing deeply on fewer concepts allows students to gain strong foundational conceptual understanding. Developing coherence across grades allows students to build upon deep conceptual understanding from earlier years so that each standard is not a new event, but an extension of previous learning. All students should take rigorous courses that balance conceptual understanding—the ability to access concepts from multiple perspectives, discuss them, and apply them to new situations—with procedural skill and fluency.

The Common Core does not eliminate computation, calculation, practice, or homework. Rather it seeks a balance in which conceptual understanding is not sacrificed for memorizing procedures. There is an emphasis on enabling students to make sense of the math and seeing math as a way to solve real life problems. Students become better problem solvers when they understand both the problem and the concepts involved in solving it. In the traditional approach, many students have

memorized formulas but don't know when to apply them. Students who develop a deep understanding of mathematics can derive the formula when they need it, know when they need it, and don't apply the wrong formula to a situation because it's the one they have memorized. Homework and practice are still valuable and teachers should have a system to capture their students' progress, but teachers might rethink the purpose of homework, perhaps scaling down the number of problems with the expectation that students show their thinking and demonstrate understanding using multiple representations.

Questions about detracking

- *Regarding detracking: the concept is good, but what about English learners and highly disruptive or apathetic kids? They are slowing down my daughter's 7th grade science class.*
- *Can the untracked class work in a class of over 30 students and 1 teacher, with maybe 1 student teacher? Class now includes "special" learners and "honors" students.*
- *Jo Boaler's example of a multi-dimensional classroom had about 15 students. How much participation is feasible in a classroom of 30-35 students?*
- *In spite of data supporting that grouping by ability is no longer the way to go, parents are deeply concerned about losing honors tracking/grouping. How do you address our concerns of ungrouping kids who, before this heterogeneous approach, loved math; who may now be in a class of up to 35 students, a few of whom can be disruptive?*

Separating students by perceived ability level into different classes creates distinct classroom cultures. In lower-tracked classes, students receive more procedural activities and what is reinforced is often behavior instead of academics. In higher-tracked classes, students are often over-accelerated, meaning that they may cover more material but still stay at a surface level. Both conditions are a disservice, in that math is narrowly defined as skills and answer-getting, with students feeling anxiety about performance. Detracking improves the classroom culture for a large number of students who otherwise would not have access to high academic expectations or motivated classmates; this includes students in both the high and low tracks. Additionally, criteria for placing students in high or low tracks have often involved those narrowly defined conceptions of math learning. With the new Common Core Standards for Mathematics, the content standards and the Standards for Mathematical Practices expands what it means to do and learn math.

The SFUSD core curriculum was developed to support heterogeneous classes. Shifting the emphasis away from getting the right answer quickly and toward deeper thinking and discussion

opens who feels included and successful, thus decreasing disruptive or apathetic behavior. Tasks and problems are designed to provide access and challenge all students.

When students feel their ideas are valued both by the teacher and fellow students and know they can contribute to whole class learning, there is more buy-in and collaboration. Students come to see that they can do math and take more responsibility for their own learning and work to support each other by being inclusive and helpful. Students who are a part of a supportive community also take more risks, advocating for their own learning by asking questions to solidify their understanding.

Research has shown that all learners benefit in a heterogeneous setting (including in schools with larger class sizes). The research has been conducted in a variety of settings, including urban districts, in the US, in England, and Australia. All learners benefit from the variety of thinking that is expressed, including more able students who benefit from the need to explain their thinking clearly and concisely. Creating explanations serves to consolidate and enhance their understanding, while other learners benefit from the explanations. All students studied have improved their performance compared to tracked classroom settings. To read more about the research on detracking, see: http://www.sfusdmath.org/articles-of-interest.html

Questions about high achieving students

- *How do we help a student who is a high achieving learner vs. the other students in the classroom?*
- *Do high performing kids get bored with the slow pace of the curriculum?*
- *What is the district's approach to students who need more advanced math? At a time when there is a lot of talk about preparing students for the future (STEM jobs) there should be pathways to support students who want to advance in math.*
- *I am also interested in how her idea of not tracking students fits with Stanford's Gifted and Talented program (formerly EPGY). Keeping our non-struggling learners engaged is key to having them reach their true potential.*

The SFUSD core curriculum provides rigorous math tasks that allow access for many types of learners. The tasks and activities are designed to be highly engaging, promote productive struggle, and often have multiple solution strategies. This allows students many opportunities to delve deeper

into the mathematics, strengthen their understanding of concepts and explore mathematics related to interesting real-world situations. Rich tasks provide natural opportunities for extensions that students often identify themselves or that the teacher can offer students for deeper investigations that are the heart of a STEM-oriented education.

It's not about going faster, it's about going deeper. The US is suffering from a massive over-acceleration of students in high school that is contributing to a declining rate of students choosing STEM majors once they are in college. The SFUSD core curriculum challenges students who are used to successfully getting the right answer quickly to deepen their understanding by explaining their thinking and understanding other students' thinking. This approach asks students to use multiple strategies and make conceptual connections, which helps develop the types of complex thinking that are called for by the research and business innovation communities.

Students working on challenging tasks in heterogeneous groups develop communication and collaboration skills that go beyond the math content. In heterogeneous groups, students are more likely to experience the benefits of learning together, appreciating different perspectives, and building upon one another's strengths, which makes them better prepared for college and the workplace. Businesses are often looking for employees who are skilled and successful at working in collaboration with others because it allows for innovation and efficiency.

Questions about the course sequence

- *Will current 8th grade students be prepared for what's required of them in High School math?*
- *What do you think about delaying algebra for all students until High School? Advantages? Disadvantages?*
- *As part of the Common Core Curriculum, is there a path for my child to take Calculus in High School without having to take extra classes?*
- *If tracking students is proven to be detrimental, will honors courses be removed from the Common Core Curriculum?*
- *In light of tonight's presentation, could you discuss the advantages and disadvantages of the pathway decision by the SF Board of Education in their adoption of the Math Common Core?*

The Common Core describes a progression of algebra from Kindergarten through Grade 8 that leads to the CCSS Algebra course in high school. CCSS Math 8 introduces extensive new mathematics content traditionally taught in high school—linear functions, transformational geometry, and bivariate statistics. CCSS Algebra and CCSS Geometry are built upon the extensive development of the core concepts in CCSS Math 8 (linear functions and equations, transformational geometry), so 8th grade students will be prepared for high school courses.

The SFUSD course sequence is based on a belief that students learn best in heterogeneous classes that hold high expectations for all students. The curriculum was created to address standards that spiral or progress through the grade levels. The 8th grade curriculum focuses on formulating and reasoning about expressions and equations, grasping the concept of functions and using functions to describe quantitative relationships, and analyzing two- and three-dimensional space and figures using distance, angle, similarity and congruence. These are critical foundational skills in preparing students for algebra, geometry, and statistics in high school.

Algebra 1 was traditionally a high school course that only a small number of students took in middle school, but over the last 15 years there has been a push to accelerate increasing numbers of students (or in the case of California, all students) into middle school Algebra 1. As a result, record numbers of students are failing and repeating Algebra 1, especially students from underserved communities. By moving Algebra 1 back into 9th grade for all students and replacing it with CCSS Math 8—a course that explicitly develops concepts needed for success in Algebra—students will experience more confidence and success because they have time to do mathematics with each other, discussing their learning, examining each other's work, and building a deeper understanding of concepts.

After 10th grade, students can choose to take an Honors Algebra 2 course that compresses CCSS Algebra 2 with Precalculus, which allows them to take AP Calculus in 12th grade. Unlike the earlier practice of having students accelerate in math by skipping a course, the Common Core necessitates that acceleration only occur by course compression—learning the standards from more than one year during a regular class period over one year. The option for compression supports students who wish to graduate from high school prepared for specialized studies in STEM in university settings.

Having one core sequence provides focus and coherence as schools and teachers implement the CCSS-M and supports equity by creating one path for all students to experience rigorous

mathematics. We believe that secondary schools do not separate their students into an honors track and a regular track—or into other tracks based on perceived ability—until students choose course pathways at the end of 10th grade.

Questions about teacher training

- *Will there be special training for teachers? Where and what?*
- *How do we ensure teachers are properly trained?*
- *Given the challenges of teaching to a heterogeneous classroom, what extra resources is the district providing to ensure that all students are challenged appropriately? What is the district's plan to ensure that teachers are adequately trained and rewarded for successful differentiated instruction?*

The Math Department is primarily supporting teachers with implementation this year through a Math Teacher Leader program. Each school site has teacher leaders who are receiving professional development and in turn, share their learning with teachers at their school sites. Teacher leaders attended a 3-day summer institute before the beginning of the school year and continue to meet in grade-level bands several more days throughout the year. These professional development days allow teacher leaders to make sense of the standards and core curriculum, learn about effective teaching strategies for productively increasing student discourse, and help them develop and organize the professional development for teachers at their site. Teacher leaders are also providing feedback on how the units of study should be revised for next year.

All teachers are invited to attend any of several professional development sessions offered after school hours on topics relevant to the new units of study. These topics include math talks, using rich math tasks, and areas of major content shifts such as units fractions, place value, transformational geometry, modeling, and statistics. The Math Department website (www.sfusdmath.org) is updated regularly and holds a large amount of information for educators, teacher leaders, parents, and our community. Learning the Common Core content and practices is an ongoing process for all of us.

More generally, the members of the Math Department are working together with teachers on a daily basis: we plan and deliver the professional development for teacher leaders; we organize and support the teacher curriculum development teams; we organize the writing, editing, copying,

delivery, and revision of the core curriculum units; we coordinate with other people and departments in the district to answer questions, support joint efforts, provide input, and solicit feedback; we work with schools and classroom teachers to help with collaborative planning and when possible, with modeling lessons, observing teachers, and giving feedback.

Questions about testing and assessment

- *I understand how this [the Common Core] can be implemented for student's learning, but how can this be implemented for student's evaluation?*
- *How do you evaluate and grade students in this system? What earns a high score? What earns a low score?*
- *What is the purpose of continuing the CLA testing? It seems to be perpetuating the fixed mindset—timed rigid testing.*

The evaluation of students' learning is based on the work that they produce, including non-written, participatory evidence. There are several ways to gather these evaluations. Teachers can closely observe their students as they work and take notes. Students can produce an individual product based on their small group work. Most evaluations of students are meant to help the teacher determine where the student is on a learning continuum, so that the teacher can plan the next steps to take in their instruction. There is a large body of research that says evaluative feedback does not enable learning and in fact often causes the student to stop learning. Feedback that is based on next steps for improvement has proved far more effective. With this in mind, student evaluation in the form of grades should be limited, while feedback in the form of next steps should be prolific.

In the elementary grades, we have rewritten the Standards Based Report Cards to reflect the new standards. Students will be evaluated over the course of the academic on the new standards using a '1-4' scale indicating their progress towards mastery. Rubrics for each grade are being developed as we speak and will be available next year.

The district Common Learning Assessments (CLAs) are a vehicle to gather data about student learning at three designated points during the academic year and use the information as a formative assessment to guide instruction. Embedding the constructed response and performance assessment questions from the core curriculum Milestone Tasks in the CLA reduces the amount of testing for our

students at all grade levels. CLAs should not be viewed as a hard and fast grade of students' progress.

Questions about textbooks and helping your children

- *Why don't SFUSD students get common core textbooks or e-version or copy, but students from other districts do? My child's cousin, who is also in the same grade, got a math textbook from CPM. Is it a lack of money? Or?*
- *How are we supposed to support our kids in this new curriculum with no textbooks/workbooks/materials this year?*
- *My daughter has difficulty understanding Math conceptually. How do I help her to move toward better understanding of math formulas and theorems and proofs? She never had a good grasp of her math facts when she was younger (3rd grade). I believe it is because of this weakness that she is in the current situation she is in today—struggling with math in High School (10th grade) and possibly in college in the future. What resources can I have her use to overcome this struggle now?*
- *Given that most teachers come from a training tradition of "fixed" mindset, how do we help our students leapfrog over the entrenched practices of past generations?*

The SFUSD core curriculum is based on the beliefs that a curriculum is not a textbook and a textbook is not a curriculum. When students engage in interesting, challenging mathematics, they see the difference between deeply exploring math and following procedures outlined in traditional textbooks. With a curriculum that inspires a growth mindset and teacher training to support this understanding, students will have opportunities to access deep mathematics learning.

The process of creating a core curriculum began two years ago before there were textbooks truly aligned to the Common Core standards. The elementary core curriculum still makes significant use of the adopted Elementary Math textbooks, and the secondary core curriculum makes significant use of the College Preparatory Mathematics (CPM) textbooks, which are now aligned to the Common Core. SFUSD has made an agreement with CPM to provide all SFUSD students with free eBook access.

The Common Core emphasizes conceptual understanding along with procedural fluency. While the goal of learning procedures used to be application (e.g., learning to multiply in order to do

bookkeeping), we now have calculators and computers for that purpose. Now the goal of learning algorithms and math strategies is to illuminate the number system and make connections between mathematical concepts. It is also very important to understand procedures conceptually and flexibly (for example, When do I divide? How can I figure this out with a visual diagram or with an equation?) in order to solve problems in the real world.

You can support your child when working on homework by asking questions such as:

- What are you trying to find out?
- Why does that work?
- Is there another way to figure it out?
- Have you tried drawing a picture or diagram of the problem?
- What have you learned so far?

Questions about math games, resources, and programs

- *What math games do you recommend for 1st-6th graders? Not apps, but physical games.*
- *What do you think about kids learning and playing with an abacus?*
- *Have you seen the app Dragon Box?*
- *What do you think of Khan Academy math?*
- *What do you think about how math is presented in EPGY? Khan Academy?*
- *What do you think of Kumon classes for kids?*

We strongly recommend playing a variety of physical games with you children. Games are great for teaching probability, strategy, and logical thinking. Many of the games that are a part of the Everyday Math curriculum are still highly effective for skill practice, and are familiar to many teachers and students. An abacus can also, be fun and engaging for students, and it can be used to show how other cultures bring understanding to mathematics and place value.

The Khan Academy and EPGY are resources to help students review procedures and algorithms. Kumon focuses on speed and computation. It is fine and helpful to know math facts quickly, but this focus omits deep understanding of mathematical concepts. Students should have more than memorization to back up their thinking; they need to understand the concepts used when solving math problems and have a "toolkit" of strategies to use when memorization isn't enough.

Jo Boaler has some recommendations on her site for great Apps for kids:
http://youcubed.org/students/2014/math-apps-and-games-we-like/

Questions about Jo's presentation

- *Can I have the slide of what not to do and what to do?*
- *Can we get a copy of the Do's and don'ts of Math Practice for our children?*

Jo referenced Carol Dweck's advice for parents about how to speak to their children. For more information, and to find the specific advice, see:
http://www.mindsetonline.com/howmindsetaffects/parentsteacherscoaches/

Question about politics

- *How can those of us that support the Common Core counter the conservative political opposition and the fear engendered by them?*

When you are in the position to have a discussion, state the facts: Common Core is a set of standards that emphasizes focus, coherence, and rigor. It is not a test, not a curriculum, not a set of homework problems, not a federal mandate, and not a teacher evaluation tool.

For more information, read this column:
http://www.usatoday.com/story/opinion/2014/09/15/common-core-math-education-standards-fluency-column/15693531/

"Opening Our Ideas": How a detracked mathematics approach promoted respect, responsibility, and high achievement.

Jo Boaler, Stanford University

In *Theory into Practice*, Winter 2006, Vol. 45, No. 1

Abstract

This article describes the ways in which the mathematics department of an urban, ethnically diverse school, brought about high and equitable mathematics achievement. The teachers employed heterogeneous grouping and *complex instruction*, an approach designed to counter status differences in classrooms. As part of this approach teachers encouraged multi-dimensional classrooms, valued the perspectives of different students, and encouraged students to be responsible for each another. The work of students and teachers at Railside was equitable partly because students achieved more equitable outcomes on tests, but also because students learned to act in more equitable ways in their classrooms. Students learned to appreciate the contributions of students from different cultural groups, genders and attainment levels, a behavior that I have termed *relational equity*. This article describes the teaching practices that enabled the department to bring about such important achievements.

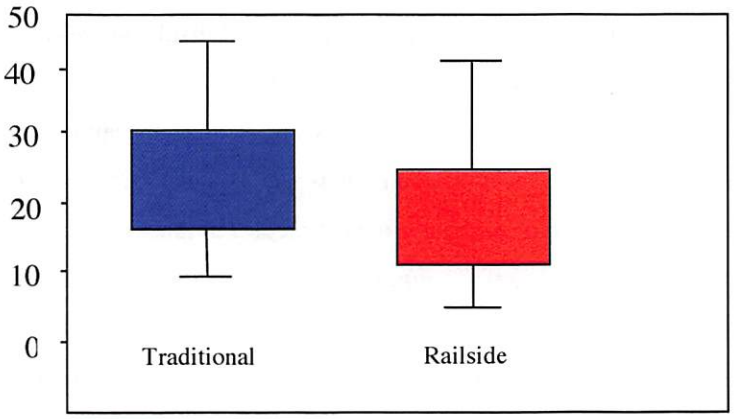
"What makes the class good is that everybody's at different levels so everybody's constantly teaching each other and helping each other out." (Zane, Railside school)

Introduction.

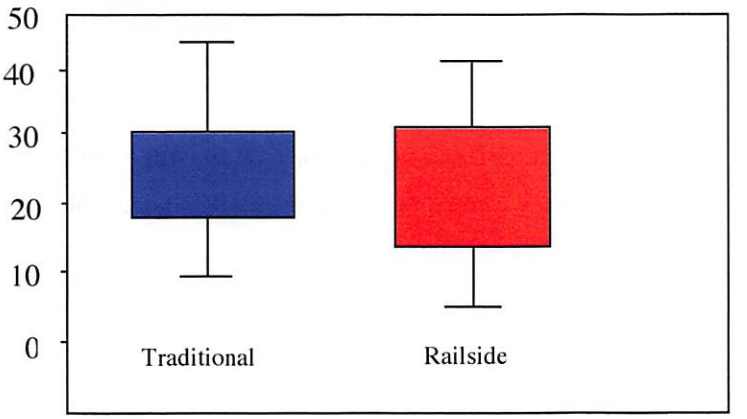
One of the most difficult challenges facing teachers of mathematics, and other subjects, is the wide range of students they teach. Mathematics classes often include students with low motivation and weak knowledge alongside others with advanced understanding and high motivation. Not surprisingly many teachers support the practice of ability grouping so that they may narrow the range and teach more effectively. In two different research studies I have conducted, in England and the US, I have followed students through high schools, investigating the impact of different teaching and grouping methods upon learning. In both studies the schools that used mixed ability approaches resulted in higher overall attainment and more equitable outcomes (Boaler, 2002, 2004). But in both cases the mathematics departments that brought about higher and more equitable attainment employed particular methods to make the heterogeneous teaching effective. In this article I will describe the approach of Railside school, an urban high school in California. At Railside the students not only scored at high levels on tests, with differences in attainment between students of different cultural groups diminishing or disappearing while they were at the school, but the students learned to treat each other with respect. They learned to appreciate the contributions of students from different cultural groups, social classes, genders and attainment levels and develop extremely positive intellectual relations. I have termed this behavior relational equity (see also Boaler, *in press*), and this article will explain how it was achieved. It is commonly believed that students will learn respect for people from different cultures and circumstances if they learn through culturally relevant examples, or consider the history of different cultures. At Railside, the respectful relationships that students developed came about through a collaborative problem solving approach in which students worked together and learned to appreciate the different insights, methods, and perspectives that different students offered in the collective solving of problems.

Our study of Railside school was conducted as part of a larger, four-year study of three US high schools. At Railside, the department employed a mixed-ability reform-oriented approach, the other two mathematics departments employed tracking and traditional teaching methods. During the four-year study we collected a range of data, including approximately 600 hours of classroom observations, assessments given to the students each year, questionnaires and interviews. Railside school was more urban than the other two schools, with more English language learners and higher levels of cultural diversity (approximately 38% of students were Latino/a, 23% African American, 20% White, 16% Asian or Pacific Islanders. 3% were from other groups). On tests given to the students each year, the Railside students started at significantly lower levels than students at the other two schools but within two years they were achieving at significantly higher levels.

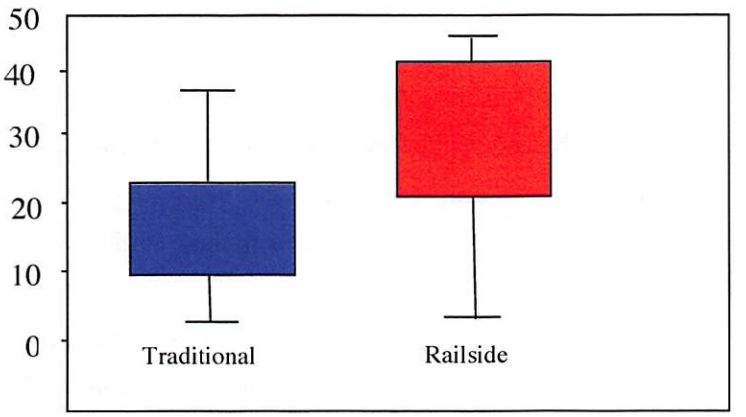
Year 1 Pre-Assessment.



Year 1 Post-Assessment



Year 2 Post-Assessment



Students at Railside were also more positive about mathematics and took more courses. In year 4, 41% of seniors were enrolled in calculus, compared with approximately 27% in the other two schools. Importantly, inequities between students of different ethnic groups disappeared or were reduced in all cases at Railside whereas they remained at the other schools that employed tracking (for more detail see Boaler, 2004).

Some mathematics departments employ group work with limited success, particularly because groups do not always function well, with some students doing more of the work than others, and some students being excluded or choosing to opt out. At Railside the teachers employed additional strategies to make group work successful. They adopted an approach called complex instruction, designed by Liz Cohen and Rachel Lotan (Cohen, 1994; Cohen & Lotan, 1997) for use in all subject areas. The approach aims to counter social and academic status differences in classrooms, starting from the premise that status differences do not emerge because of particular students but because of group *interactions*. The approach includes a number of recommended practices that the mathematics department employed and refined for use in their subject area. In the next section I will review seven of the practices that the teachers employed and that our long term observations, interviews with students, and detailed analyses, showed to be important in the promotion of equity. The first four (multidimensional classrooms, student roles, assigning competence, and student responsibility) are recommended in the complex instruction approach, the last three (high expectations, effort over ability, and learning practices) were consonant with the approach and they were important to the high and equitable results that were achieved.

Equitable Teaching Practices.

Multidimensionality

In many mathematics classrooms there is one practice that is valued above all others – that of executing procedures correctly and quickly. The narrowness by which success is judged means that some students rise to the top of classes, gaining good grades and teacher praise, while others sink to the bottom with most students knowing where they are in the hierarchy created. Such classrooms are uni-dimensional – the dimensions along which success is presented are singular. A central tenet of the complex instruction approach is what the authors refer to as *multiple ability treatment.* This approach is based upon the idea that expectations of success and failure can be modified by the provision of a more open set of task requirements that value many different abilities. Teachers should explain to students that no one student will be "good on all these abilities" and that each student will be "good on at least one" (Cohen & Lotan, 1977, p. 78).

At Railside the teachers created multidimensional classes by valuing many dimensions of mathematical work. This was achieved – in part – by giving students what the teachers referred to as *group-worthy problems* – – open-ended problems that illustrated important mathematical concepts, allowed for multiple representations,

and had several possible solution paths (Horn, 2005). The teachers had created the algebra curriculum themselves, adapting problems from different curriculum to make them group-worthy. This enabled more students to contribute ideas and feel valued. When we interviewed the students and asked them "What does it take to be successful in mathematics class?" they offered many different practices such as: asking good questions, rephrasing problems, explaining well, being logical, justifying work, considering answers, and using manipulatives. When we asked students in the traditional classes in the other two schools in our study what they needed to do in order to be successful, they talked in much more narrow ways, saying that they needed to concentrate and pay careful attention. The different dimensions that students believed to be an important part of mathematical work at Railside were valued in the teachers' interactions and the grading system.

The multidimensional nature of the classes at Railside was an extremely important part of the increased success of students. Put simply, when there are many ways to be successful, many more students are successful. Students are aware of the different practices that are valued and they feel successful because they are able to excel at some of them. The following comments given by students in interviews give an indication of the multidimensionality of classes -

> *With math you have to interact with everybody and talk to them and answer their questions. You can't be just like "oh here's the book, look at the numbers and figure it out"*
> *Int: Why is that different for math?*
> *It's not just one way to do it (...) It's more interpretive. It's not just one answer. There's more than one way to get it. And then it's like: "Why does it work"? (Jasmine, Y1)*

It is rare to hear students describe mathematics as more broad and more *interpretive* than other subjects. This breadth was important to the wide rates of success and participation achieved.

Roles

When students were placed into groups they were also given a particular role to play, such as *facilitator, team captain, recorder/reporter* or *resource manager* (Cohen & Lotan, 1997). The premise behind this approach is that all students have important work to do in groups, without which the group cannot function. At Railside the teachers emphasized the different roles at frequent intervals, stopping, for example, at the start of class to remind facilitators to help people check answers or show their work or to ask the group "What did you get for number 1?" Students changed roles at the end of each unit of work. The teachers reinforced the status of the different roles and the important part they played in the mathematical work that was being undertaken. The roles contributed to the complex interconnected system that operated in each classroom, a system in which everyone had something important to do and all students learned to rely upon each other.

Assigning Competence

An interesting and subtle approach that is recommended within the complex instruction literature is that of *assigning competence*. This is a practice that involves teachers raising the status of students that may be of a lower status in a group, by, for example, praising something they have said or done that has intellectual value, and bringing it to the group's attention; asking a student to present an idea; or publicly praising a student's work in a whole class setting. This practice was one that I could not fully imagine until I saw it enacted. My first awareness of it came about when a quiet Eastern European boy muttered something in a group that was dominated by two happy and excited Latina girls. The teacher who was visiting the table immediately picked up on it saying "Good Ivan, that is important". Later when the girls offered a response to one of the teacher's questions he said, "Oh that is like Ivan's idea, you're building on that". He raised the status of Ivan's contribution, which would almost certainly have been lost without such an intervention. Ivan visibly straightened up and leaned forward as the teacher reminded the girls of his idea. Cohen (1994) recommends that if student feedback is to address status issues, it must be public, intellectual, specific and relevant to the group task (Cohen, 1994, p. 132). The public dimension is important as other students learn about the broad dimensions that are valued; the intellectual dimension ensures that the feedback is an aspect of mathematical work, and the specific dimension means that students know exactly what the teacher is praising.

Teaching Students to be Responsible for Each Other's Learning

A major part of the equitable results attained at Railside was the serious way in which teachers expected students to be responsible for each other's learning. Many schools employ group work which, by its nature, brings with it an element of interdependence, but Railside teachers went beyond this to ensure that students took their responsibility to each other very seriously. One way in which teachers nurtured a feeling of responsibility was through the assessment system. For example, teachers occasionally graded the work of a group by rating the quality of the conversations groups had. In addition, the teachers occasionally gave group tests, which took several formats. In one version, students worked through a test together, but the teachers graded only one of the individual papers and that grade stood as the grade for all the students in the group. A third way in which responsibility was encouraged was through the practice of asking one student in a group to answer a follow-up question after a group had worked on something. If the student could not answer the question, the teacher would leave the group to further discussion before returning to ask the same student again. In the intervening time, it was the group's responsibility to help the student learn the mathematics they needed to answer the question.

The teaching strategy of asking one member of a group to give an answer and an explanation, without help from their group-mates, was a subtle practice that had major implications for the classroom environment. This practice meant that students were responsible to everyone in their group. In the following interview extract the students talk about this particular practice and the implications it held:

Int: Is learning math an individual or a social thing?
G: It's like both, because if you get it, then you have to explain it to everyone else. And then sometimes you just might have a group problem and we all have to get it. So I guess both.
B: I think both - because individually you have to know the stuff yourself so that you can help others in your group work and stuff like that. You have to know it so you can explain it to them. Because you never know which one of the four people she's going to pick. And it depends on that one person that she picks to get the right answer. (Gisella & Bianca, Y2)

The students in the extract above made the explicit link between teachers asking any group member to answer a question, and being responsible for their group members. They also communicate an interesting social orientation that becomes instantiated through the mathematics approach, saying that the purpose in knowing individually is not to be better than others but so "you can help others in your group."

Two of the practices that I have come to regard as being particularly important in the promotion of equity, and that are central to the responsibility students show for each other, are justification and reasoning. At Railside students were required to justify their answers, giving reasons for their methods, at almost all times. There are many good reasons for this – justification and reasoning are intrinsically mathematical practices (RAND, 2002; Martino & Maher, 1999) – but these practices also serve an interesting and particular role in the promotion of equity. The following boy was not one of the highest achievers in the class, and it is interesting to hear him talk about the ways he was supported by the practices of justification and reasoning:

Most of them, they just like know what to do and everything. First you're like "why you put this?" and then like if I do my work and compare it to theirs. Theirs is like super different 'cos they know, like what to do. I will be like – let me copy, I will be like "why you did this? And then I'd be like: "I don't get it why you got that." And then like, sometimes the answer's just like, they be like "yeah, he's right and you're wrong" But like – why?" (Juan, Y2)

Juan made it clear that he was helped by the practice of justification and that he felt comfortable pushing other students to go beyond answers and explain *why* their answers were given. At Railside, the teachers carefully prioritized the message that each student had two important responsibilities – both to help someone who asked for help, but also to ask if they needed help. Both were important in the pursuit of equity, and justification and reasoning emerged as helpful practices in the learning of a wide range of students.

High Expectations

There were many other, related aspects of the teachers' approach that I can only briefly review in this short paper. For example, it was critical to the success of the students that teachers kept the demand of lessons

intellectually high, both by providing complex problems and by following up with high-level questions. When students could not complete questions the teachers would leave groups to work through their understanding rather than providing them with small structured questions that led them to the correct answer. In interviews with the students, it became clear that they appreciated the high demands placed upon them. The students' appreciation was also demonstrated through questionnaires. For example, one of the questions started with the stem: "When I get stuck on a math problem, it is most helpful when my teacher..." This was followed by answers such as "tells me the answer" "leads me through the problem step by step" and "helps me without giving away the answer". Students could respond to each on a four-point scale (strongly agree, agree, disagree, strongly disagree). Almost half of the Railside students (47%) *strongly* agreed with the response: "Helps me *without* giving away the answer," compared with 27% of students in the 'traditional' classes at the other two schools.

Effort Over Ability.

In addition to the actions in which teachers engaged, the teachers also gave frequent and strong messages to students about the nature of high achievement in mathematics, continually emphasizing that it was a product of hard work and not of innate ability. I have already described the multidimensionality of classrooms and the fact that teachers took every opportunity to value something students could do, but they also kept reassuring students that they could achieve anything if they put in the effort. This message was heard by students and they communicated it to us in interviews, with absolute sincerity. For example:

> *To be successful in math you really have to just like, put your mind to it and keep on trying – because math is all about trying. It's kind of a hard subject because it involves many things. (...) but as long as you keep on trying and don't give up then you know that you can do it. (Sara, Y1)*

In the year 3 questionnaires, we offered the statement "Anyone can be really good at math if they try" 84% of Railside students agreed with this, compared with 52% of students in the traditional classes.

Learning Practices.

The final aspect of the teachers' practice that I will highlight also relates to the expectations they offered the students. In addition to stressing the importance of effort the teachers were very clear about the particular ways of working in which students needed to engage. Cohen and Ball (2001) describe ways of working that are needed for learning as *learning practices*. For example, the teachers would stop the students as they were working and talking and point out valuable ways in which they were working. In one videotaped example of this, Guillermo, the department co-chair, helped a boy named Arturo. Arturo said he was confused, so Guillermo told him to ask a specific question; as Arturo framed a question he realized what he needed to do and continued

with his thinking. Arturo decided the answer to the question he was working on was "550 pennies" but then stopped himself saying "No, wait, that's not very much." At that point Guillermo interrupted him saying:

> Wait, hold on a second, two things just happened there. Number one is, when I said "what is the exact question?" you stopped to ask yourself the exact question and then suddenly you had ideas. That happens to a lot of students. If they're confused, the thing you have to do is say, "OK what am I trying to figure out? Like exactly", and, like, say it. So say it out loud or say it in your head but say it as a sentence. That's number one and number two, then you checked out the answer and you realized the answer wasn't reasonable and that is *excellent* because a lot of people would have just left it there and not said, "what, 500 pennies? That's not very much." (Guillermo, Math department co-chair)

Prior to the beginning of new work teachers set out the valued ways of working, encouraging students to, for example, pick "tricky" examples when writing a book (one of the projects they completed) as they would "show off" the mathematics that they knew; they also encouraged students individually as shown in the example above. The teachers communicated very clearly to students which learning practices would help them achieve. This was also true of the teachers in the school in England that I studied (Boaler, 1997, 2002) who also brought about more equitable outcomes.

Relational Equity

It would be hard to spend years in the classrooms at Railside without noticing that the students were learning to treat each other in more respectful ways than is typically seen in schools and that ethnic cliques were less evident in the mathematics classrooms than they are in most schools. Further, such behavior did not just *happen* to take place in a mathematics classroom; it was fundamentally related to the students' conceptions of and work within mathematics. Thus, the work of students and teachers at Railside was equitable partly because they achieved more equitable outcomes on tests, with few achievement differences aligned with cultural differences, but also because they learned to act in more equitable ways in their classrooms. Students learned to appreciate the contributions of different students, from many different cultural groups and with many different characteristics and perspectives. It seemed to me that the students learned something extremely important, that would serve them and others well in their future interactions in society, which is not captured in conceptions of equity that deal only with test scores or treatment in schools. I propose that such behavior is a form of equity, and I have termed it *relational* equity (see also Boaler, in press).

It is commonly believed that students will learn respect for different people and cultures if they have discussions about such issues or read diverse forms of literature in English or social studies classes. I propose

that all subjects have something to contribute in the promotion of equity and that mathematics, often regarded as the most abstract subject removed from responsibilities of cultural or social awareness, has an important contribution to make. For the respectful relationships that Railside students developed across cultures and genders that they took into their lives were only made possible by a mathematics approach that valued different insights, methods and perspectives in the collective solving of particular problems.

Conclusion.

I have focused upon Railside school in this paper because it is an important case of an urban, low-income high school that brought about high and equitable achievement. Our four-year, longitudinal study, in which we monitored students at this and two other schools, revealed the importance of the approach that the school employed in supporting mixed ability teaching and providing high level learning opportunities for a wide range of students. Railside school is not a perfect place - the teachers would like to achieve more in terms of student achievement and the elimination of inequities, and they rarely feel satisfied with the achievements they have made to date, despite the vast amounts of time they spend planning and working. But research on urban schools, and the experiences of mathematics students in particular, tells us that the achievements at Railside are extremely unusual. In this paper, I have attempted to convey the work of the teachers in bringing about the reduction in inequalities as well as general high achievement. In doing so, I hope also to have given a sense of the complexity of the relational and equitable system that they have in place. Teachers who have heard about the achievements of Railside's math department have asked for their curriculum so that they may use it, but while the curriculum plays a part in what is achieved at the school, it is only one part of a complex, interconnected system. At the heart of this system is the work of the teachers, and the many different equitable practices in which they engage.

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Additional Resources for Classroom Use.

www.stanford.edu/~joboaler/

The website above includes a downloadable paper, entitled: 'Promoting Equity in Mathematics Classrooms – Important Teaching Practices and their impact on Student Learning' which is a longer version of this paper with more evidence and details on the approach described.

www.complexinstruction.org

More information on the complex instruction approach can be found at the website above.

Additional Resources for Classroom Use.

Effective Mathematics Teaching Approaches.

Website: http://www.stanford.edu/~joboaler/

Boaler, J. (2002) *Experiencing school mathematics: traditional and reform approaches to teaching and their impact on student learning.* (Mahwah, NJ, Lawrence Erlbaum Association).

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SFUSD SAN FRANCISCO PUBLIC SCHOOLS

PRESS RELEASE
For Immediate Release

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Record-high number of SFUSD students enrolled in higher level math

New data show 10.4% more high school students taking advanced math courses in 2018-19 school year

San Francisco (January 9, 2019) - More San Francisco Unified School District (SFUSD) high school students are taking higher level math classes than ever before under the new secondary course sequence, and the students who are taking those classes are more diverse, according to math enrollment data.

The class of 2019 is the first cohort of students who experienced high school math under Board Policy 6152.1, Math Course Sequence. The San Francisco Board of Education adopted the new math sequence in 2014, which aligns with the Common Core State Standards (CCSS) and provides a thoughtful progression of content from algebra, geometry and statistics.

The data show 456 additional students — a 10.4% increase from the year prior — are taking courses beyond Algebra 2 in the 2018-19 school year. The 4,660 students enrolled in courses beyond Algebra 2 this school year represents 29.8% of all students enrolled in comprehensive high schools in the SFUSD, up from 27% for the class of 2017-2018, when 4,204 students accessed higher level math courses.

The students who are taking those classes are more diverse than in previous years. This school year there is a 34.7% increase in African American students taking courses beyond Algebra 2; a 32.7% increase in Filipino students; a 20.1% increase in Latino students; a 25.2% increase in Pacific Islander students; and a 16.7% increase in white students. Additionally, there is a 31.6% increase in English Language Learners; a 10% increase in students with an Individual Education Program (IEP); and a 11.9% increase in students who qualify for free and reduced price lunches.

"We are extremely encouraged by these data, which show that many more students from all backgrounds are enrolled in higher level math courses today, " SFUSD Superintendent Dr.

Vincent Matthews said. "We know that families have been asking if their children can still get into advanced math courses in high school under the course sequence we began implementing four years ago. With these data, we can confidently say that not only *can* our students access higher level math, they *are* accessing it."

The number of students taking Advanced Placement (AP) math courses has also increased 5.9%, over a two-year period from 2016–2017 to 2018–2019. Specifically, AP Statistics enrollment has increased 48.4% while AP Calculus enrollment has declined by 12.9% over the same two-year period. Statistics is woven more purposefully throughout the Common Core, and the increase in enrollment reflects a greater need for statistical literacy across more careers. A de-emphasis in Calculus is consistent with UC and Stanford admissions' guidance.

SFUSD's graduation requirements correspond to the University of California's a–g requirements, which include completing three years of math during high school. The first three years of high school math in the Common Core's traditional sequence are Algebra 1, Geometry and Algebra 2.

Any course beyond Algebra 2 surpasses the A–G requirements. In SFUSD, students have many options for a fourth year of math, including Pre-Calculus, AP Calculus and AP Statistics. There are also many ways to reach a fourth year of math, including choosing to take a "compression" course that combines Algebra 2 and Precalculus in 11th grade; choosing to "double up" on math during 9th or 10th grade; or taking a summer Geometry course between 9th and 10th grades.

Research shows that students who complete a fourth year math course in their senior year are far more likely to find success in college.

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youcubed
at Stanford University

The Mathematics of Hope:

Moving from Performance to Learning in Mathematics Classrooms

Jo Boaler, Professor of Mathematics Education, Stanford University
& Co-founder of *Youcubed*
September 10, 2014

Heinemann Digital Campus

In 2006 a trade book appeared on bookshelves that would ultimately have one of the biggest impacts of any research volume ever published in education. In *Mindset: The New Psychology of Success* Carol Dweck summarized key findings from her research on the nature and impact of mindsets. The book quickly became a *New York Times* best-seller and was translated into more than twenty languages. Dweck's decades of research with subjects of various ages showed that students with a "growth mindset"—who believe that intelligence and "smartness" can be learned—go onto higher levels of achievement, engagement, and persistence. The implications of this mindset are profound, especially for students of mathematics.

Mathematics, more than any other subject, has the power to crush students' confidence (Boaler 2009). The reasons are related both to the teaching methods that prevail in U.S. math classrooms and the fixed ideas about mathematics held by the majority of the U.S. population and passed on to our children from birth. One of the most damaging mathematics myths propagated in classrooms and homes is that math is a gift, that some people are naturally good at math and some are not (Boaler 2013a, 2013b). This idea is strangely cherished in the Western world but virtually absent in Eastern countries such as China and Japan that top the world in mathematics achievement (PISA 2012).

New scientific evidence showing the incredible capacity of the brain to change, rewire, and grow in a really short time (Maguire et al. 2006) suggests that all students can learn mathematics to high levels with good teaching experiences. Traditional educators believe that some students do not have the brains to be able to work on complex mathematics, but it is working on complex mathematics that enables brain connections to develop. Students can grasp high-level ideas but they will not develop the brain connections that allow them to do so if they are given low-level work and negative messages about their own potential (Boaler & Foster 2014).

As I work with schools and districts, encouraging mathematics teaching that promotes growth rather than fixed mindsets (Youcubed Website), a critical requirement is that teachers offer mathematics as a learning subject, not a performance subject. Most students asked what they think their role is in math classrooms say it is to answer questions correctly. They don't think they are in math classrooms to appreciate the beauty of mathematics, to explore the rich

"Math is too much answer time and not enough learning time"

- 6 year old

set of connections that make up the subject, or even to learn about the applicability of the subject; they think they are in math classrooms to perform. This was brought home to me recently when a colleague, Rachel Lambert, told me her six-year old son had come home saying he didn't like math; when she asked him why, he said that "math is too much answer time and not enough learning time." Students from kindergarten upward realize that math is different from other subjects: learning gives way to answering questions and taking tests - performing.

"For students to see mathematics as a subject of learning, not performing, they need tasks and questions in math class that have space to learn built in."

For students to see mathematics as a subject of learning, not performing, they need tasks and questions in math class that have space to learn built in. When students spend all their time in math class answering discrete questions to which the answers are either right or wrong, it is very difficult to develop a growth mindset or to believe that mathematics is about growth and learning. When teachers ask students to find the area of a rectangle with sides of 12 feet and 2 feet, for example, students are being asked to perform a single calculation correctly. When teachers ask students to find a rectangle with an area of 24 square feet, students are being asked to use their imagination, to think; they need to consider various rectangles and think about the relationship between length and width. Students can propose different rectangles and discuss the equivalence of area in different shapes. In the first example students are answering a question on area; in the second they are learning about rectangles, dimensions, and area. If a mathematics question or task does not have space within it to think, learn, and discuss, its potential as a learning task is limited. Tasks that are particularly valuable are those that have a low floor and a high ceiling - that is, anyone can access them, but they can be taken to very high levels. (For examples of high-quality math tasks and low-floor, high-ceiling tasks, see Youcubed Tasks. watch the video on "Why we need Common Core Math" at Youcubed Videos, and see http://nrich.maths.org.)

Mathematics and Mistakes

Research has recently shown something stunning—when students make a mistake in math, their brain grows, synapses fire, and connections are made; when they do the work correctly, there is no brain growth (Moser et al. 2011). This finding suggests that we want students to make mistakes in math class and that students should not view mistakes as learning failures but as learning achievements (Boaler 2013a). Students do not, as many assume, need to revisit a mistake and correct it to experience brain growth, although that is always helpful; brain growth comes from the experience of struggle. When students struggle with mathematics, their brains grow; being outside their comfort zone is an extremely important place to be.

Mathematics classrooms throughout the U.S. are often set up to make students feel good by giving them lots of questions they can answer. Teachers believe that mistakes and struggle are unproductive and try to shelter students from them. This culture needs to change. While I was sitting in an elementary classroom in Shanghai recently, the principal leaned over to tell me that the teacher was calling on students who had made mistakes to share with the whole class so that they could all learn. The students seemed pleased to be given the opportunity to share their incorrect thinking. Instead of classrooms filled with short questions students are intended to get right or wrong, mathematics

classrooms need to be filled with open-ended tasks that includes pace for learning as well as space for struggle and growth (Youcubed Website).

For mathematics to become a learning subject with room for mistakes and growth, teachers need to make students feel good about mistakes and comfortable with struggle. When I taught a recent online class and shared the mistakes research with forward-thinking mathematics teachers, they came up with a range of ways for getting students to value mistakes (http://www.telegraph.co.uk/education/universityeducation/10414989/University-education-maturing-of-the-Mooc.html, http://tinyurl.com/oz4u4ga). One teacher, on the first day of school, asked her students to crumple up a piece of paper and throw it at the wall in a way that expressed the feelings they had when they made a mistake in math. She then asked them to retrieve the paper, uncrumple, and use a colored marker to highlight all the creases left on the paper; these, she explained, symbolized the brain growth that comes from mistakes. She had the students hang on to their brain growth diagrams for the school year.

Stop	Replace with
Frequent timed tests	Number Talks
Grades	Diagnostic feedback
Emphasizing Speed	Time to think slowly and deeply
Ability Grouping	Heterogeneous and flexible groupings

Other changes need to happen as well. Mathematics teachers need to stop frequent, timed testing; replace grades with diagnostic feedback (Black et al. 2002; Boaler & Foster 2014); and deemphasize speed, so that the students who think slowly and deeply are not led to believe they are not capable (Boaler2014). Perhaps most significantly and most radically, schools should also remove fixed student groupings that transmit fixed mindset messages and replace them with flexible groupings that recognize that students have different strengths at different times (Boaler 2009; Boaler & Foster 2014).

Fortunately these changes are entirely consistent with what is known about good teaching and learning. Decades of research show that when students engage actively with mathematics—work on long, applied problems with room for struggle and growth—and receive positive messages about their potential, they succeed (Boaler 2009; Schoenfeld 2002). The new Common Core mathematics standards (http://www.corestandards.org/) include a set of eight mathematical practices that require students to work in these ways, and they are a step in the right direction.

Currently three fifths of U.S. students fail mathematics, and mathematics is a harshly inequitable subject (Kozol 2012; Silva & White 2013). When our classrooms change—when students are encouraged to believe they can be successful in mathematics and are taught using the high-quality teaching methods they deserve—the landscape of mathematics teaching and learning in the United States will change forever (Boaler & Foster 2014). We will have many more confident and capable mathematics learners, and they will go on to become teachers of mathematics who inspire future generations to further success in science, technology, and mathematics.

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Changing the Conversation about Girls and STEM

Jo Boaler, The White House, April 28th, 2014

What do we know?

Achievement for girls and boys in STEM subjects is equal at all levels of school, but shocking inequalities persist in participation, especially as levels get higher (Boaler & Sengupta-Irving, 2006). This restricts girls' access to a wide range of jobs; it also impoverishes the disciplines of mathematics, science and engineering enabling a cycle of inequality to continue. Many factors contribute to the decisions girls make, some of which have received extensive funding and attention. The need for role models, and the positive contribution played by after school clubs and camps that engage girls in STEM work are well understood and documented (GSUSA, 2008). But important and actionable causes of inequality have been neglected in recent decades and new research evidence underscores their importance. These may be considered under two broad headings: (1) Teaching and Identity development and (2) Beliefs and Messages.

Teaching and Identity Development

Mathematics plays a significant role in students' decisions to opt out of STEM, especially but not only because it is a prerequisite for STEM majors. In most mathematics classrooms across the country mathematics is offered as a dry, abstract, repetitive subject with few opportunities for understanding. This is particularly harmful for girls, who have a greater desire for depth of understanding than boys, and higher levels of anxiety when they do not understand (Boaler, 2009). When mathematics is taught well as a broad multi-dimensional subject that involves inquiry, making connections, and reasoning about methods, all students achieve at higher levels and girls choose to participate in mathematics and science. Studies that compare traditional and inquiry based teaching of mathematics find that girls achieve at higher levels and participate more in inquiry classrooms, but for boys participation and achievement is the same in both conditions. This occurs because girls have a greater need for understanding, wanting to know why methods work and where they come from. This has been studied and found to be true in mathematics and science classrooms (Boaler, 2002; Zohar & Sela, 2003). In a meta-analysis of 123 informal STEM programs for girls, including summer and after school clubs, researchers summarized the features that girls rated as creating engagement and positive identity formation. The top four features chosen by girls: wanting hands on experiences, project based curriculum, curriculum with real life applications and opportunities to work together, all speak to the teaching of STEM subjects. Role models were also cited but girls believed them to be less important than opportunities for collaborative, inquiry based STEM work (GSUSA, 2008).

Recent evidence from neuroscience is suggesting that math should never be associated with speed, yet mathematics classrooms across the country privilege fast, procedural thinkers. Scientists now understand that when students are anxious the working memory in the brain is blocked - this is the part of the brain where math facts are held. Timed tests in which students as young as first grade are required to complete 50 questions in 3 minutes, are used across the US. These cause the early onset of math anxiety for students, and they are especially damaging for girls (Boaler, 2014).

Girls who want to understand deeply – who want to know why methods work, where they come from and how they connect to broader conceptual domains are denied access to STEM subjects because of the procedural teaching that pervades the US, and the constant emphasis, especially in mathematics, on speed. These deep thinkers are the students who are most suited to high-level work in mathematics, science and engineering and who could advance the disciplines and break cycles of inequitable teaching.

Learning is not just about accumulating knowledge, it is a process of identity development as students decide who they are and want to be (Wenger, 2000). For many girls the identities they see on offer in mathematics and science classrooms are incompatible with the identities they want for themselves (Boaler & Greeno, 2000). They see themselves as thinkers and communicators and people who can make a difference in the world (Jones, Howe & Rua, 2000); in procedural classrooms they come to the conclusion that they "just do not fit in". This relates in part to the lack of good role models but it also relates to the forms of knowledge that are privileged in many mathematics and science classrooms that leave no room for inquiry, connections or depth of understanding.

Beliefs and Messages

Powerful new evidence points to the importance of the beliefs girls hold about their own potential when they are choosing to opt in or out of STEM subjects. Students with a 'growth mindset' who believe that smartness increases with hard work, are those who engage in learning behaviors that produce high achievement. They are more persistent, willing to learn from failure, and more likely to choose challenging work and subjects. Students with a fixed mindset that believe that they are either smart or not are those who achieve at lower levels and who do not choose hard tasks or subjects (Dweck, 2007).

Mathematics is the subject with the most fixed mindset thinking in the US, many students believe that math ability is a 'gift' and they can either do mathematics or they cannot (Boaler, 2013). The damage caused by fixed mindset thinking is exacerbated by stereotyped messages. Researchers have found that when girls in university mathematics departments receive stereotyped messages about who belongs, those with a growth mindset reject the messages but those with a fixed mindset opt out of STEM subjects (Dweck, 2006b). Fixed mindset thinking affects students from across the achievement spectrum but it is particularly prevalent among high achieving girls (Dweck, 2006b).

Girls in the US are given the idea that mathematics is not for girls from the early years of school. Elementary teachers, 87% of whom are female, sympathetically offer statements such as "maybe math isn't for you, you are good at English" when students struggle or don't do well on timed tests. Girls believe these messages and they lead to diminished performance and participation. Researchers found that when mothers told their daughters "I was no good at math in school" their daughter's achievement immediately went down (Eccles & Jacobs, 1986). In a recent study Beilock *et al* (2009) found that the levels of anxiety of female elementary teachers predicts the achievement of the girls in their classes, but not the boys. Girls look up to their female teachers and identify with them at the same time as teachers are conveying the idea that math is hard for them, or they are just not a "math person". We now know that the ideas girls hold about STEM subjects and their own potential are hugely important for their achievement and participation; this is critical, actionable information as students' and teachers' ideas can be changed (Blackwell *et al*, 2007).

Evidence of Change / The Future

In the summer of 2013 Jo Boaler taught an online class to teachers and parents entitled "How to Learn Math". A central theme of the course was the messages students receive and the need to teach students a growth mindset and to reject gender stereotypes. Forty thousand people took the course; at the end 93% said they were 'very' or 'extremely' satisfied and 95% said they would change their teaching, or ways of helping their own children, as a result. Eight times as many people finished the MOOC as is typical and thousands of teachers wrote detailing the changes they were making. Many of the messages came from elementary teachers explaining that the course had been 'life changing' as it had shown them that they could be successful in math and the damaging messages they had received in their lives were wrong. The course, for teachers and parents, has now re-opened http://scpd.stanford.edu/instanford/how-to-learn-math.jsp

In June 2014 a new Stanford MOOC called "How to Learn Math – for students" will teach the ideas directly to students, of any age. The MOOC comprises six interactive sessions that teach students that they can do math, that stereotyped and fixed messages about math are wrong, and that math is a living, connected subject. The course also teaches students mathematics strategies that will encourage success. This MOOC is expected to reach 2 million students. https://class.stanford.edu/courses/Education/EDUC115-S/Spring2014/about

At the conclusion of the teacher/parent course, and in response to huge demand for the continued availability of growth mindset messages about mathematics, youcubed.org was launched; a non profit whose mission is to harness the power of new technologies to transform mathematics education in the US and beyond, erasing damaging messages, widespread failure and trauma. http:// youcubed.stanford.edu

youcubed
at Stanford University

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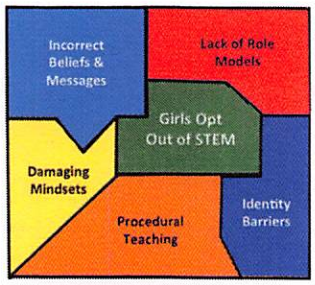
Promoting Girls' Participation in STEM: Recommendations for Change

Teaching:



- A move to inquiry based teaching in K-12 mathematics and science. This will require high quality professional development
- Change teachers' beliefs about who can learn mathematics, science and engineering
- Teach coding / computer science K-12
- Make research evidence on the brain and learning available to teachers in practical, accessible forms

Teacher Messages

- Not: "math isn't your thing" or "math is hard"
- Not: "you need a lower math class"
- Change praise from "you are smart" to "you worked hard", "you learned"

Parent Messages

- Don't share "I couldn't do math at school" or any negative feelings about math
- Communicate growth praise, not "you're so smart", but "it is great that you have learned that"

Students

- Need growth mindset interventions, particularly within mathematics
- Need opportunities to engage in inquiry mathematics and science - in school, after school, online
- Need opportunities to work collaboratively on challenging mathematics and science projects

Online courses, websites, and other technologies – for students, teachers, parents, administrators will be critical to the changes needed.

Helpful Web Links

General Mindset Interventions: http://www.mindsetworks.com ($79/student)

Mathematics and Mindset Intervention https://class.stanford.edu/courses/Education/EDUC115-S/Spring2014/about (free)

The Mathematics Revolution, resources for teachers, parents, student, administrators: youcubed.stanford.edu

Changing Teachers' / Parents' Mindsets, Ideas and Messages to Students: http://scpd.stanford.edu/instanford/how-tolearn-math.jsp

Mathematics, Messages, and the Common Core: http://www.theatlantic.com/education/archive/2013/11/the-stereotypesthat-distort-how-americans-teach-and-learn-math/281303/

Evidence on the Damage Caused by Timed Tests and Recommendations for Alternatives: Downloadable at youcubed.stanford.

Report on STEM participation and informal learning opportunities: http://www.girlscouts.org/research/resources/evaluating_promising_practices_in_informal_stem_education_for_girls.pdf

youcubed®

February 27, 2019

1) # Valuing Difference and Growth: A Youcubed Perspective on Special Education

By Jo Boaler, Professor of Mathematics Education

Tanya LaMar, Doctoral Student
Stanford University

Introduction

Nicholas Letchford grew up in Australia, a quiet boy who loved to build and solve puzzles. In Nicholas' first years of school his parents were told that he was learning disabled, that he had a very low IQ and that he was "the worst child they had seen in 20 years". 2018 was an important year for Nicholas and his family. It was the year that Nicholas' mother Lois published her book: Reversed: A Memoir[1], describing their teaching and learning journey together. It was also the year that Nicholas graduated from Oxford University with a doctorate in Applied Mathematics.

Nicholas' story of overcoming the odds that were stacked against him is inspiring but his journey - from a boy diagnosed with a learning disability to an adult with the highest academic achievement—should also remind us of the dangers of writing off any students in school, because they show signs of weakness. A few decades ago scientists believed that our brains were fixed—either at birth or by the time we were adolescents. This led to the schooling approaches that fill schools—of identifying learning disabilities, providing accommodations and working around them. Now the scientific world has new understandings, particularly regarding the incredible plasticity and adaptability of the brain[2]. Scientists have discovered that every time we learn we form, strengthen or connect brain pathways, in a process of almost constant brain change[3]. As neuroscientist Norman Doidge states, every day we wake up our brains have reorganized[4]. This knowledge of the brains' continual potential to adapt and change has led scientists and educators to take a wholly different approach to students with disabilities. Instead of working around areas of weakness, scientists now identify brain areas in need of support and strengthen them, building much needed pathways[5]. We will review some important studies later in this paper, that report upon brain interventions that set students with special education labels on entirely different journeys. One of the goals of this paper is to share evidence of these brain and learning interventions.

A second goal of this paper is to open discussion of the ways we consider difference in mathematics learning. Many students think outside of the narrow box of mathematics learning that is on offer in schools. When schools emphasize a narrow way of thinking, students who think differently turn away from the subject or worse, become labeled as having a disability. It is fairly typical for schools and homes across the US and world to offer mathematics as a subject of memorization[6]. This comes about in part because of the testing culture that is dominant in the US. Teachers know that they can teach students to memorize methods and be successful in narrow tests. The memorization approach starts early—with teachers asking students to memorize tables of multiplication facts, often from 1st grade onwards. Mathematician Francis Su describes the memorization of the 12x12 multiplication table as one of the most meaningless activities possible. Further damage is done when students are tested on their recall of math facts, under

timed conditions, leading many students to develop mathematics anxiety[7]. Students who undergo such experiences learn early on that mathematics is a shallow subject needing fast recall, and for that reason they turn away from it. A previous youcubed paper[8] entitled: "Fluency without Fear" shares different ways of approaching fact fluency with students, giving students understanding and enjoyment, instead of fear.

There are many problems with the memorization approach to mathematics. One is that some students are not good memorizers. These students do not have less mathematics potential[9] and often they are students who think creatively and visually, have strong reasoning and logic, and who could contribute greatly to the discipline of mathematics. Sadly such students are not valued in memorization classrooms, and they quickly get the idea they are not "a math person" which changes their learning from that point on. For some students weak memorization of math facts, which often stems from anxiety, leads to a learning disability diagnosis and years of special education classes and low self-esteem[10]. This is something we are trying to change, through the dissemination of evidence through youcubed.org and the message that diversity in thinking is something to be valued. Even though weak memorization is often used as the indicator of a learning disability, there are many reasons that students do not memorize well, as we describe later. Also strong memorization and speedy performance of math facts and methods is not an indication of strong mathematics potential.

This paper aims to communicate scientific evidence in two main areas, that we hope will inform and support those working in special education and those working with students in need of support. First we share a growth approach to Special Education that draws from the latest scientific work in neuroplasticity. Second we report on schools and teachers taking a multi-dimensional approach to the teaching of mathematics that works to honor many different types of thinking, valuing difference and rejecting ideas of deficit. We, the authors, are not special educators and do not have the detailed knowledge of those who specialize in the field, but we hope that our knowledge of mathematics learning and of neuroscience, will help those who are doing the important work of supporting students in schools.

Many special educators have worked for years to value students who have learning differences, and resist attempts to pull them into different classrooms, cementing ideas of deficit. We applaud this work, as well as the special educators who work with students who have been put into different schools and classes, and strive to give students the idea they can learn and achieve highly. While this paper is not giving the argument that all students have the same brain and the same potential, we will give the argument that when teaching and expectations are broadened, many more students are successful and some students even shed learning disability labels. Our aim in writing this is to provide research evidence that will help students succeed in mathematics and other subjects, past the limitations that are often placed on students who think differently.

1. Special Education and Mathematics Anxiety

Across the United States approximately 8.4% of students are diagnosed as having a special education "disability"[11]. The vast majority of those—72% are diagnosed as having mild to moderate disabilities[12]. These include learning disabilities such as dyslexia, dyscalculia, and auditory processing disorder. Inequities prevail in special education, as they do in most aspects of schooling. For example, males and students of color are more frequently classified as special education students than are females and white mainstream students. Nearly twice as many males as females are classified as students with learning disabilities.

The group most likely to be classified as "mentally retarded" or "learning disabled" are boys of color[13]. Black students with disabilities are four times more likely than their white counterparts to be educated in correctional facilities[14].

A large amount of the current research on mathematics learning disabilities (MLD) has been conducted on elementary aged students with a focus on speed and accuracy in arithmetic calculations[15]. When children have particular problems memorizing disconnected facts, they are often regarded as having a learning disability. Research indicates that 5-7% of students are diagnosed with mathematics learning disabilities[16], but there is no agreed upon assessment criterion for this diagnosis and low mathematics achievement is often used as an indicator of a disability[17]. This is troubling given that students underachieve in mathematics for many different reasons, often unrelated to cognitive differences. One of the most important and yet most neglected reasons for underachievement is math anxiety, a psychological condition that often develops in the early years and snowballs as students move through school. Ashcraft describes math anxiety, as the feeling of tension, apprehension, or fear when people work on mathematics[18]. Neuroscientists are now showing that mathematics anxiety is widespread, that it impedes the functioning of the brain[19] and it can be passed on by teachers and by parents[20]. Before deciding that a student has a "learning disability" it seems important that we consider the ways that mathematics anxiety may be affecting a student's learning and achievement.

Many children in the US, and beyond, grow up thinking that either you can do math or you can't. When they struggle, they assume they can't. From that point on any struggle is a further reminder of their perceived inadequacies. Procedural mathematics teaching and high-pressure testing combined with the prevalent ideas that only some students belong in mathematics[21], has led to the development of widespread mathematics anxiety across the world. One study found that 48% of all young adults in a work-apprentice program had math anxiety[22]; other studies have found that approximately 50% of students taking introductory mathematics courses in college suffer from math anxiety[23]. It is difficult to know the impact and extent of math anxiety across the world but even conservative estimates suggest that it is considerable and worthy of greater attention[24]. In our own work teaching mathematics as a multi-dimensional subject, valuing the different ways students think and reason, we have found that math anxiety disappears when students see that they can learn successfully and they are given the opportunity to build a new relationship with mathematics[25].

Researchers now know that when people with math anxiety encounter numbers, a fear center in the brain is activated—the same fear center that lights up when people see snakes or spiders. As the fear center of the brain becomes activated, activity in the problem-solving centers in the brain is diminished[26]. It is no wonder that so many people underachieve in mathematics—as soon as people become anxious about it, their brains are compromised.

Sian Beilock's research has revealed the ways math anxiety is passed on to young students, by teachers and parents. In one study, she and colleagues found that the amount of math anxiety expressed by parents predicted their child's math achievement in school[27]. The amount of math knowledge parents had was not important, only how anxious they were. And their math anxiety only impacted students negatively if parents helped with homework. This suggests that math anxiety is passed onto children when parents are having conversations with them about mathematics.

In another important study Beilock and her team found that the amount of math anxiety female elementary-school teachers have predicts their female—but not male—students' achievement[28]. This probably comes about because female teachers share their feelings about math through statements such as, "I was not good at math in school," and, "Let's just get through this quickly, so that we can move to reading time." Girls are probably affected by this more than boys, because they identify with their same-gender teachers. Unfortunately, while unproductive mathematics approaches and messages continue to be a part of students' education, it is difficult to know when a student has a genuine learning difference and when they are suffering from a form of anxiety that would suggest a whole different approach to remediation. Researchers agree that assessments should look for and identify math anxiety in order to help underachieving students[29].

The remaining two sections of the paper share evidence of different ways of supporting students who need particular help with learning. First we review the brain training interventions that are being used by neuroscientists and others, in mathematics and in reading, with highly promising results. Second we share the impact of teaching mathematics multi-dimensionally, including the ways it addresses mathematics anxiety and invites students to be mathematically successful, even when they have previously been labelled as low achieving.

2. Targeted Brain Interventions

For decades the approach of many who work in special education has been to identify students' areas of need and work around them—engaging students in learning approaches that draw from their strengths. This approach made sense for the thinking at the time. If brains were relatively set it would be unproductive to try and change them, and schools lacked the resources and knowledge to do so. But we are now in a new era, and neuroscientists have important insights into the complex working of the brain. Not only do neuroscientists have the capacity to understand brain functioning, but they can also change brain functioning through targeted interventions. In one study researchers gave a brain intervention to 24 children ranging from 7 to 12 years old who were either clinically diagnosed with dyslexia or recorded as having significant reading difficulties[30]. These children were given an intensive 8-week long reading intervention program where they participated in one-on-one training sessions for 4 hours a day, 5 days a week. Throughout the study, MRI data were collected to track the students' brain growth. The researchers found large-scale changes in brain growth for the participants. Furthermore, this brain growth was correlated with a significant improvement in reading skills. By the end of the intervention program, the average reading achievement score for the intervention group was within the range of scores for typical readers[31]. This finding shows that targeted interventions can bring about significant brain growth and change which can result in improved outcomes for students with learning differences.

A different intervention conducted by neuroscientist Teresa Luculano and her colleagues in Stanford's school of medicine, was similarly promising[32]. The researchers brought in children from two groups—one group had been diagnosed as having mathematics learning disabilities and the other consisted of regular performers. The researchers looked at the brains of the children using MRI scans taken when they were working on mathematics. They found actual brain differences—the students identified as having disabilities had more brain regions lighting up when they worked on a math problem. However, we do not want all brain areas to light up when we work on mathematics; we want a few focused areas to light up. The researchers gave one-on-one tutoring to both sets of students—those who were regular performers and

those identified as having a mathematics learning disability. The tutoring, which included 8 weeks of 40-50 minute sessions per day, focused on strengthening student understanding of relationships between and within operations. At the end of the eight weeks of tutoring, not only did both sets of students have the same achievement; they also had the exact same brain areas lighting up[33].

Both of these studies show that in a short period of time with careful teaching, brains can be completely changed and rewired. Such studies are inspiring and should remind us that all students are on a growth journey. The dichotomous thinking that fills schools—with decisions that some students are "smart" or capable of high level work, or have "special needs"—make no sense if we acknowledge that all students—and teachers—are in a continual process of brain change and growth.

It is not only neuroscientists who are focused upon brain change and growth. Barbara Arrowsmith-Young is a pioneer who has been giving students cognitive training through her specialized schools in Toronto, and through the training of educators who take her approach back to their own schools[34]. Barbara is someone who was herself diagnosed with severe learning disabilities. As she was growing up, she and her family were told she was brilliant in some areas, but "retarded" in others. Fortunately for Barbara, she had an amazing memory and was able to memorize her way through school and hide what she knew was wrong.

As an adult her own learning disabilities prompted her to study child development, and eventually she came across the work of Alexander Luria, a Russian neuropsychologist who had written about stroke victims who had trouble with grammar, logic, and reading clocks. Luria worked with many people with brain injuries, produced an in-depth analysis of the functioning of various brain regions, and developed an extensive battery of neuropsychological tests. Then Barbara came across the research in neuroplasticity and realized that particular activities could produce brain growth. She began months of detailed work on the areas she knew she was weakest in. She made herself hundreds of cards with clock faces and practiced so much she was reading them faster than "regular" people. She started to see improvements in her symbolic understanding and for the first time began grasping grammar, math, and logic[35].

Now Barbara runs schools and programs that give cognitive training to students diagnosed with learning disabilities[36]. During visits to her schools in Toronto we met many children and adults who were attending the programs. Many of them spoke in similar terms—talking about a "fog lifting" after they started on her cognitive tasks. Researchers studying the Arrowsmith program have now found that it causes improvements in brain connectivity, and network reorganization[37].

Barbara not only offers cognitive training for students who go to Toronto and enroll in the school; she has now developed a program that educators can be trained in and take back to their schools. Some students stay in the program for a few months, some for a few years, and now a remote program is being developed for students to work in different locations. A free webinar will be shared on youcubed.org to help those who would like to learn more about and possibly become trained in the Arrowsmith approach[38]. The Arrowsmith program and the research that is now emerging from it, holds promise. For subject teachers in schools, similarly exciting results come about when expectations and content are opened up, as examples in mathematics show.

3. Teaching Mathematics through Multiplicity

We recently ran a Youcubed summer mathematics camp for students at Stanford. Eighty-four students attended, from a range of achievement levels, and all shared with interviewers that they did not believe they were a "math person". We worked to change those ideas and teach mathematics in an open and multi-dimensional way. After eighteen lessons the students improved their achievement on standardized tests by the equivalent of 2.7 years[39]. When district leaders visited the camp and saw students identified as having learning disabilities, who were low achieving in their district, solve complex problems and share their solutions with the whole class, they became teary and said it was impossible to know who was in special education and who was not in the classes.

When mathematics is taught as a narrow subject, with one way to be successful—follow and reproduce the teacher's methods—only a small number of students are successful. When mathematics is opened and teachers work to recognize and value all the ways of being mathematical including making conjectures, problem solving, communicating, reasoning, drawing, modelling, making connections, and using multiple representations—many more students are successful. A more open mathematics approach has been shown by multiple research studies to bring about more equitable and higher achievement[40]. The teaching of mathematics as a set of methods to follow, encourages students to regard mathematics as a subject of memorization. Without the opportunity to explore mathematical ideas, develop understanding, and see important mathematical connections, students resort to memorizing methods and procedures. The limitations and the pervasiveness of this approach in the US was shown by a study of student learning conducted with 13 million students worldwide[41].

PISA testing is a form of international testing in mathematics and science given to 15-year-olds worldwide. In 2012 the Organization for Economic Co-Operation and Development (OECD) focused on mathematics in particular and collected evidence of students' approaches to learning. This showed something interesting. Analysts divided students into one of three learning styles: students either approached mathematics learning by memorizing, by relating material to previously known material, or by self-monitoring—connecting new ideas to those they had learned. Analysts found that students who took a memorization approach to mathematics were the lowest achieving students in every country and any country that had high numbers of memorizers (such as the US) was low performing[42]. The US was in the top third of countries across the world with high proportions of students taking a memorization approach.

A research study that sheds light on the limitations of a memorization approach and the ways young students become low achievers in mathematics was conducted by two professors in the UK, Eddie Gray and David Tall[43]. They conducted a study with a group of 7 to 13 year old students who were identified by their teachers as low, average, or high achieving. The students were asked to work out addition problems like 7+19 and were presented with a visual representation. The researchers categorized the strategies that students used to complete these questions as using "known facts", "counting all", "counting up", and "derived facts". The "derived facts" approach, which could also be described as "number sense" meant that students were using numbers flexibly to solve problems. For example, when faced with a problem such as 7+19 a student with number sense might add 6 and 20, whereas a student using a counting strategy would count the numbers one by one. Gray and Tall found that the strategies used by above average students and below average students varied greatly:

Above Average Student Strategies	Below Average Student Strategies
30% known facts 9% counting on 0% counting all 61% derived facts	6% known facts 72% counting on 22% counting all 0% derived facts

The researchers noted something important—the difference between the low and high achieving students was not that the high achievers knew more, but that they were engaging with numbers flexibly and the low achievers were not. The researchers also pointed out that low achievers are often learning a more difficult mathematics, and they illustrated this with the strategy they used to subtract 13 from 16. Whereas the students with number sense subtracted 3 from 6 and 10 from 10, the students without number sense counted down, from 16 to 13. This requires a great deal of cognitive focus and is more difficult than the number sense approach. Unfortunately, as the researchers note, when students are identified as low achieving, they are often pulled out of class and given more "drill and practice" which cements their memorization approach to mathematics. Students pulled into special education classes are often taught mathematics procedurally and encouraged to memorize methods. This is unfortunate as the students most need a different and more conceptual approach to mathematics, so that they develop number sense, and a comfort with numbers and number relationships[44].

In different studies in which researchers report an approach to mathematics that values the different forms of thinking that learners offer, teachers find that students diagnosed as having learning disabilities contribute a great deal, communicating sophisticated thinking strategies[45]. A number of different studies have shown that when students are given the freedom to think in ways that make sense to them, learning disabilities are no longer a barrier to mathematical achievement[46]. Many teachers do not know how to teach multi-dimensionally, which is why youcubed offers professional development, online courses and a range of other resources to help teachers know and teach mathematics differently (see youcubed.org). These courses are designed to help teachers of mathematics and special educators.

Dylan Lynn was diagnosed as having dyscalculia, a particular brain condition that makes learning mathematics hard. But Dylan refused to accept that she could not learn mathematics and pursued and achieved a degree in statistics at the University of California, Berkeley. Many people told Dylan to change her focus from mathematics, instead of this she worked out her own system of tackling mathematics problems, engaging with them in more multi-dimensional ways. Dylan now collaborates with Katherine Lewis, a professor at the University of Washington, in communicating her approach to mathematics, to help others achieve their goals, even when those who have been assessed as having a learning disability[47].

In Conclusion

This paper has shared some ideas and research that are focused on brain growth and difference. It has taken a necessarily selective approach, with the aim of sharing some new initiatives and research that are not well known. When students like Dylan Lynn and Nicholas Letchford move from labels of special education to high mathematics achievement many factors are at work, including educators or parents who believe in the students. The students also displayed a growth mindset approach to their lives and their learning. A large body of research has now shown that when students develop a growth mindset,

and believe that they can achieve, they go on to higher achievement[48] and their brains function more effectively[49]. But it is hard for students to develop a growth mindset if they are learning in school systems that communicate the opposite idea - that only some students can be successful.

An important shift that needs to be made in the school system and in homes concerns the way in which students and teachers react when students struggle. Neuroscience and educational research shows that times of struggle are some of the most productive times for brains, and they should be celebrated[50]. If students face struggle and think that it is a time of challenge and brain growth, rather than assuming they are failures and not "math people" (or substitute any other subject), their learning pathways will change. This takes different messages from teachers and parents, especially around times of struggle[51].

This paper is not giving the argument that all students have the same potential or that some students do not have learning differences that need special attention, but we are claiming that many students develop the incorrect idea that they cannot be successful when mathematics is taught in a narrow and closed way, because of the narrowness of the approach. All students benefit from a multi-dimensional mathematics approach that values different ways of seeing and working, that is true to the discipline of mathematics[52], and that focuses upon the big ideas of mathematics and the connections that link them[53]. A connected, meaningful and multi-dimensional mathematics experience should be a right for all students.

To conclude this paper we ask a question, that was first asked by Ray McDermott: How would learning change for students if we did not have labels in our school system?[54] Unfortunately any label—even one that brings with it funding and helpful accommodations—has a fixed idea about it. This film shows Stanford students reflecting on labels of giftedness and smartness, and the ways these labels changed them, in some unexpected ways[55]. When students arrive at schools with brain and learning differences that need special attention and help, it is important to provide accommodations, but when labels are attached to such accommodations, they start to define children, in unproductive ways. We work with schools now that have special educators who help students without labels, and always refer to learning differences, rather than learning disabilities. This may seem like a small linguistic shift but it is one that changes students' perceptions and pathways. All learners are different and that is something to be celebrated. Teaching would be a very un-rewarding job if we asked learners questions and they all gave the same answer and thought in the same way. I (JB) was very struck by the recommendations that came to me as a parent for my own child with dyslexia and auditory processing difficulties. All of the recommendations for the teaching she should receive and that would really help her - to see content and ideas in different ways, to engage with multiple media and methods, to avoid disconnected facts, or find ways to connect them—seemed like good teaching for all students. Perhaps we should not even call it "special education". Maybe there is a better name: good education.

This article contains extracts from Jo's new book: Limitless Mind: Learn, Lead & Live without Barriers. (Harper Collins:2019).

Acknowledgements: We would like to thank those who read and helped with drafts of this paper, especially Beth Powell, Montse Cordero, Kristina Dance, Jack Dieckmann & Cathy Williams. Any mistakes contained in the paper are the authors alone!

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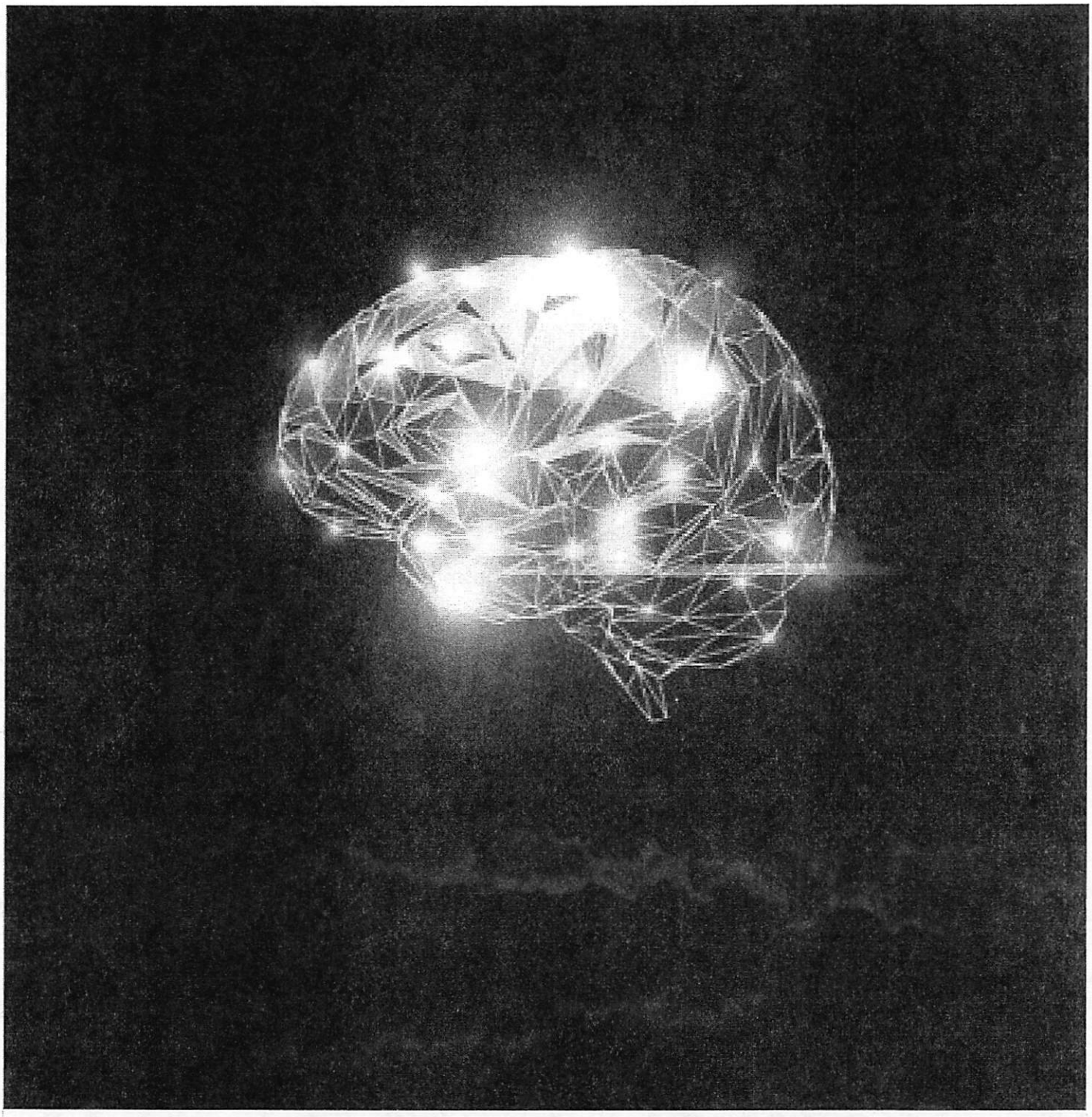
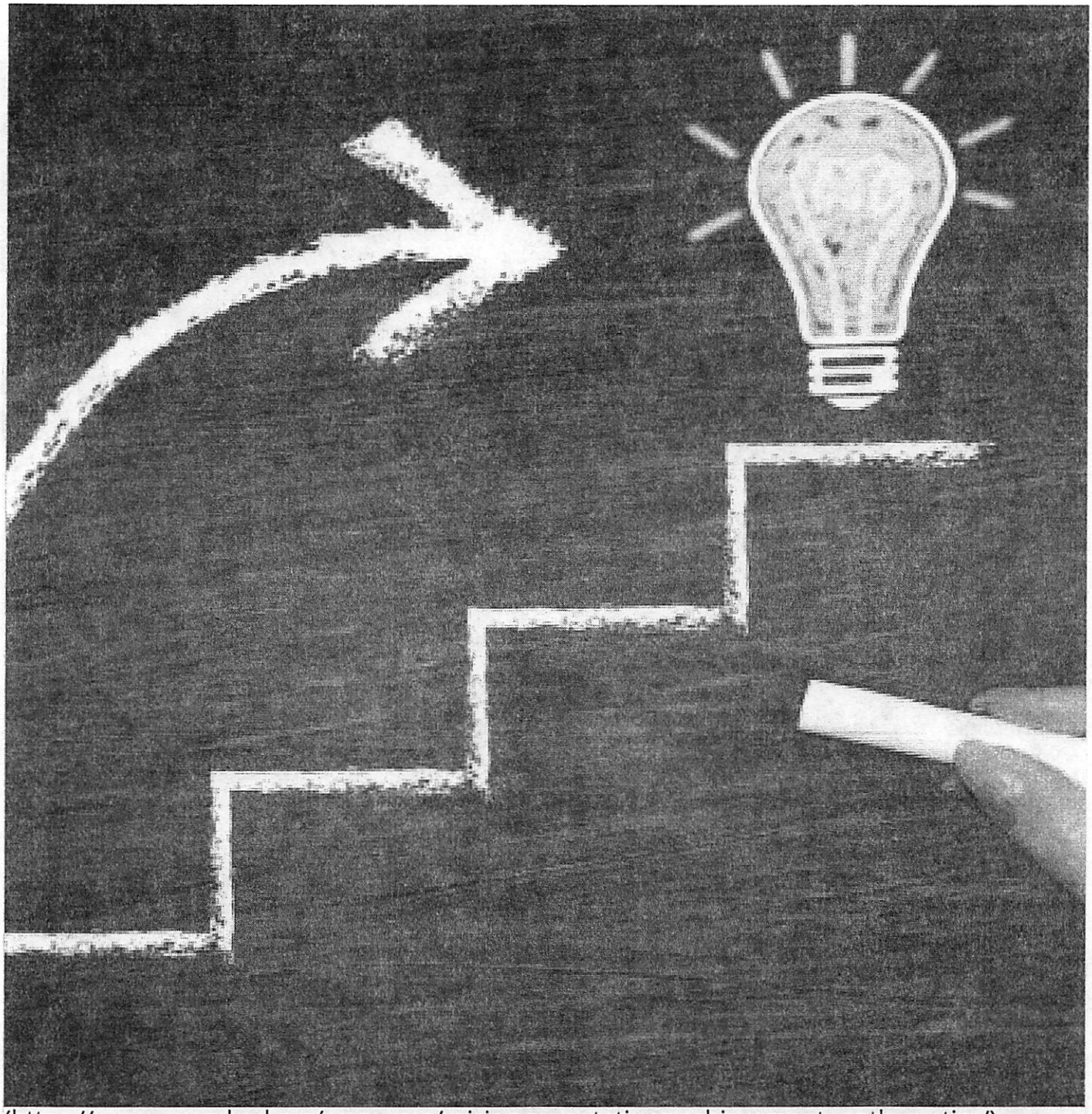
2) Ability Grouping

This is an area of education where the practice that happens in schools is far from the research evidence that exists. International analysts conclude that the most successful countries are those that group by ability the latest and the least. Mixed achievement teaching is associated with higher overall achievement for students of all levels and when schools move from tracking to giving all students high-level math classes, achievement increases significantly (see Evidence – Research Papers). But teaching children in mixed achievement groups requires a different form of teaching than the more typical lecture and short question repetition that prevails in US math classrooms. If schools and classrooms de-track without adjusting their teaching, high results are unlikely to be the outcome. Over the years I have been fortunate to work with many incredible teachers, committed to equity, who teach mixed achievement groups. On this page are two papers detailing the successful use of mixed achievement grouping, one in a high school setting (How a detracked mathematics approach ..) and one describing what happened when a district took away advanced classes in middle schools (Raising Expectations and Achievement). Our Group Work page also details ways to teach students heterogeneously. My book: Mathematical Mindsets details ways to teach mixed achievement groups successfully. Other cases of successful mixed achieving grouping include our summer camp teaching, which is shown under Evidence – Our Teaching Approach.

(https://www.youcubed.org/downloadable/myth-gifted-child/)



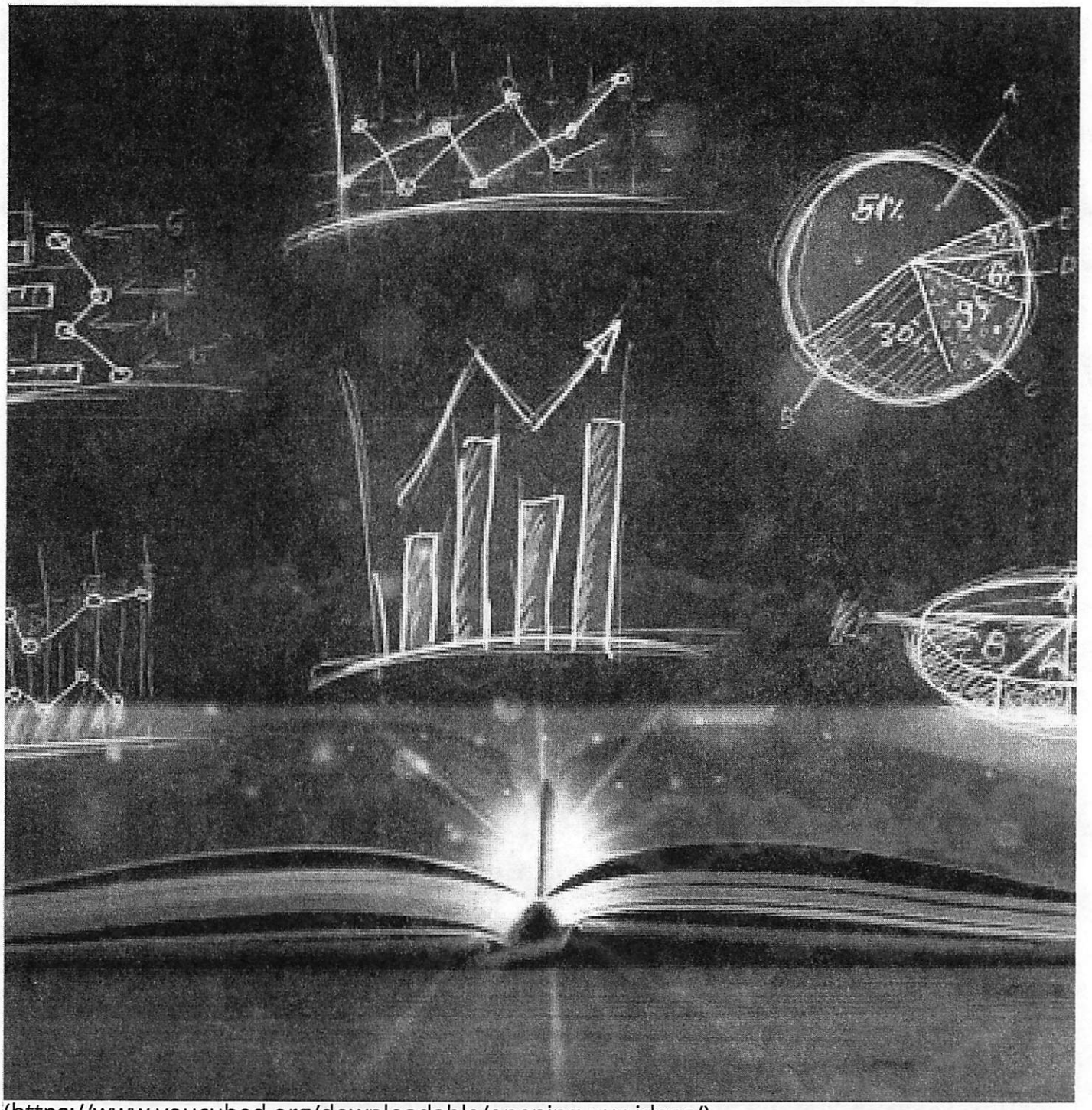
The Myth of the Gifted Child– extracts from Mathematical Mindsets (https://www.youcubed.org/downloadable/myth-gifted-child/)



(https://www.youcubed.org/resources/raising-expectations-achievement-mathematics/)

Raising Expectations and Achievement in Mathematics (https://www.youcubed.org/resources/raising-expectations-achievement-mathematics/)

This paper by Jo Boaler and David Foster reviews an intervention in which student learning of mathematics increased dramatically.



(https://www.youcubed.org/downloadable/opening-our-ideas/)

"Opening Our Ideas" (https://www.youcubed.org/downloadable/opening-our-ideas/)

How a detracked mathematics approach promoted respect, responsibility, and high achievement.

youcubed
at Stanford University

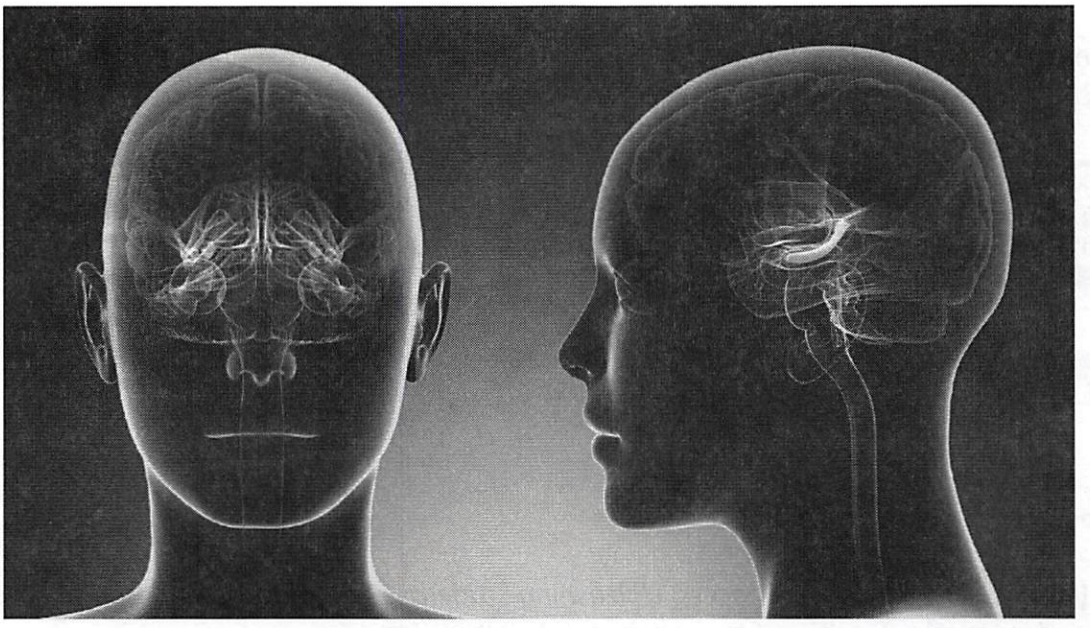
3) Anyone Can Learn to High Levels

by Jo Boaler

Stanford Professor of Mathematics Education, Online Course Experimenter, Co-Founder of Youcubed, author of the new book: Mathematical Mindsets.

Many people think that some students can work to high levels and some cannot because of the brains they are born with, but this idea has been resoundingly disproved. Study after study has shown the incredible capacity of brains to grow and change within a remarkably short period of time.

Some of the amazing evidence of brain plasticity comes from studies of London Black Cab drivers. To become a black cab driver in London you need to study for between two and four years and at the end of that time take a test called The Knowledge. To pass The Knowledge you must memorize over 25,000 streets and 20,000 landmarks in Central London. Scientists found that after this complex spatial training the hippocampus of the taxi drivers had grown significantly. The hippocampus is a part of the brain that specializes in acquiring and using complex spatial information. When drivers retire, many years later, the hippocampus shrinks back down again.



The studies conducted with Black Cab drivers, of which there have now been many, showed a degree of brain flexibility, or plasticity, that stunned scientists. They had not previously thought that such brain growth was possible. This led scientists to shift their thinking about ability and the possibility of the brain to change and grow.

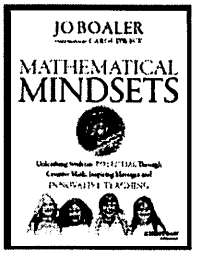
Around the time that the Black Cab studies were emerging, something happened that would further rock the scientific world. A nine-year old girl, Cameron Mott, had been having seizures the doctors could not control. Her physician, Dr. George Jello, proposed something radical. He decided he should remove half of her brain, the entire left hemisphere. The operation was revolutionary—and ultimately successful. In the days following her operation, Cameron was paralyzed. Doctors expected her to be disabled for many years, as the left side of the brain controls physical movements. But as weeks and months passed, she stunned doctors by recovering function and movement that could mean only one thing—the right side of her brain was developing the connections it needed to perform the functions of the left side of the brain.

Doctors attributed this to the incredible plasticity of the brain and could only conclude that the brain had, in effect, "regrown."

The new brain growth had happened faster than doctors imagined possible. Now Cameron runs and plays with other children, and a slight limp is the only sign of her significant brain loss. To learn more about this story visit the Today Show website.

The new findings that brains can grow, adapt, and change shocked the scientific world and spawned new studies of the brain and learning, making use of ever-developing new technologies and brain scanning equipment. In one study that is highly significant for those of us in education, researchers at the National Institute for Mental Health gave people a 10-minute exercise to work on each day for three weeks. The researchers compared the brains of those receiving the training with those who did not. The results showed that the people who worked on an exercise for a few minutes each day experienced structural brain changes. The participants' brains were "rewired" and grew in response to a 10-minute mental task performed for just 15 days over three weeks. Such results should prompt educators to abandon the traditional fixed ideas of the brain and learning that currently fill schools—ideas that children are smart or dumb, quick or slow.

If brains can change in three weeks, imagine what can happen in a year of math class if students are given the right math materials and receive positive messages about their potential and ability.



This article contains excerpts from Jo Boaler's new book, Mathematical Mindsets: Unleashing Students' Potential Through Creative Math, Inspiring Messages and Innovative Teaching

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To read about studies of schools that have given students positive messages about their ability, combined with mathematics teaching that supports the brain messages, see:

Boaler, J. (1998). *Open and closed mathematics: Student experiences and understandings. Journal for Research in Mathematics Education, 29(1), 41-62.*

Boaler, J., & Greeno, J. *(2000). Identity, agency and knowing in mathematics worlds. In J. Boaler (Ed.), Multiple perspectives on mathematics teaching and learning (pp. 171-200). Westport, CT: Ablex Publishing.*

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Boaler, J. (2002). *Learning from Teaching: Exploring the Relationship Between Reform Curriculum and Equity. Journal for Research in Mathematics Education, 33(4), 239-258.*

Boaler (2005). *The 'Psychological Prison' from which they never escaped: The role of ability grouping in reproducing social class inequalities. FORUM, 47, 2&3, 135-144.*

Boaler, J. (2006). *Opening Their Ideas: How a de-tracked math approach promoted respect, responsibility and high achievement. Theory into Practice. Winter 2006, Vol. 45, No. 1, 40-46.*

Urban Success. A Multidimensional mathematics approach with equitable outcomes. Phi Delta Kappan, 87, 5.

Boaler, J & Staples, M. (2008). *Creating Mathematical Futures through an Equitable Teaching Approach: The Case of Railside School. Teachers' College Record. 110 (3), 608-645.*

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4) **Depth Not Speed**

Many people incorrectly believe that being good at mathematics means being fast at mathematics. It doesn't and we need to dissociate mathematics from speed. When we value fast computation (as many classrooms do) we encourage a subset of learners who compute quickly and discourage many others, including deep slow thinkers who are very important to mathematics. We no longer need students to compute fast (we have computers for this) we need them to think deeply, connect methods, reason, and justify. Here are some suggestions for dissociating maths from speed and encouraging a broader range of students:

1. Tell students you don't value fast work. Mathematical thinking is about depth not speed.
2. Don't let mathematical discussions be driven by the fastest students.
3. When asking for hands up, don't always take answers from the fastest students.
4. Don't use flash cards, speed competitions, timed tests, instead value depth, creativity, different ways of thinking about maths, and different explanations.

TIME

(http://motto.time.com/4717463/jo-boaler-women-stem-ivanka-trump-betsy-devos/)

The Way We Teach Math Is Holding Women Back (http://motto.time.com/4717463/jo-boaler-women-stem-ivanka-trump-betsy-devos/)

In this article, Jo Boaler argues for advancing the STEM fields and those groups who are underrepresented within them.

THE HECHINGER REPORT

(http://hechingerreport.org/opinion-bad-math-no/)

One of Jo's Students Reflects on Her Math Transformation (http://hechingerreport.org/opinion-bad-math-no/)

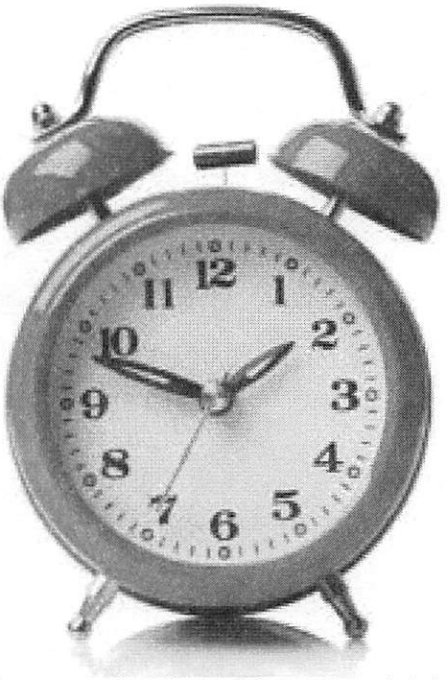
In this opinion piece, a student in Jo's seminar describes how her relationship with math changed from trauma to hope.

THE HECHINGER REPORT

(http://hechingerreport.org/opinion-time-stop-clock-math-anxiety-heres-latest-research/)

It's time to stop the clock on math anxiety (http://hechingerreport.org/opinion-time-stop-clock-math-anxiety-heres-latest-research/)

Jo Boaler details five problems we can solve to keep students on course and end the math madness.



(https://www.youcubed.org/downloadable/timed-tests/)

Research Suggests Timed Tests Cause Math Anxiety (https://www.youcubed.org/downloadable/timed-tests/)

This article summarizes the evidence and describes how to teach number sense and math fluency while encouraging understanding and excitement.

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5) Short Impact Papers

frontiers in Education

(https://www.frontiersin.org/articles/10.3389/feduc.2018.00026/full)

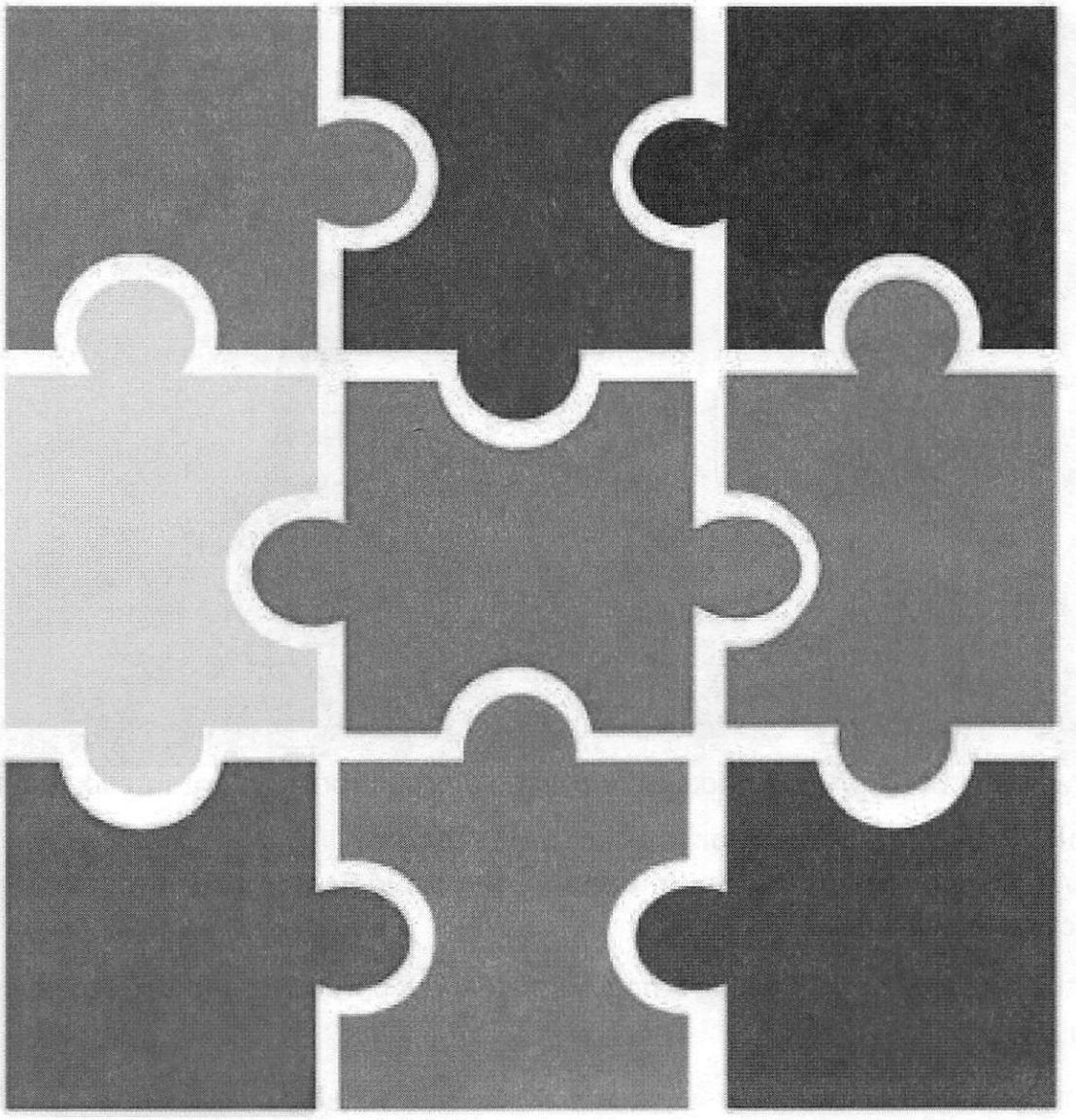
Changing Students Minds and Achievement in Mathematics (https://www.frontiersin.org/articles/10.3389/feduc.2018.00026/full)

The Impact of a Free Online Student Course

(https://www.youcubed.org/downloadable/white-house-paper/)

Changing the Coversation about Girls and STEM (https://www.youcubed.org/downloadable/white-house-paper/)

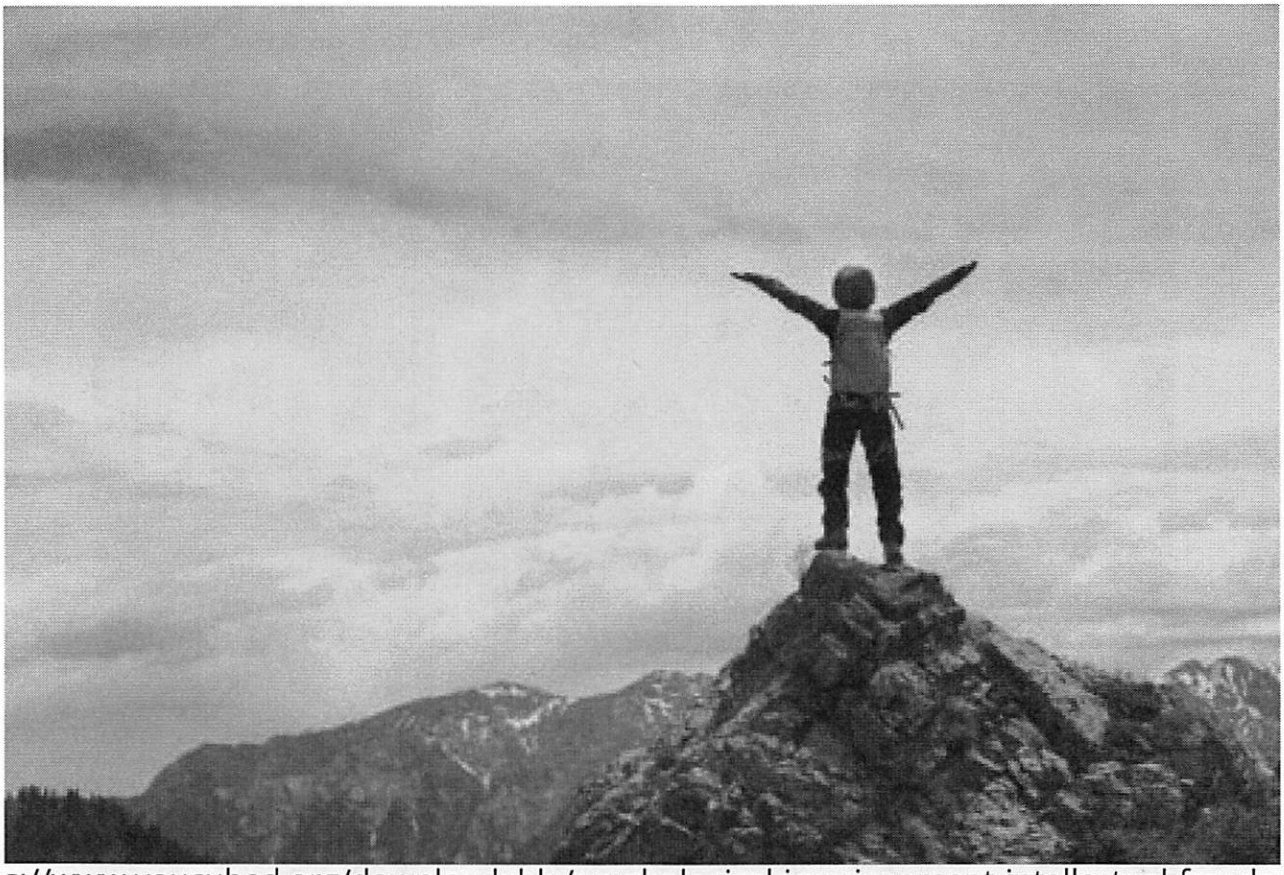
A presentation by Jo Boaler at The White House with recommendations for encouraging female participation in STEM fields.



(https://www.youcubed.org/downloadable/what-is-mathematical-beauty/)

What Is Mathematical Beauty? (https://www.youcubed.org/downloadable/what-is-mathematical-beauty/)

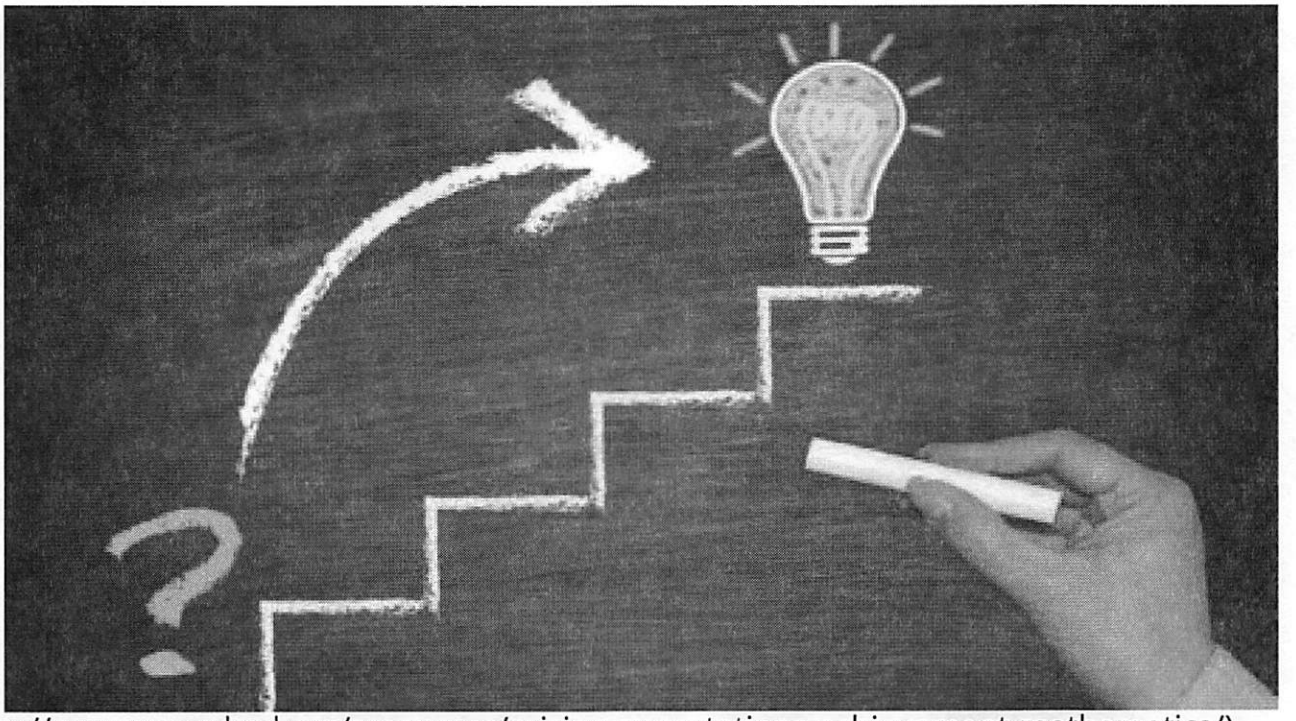
Teaching Through Big Ideas and Connections



(https://www.youcubed.org/downloadable/psychological-imprisonment-intellectual-freedom/)

Psychological Imprisonment or Intellectual Freedom? (https://www.youcubed.org/downloadable/psychological-imprisonment-intellectual-freedom/)

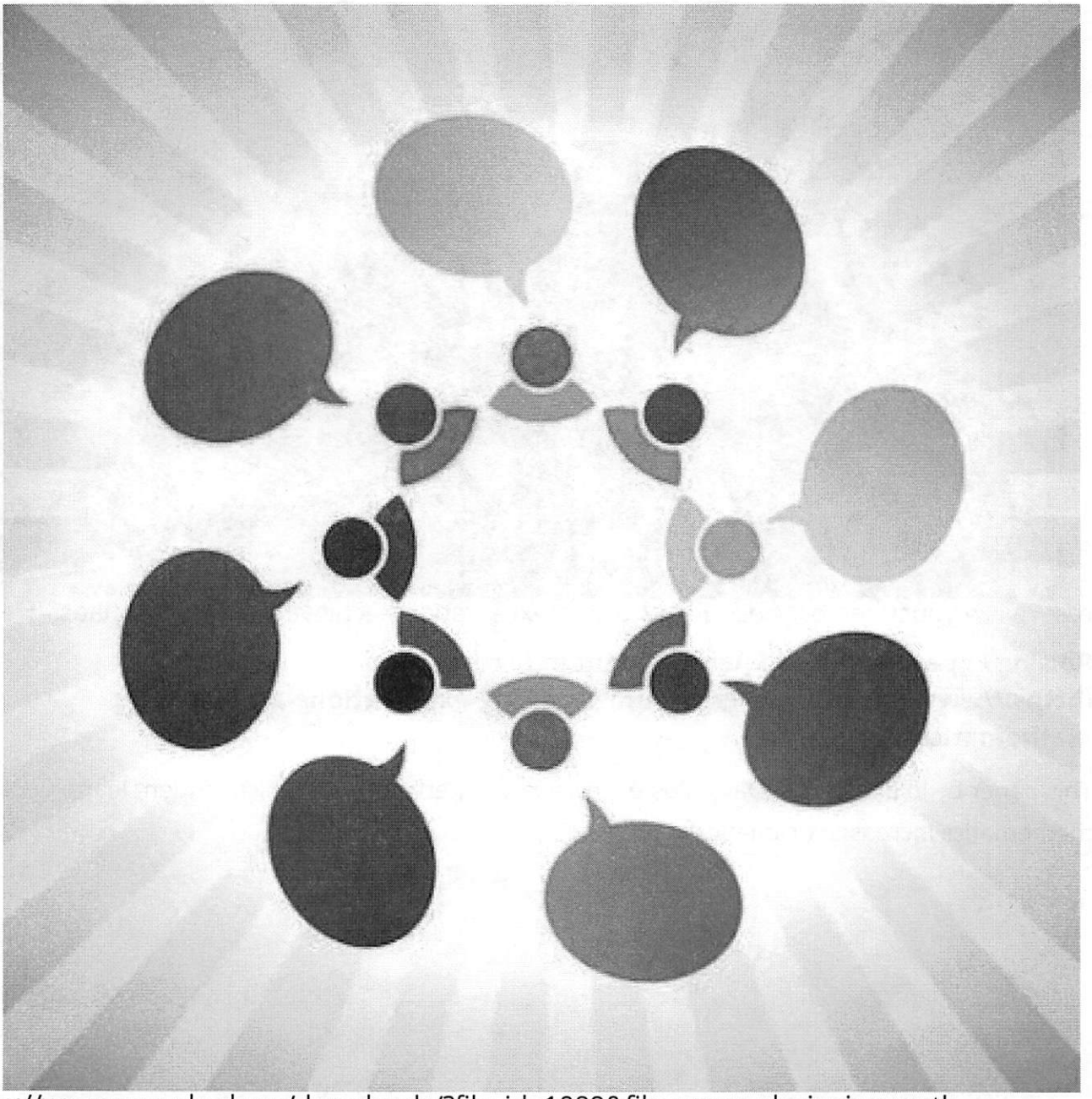
A Longitudinal Study of Contrasting School Mathematics Approaches and Their Impact on Adults' Lives



(https://www.youcubed.org/resources/raising-expectations-achievement-mathematics/)

Raising Expectations and Achievement in Mathematics (https://www.youcubed.org/resources/raising-expectations-achievement-mathematics/)

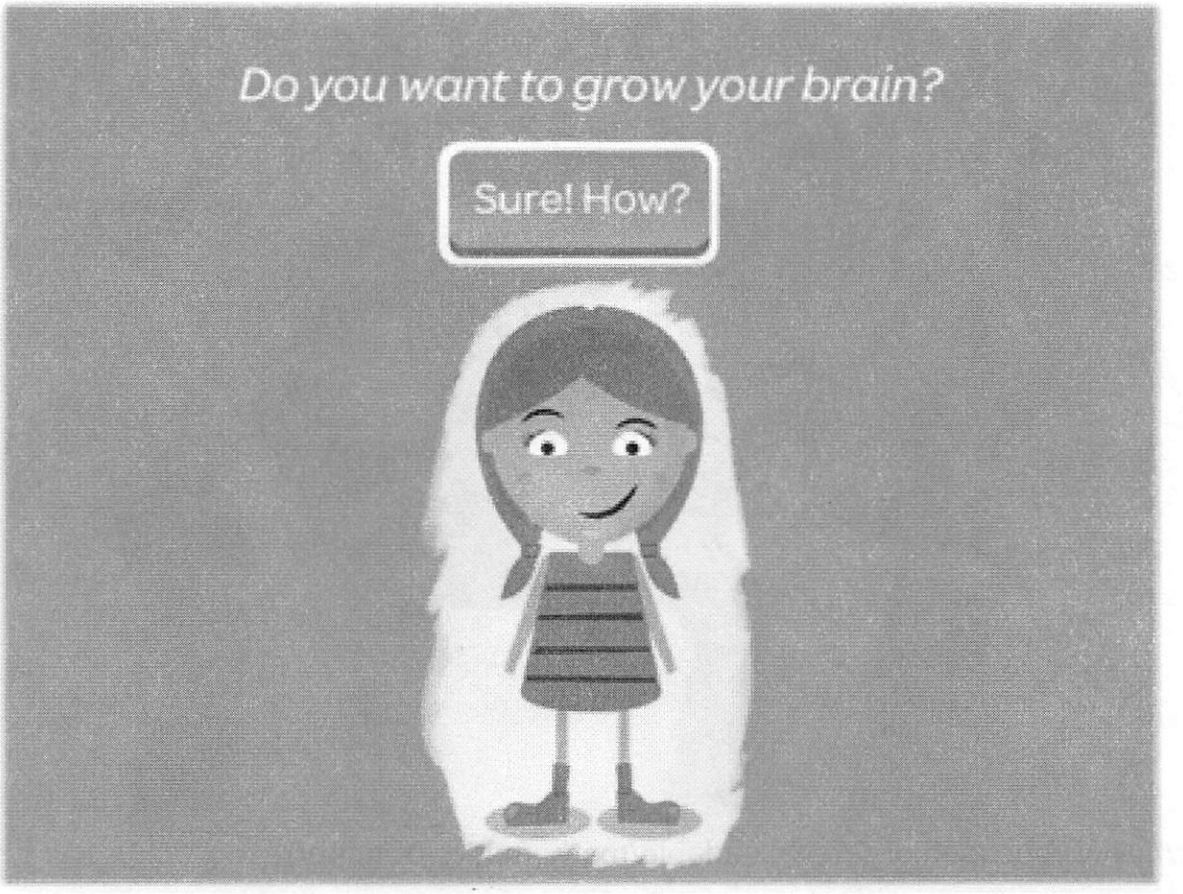
This paper by Jo Boaler and David Foster reviews an intervention in which student learning of mathematics increased dramatically.



(https://www.youcubed.org/downloads/?file_id=1089&file_name=designing-math-classes&resource_name=designing-mathematics-classes-to-promote-equity-and-engagement)

Designing Mathematics Classes to Promote Equity and Engagement (https://www.youcubed.org/downloads/?file_id=1089&file_name=designing-math-classes&resource_name=designing-mathematics-classes-to-promote-equity-and-engagement)

In this first paper of a collection, Jo Boaler describes the teaching intervention that became our summer school algebra class



(https://www.youcubed.org/downloadable/motion-math-paper/)

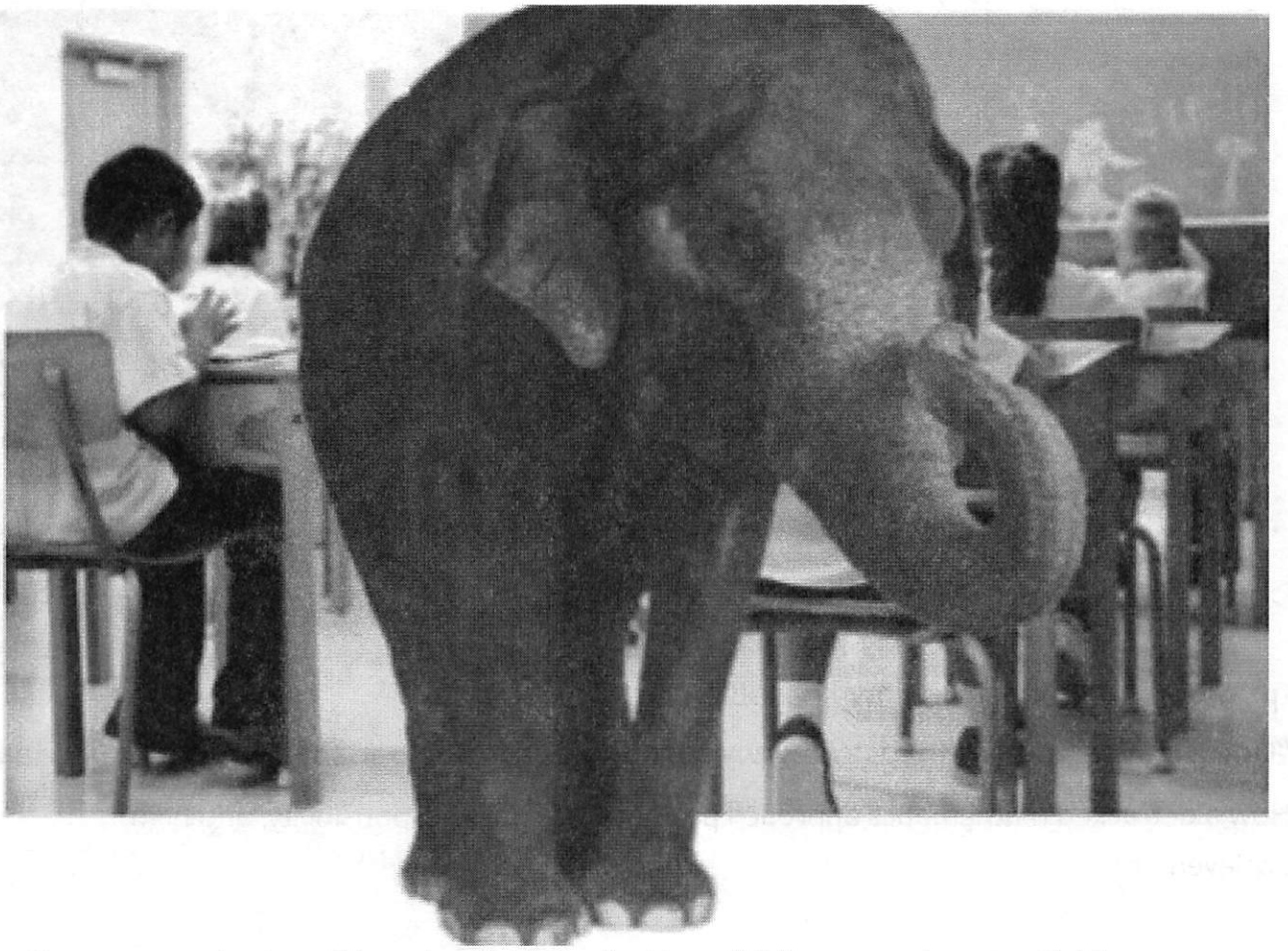
Promoting a Growth Mindset Through Personalized Mindset Coaching (https://www.youcubed.org/downloadable/motion-math-paper/)

A promising experiment with Motion Math

(https://www.youcubed.org/downloadable/mathematics-of-hope/)

The Mathematics of Hope: Moving from Performance to Learning (https://www.youcubed.org/downloadable/mathematics-of-hope/)

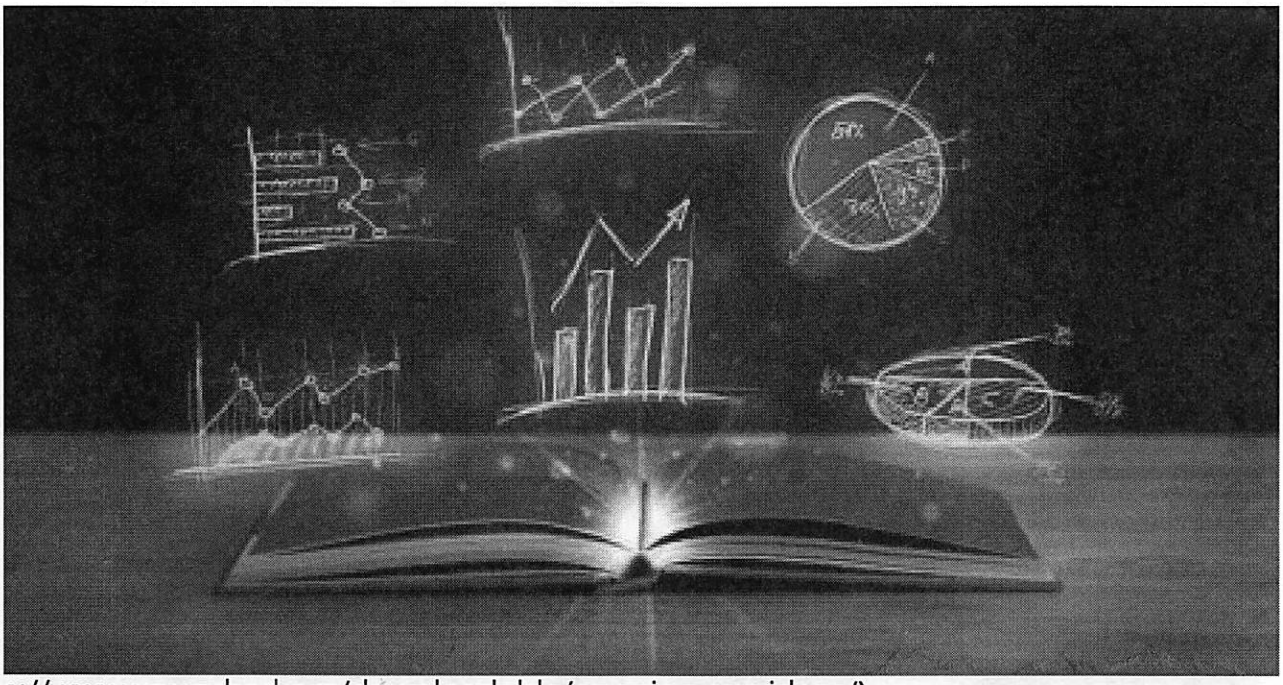
A paper by Jo with some important ideas about mathematics messages and the opening of tasks.



(https://www.youcubed.org/downloadable/unlocking-childrens-math-potential/)

Unlocking Children's Math Potential (https://www.youcubed.org/downloadable/unlocking-childrens-math-potential/)

This short paper summarizes five research findings that address the myth that only some students can do well in math.



(https://www.youcubed.org/downloadable/opening-our-ideas/)

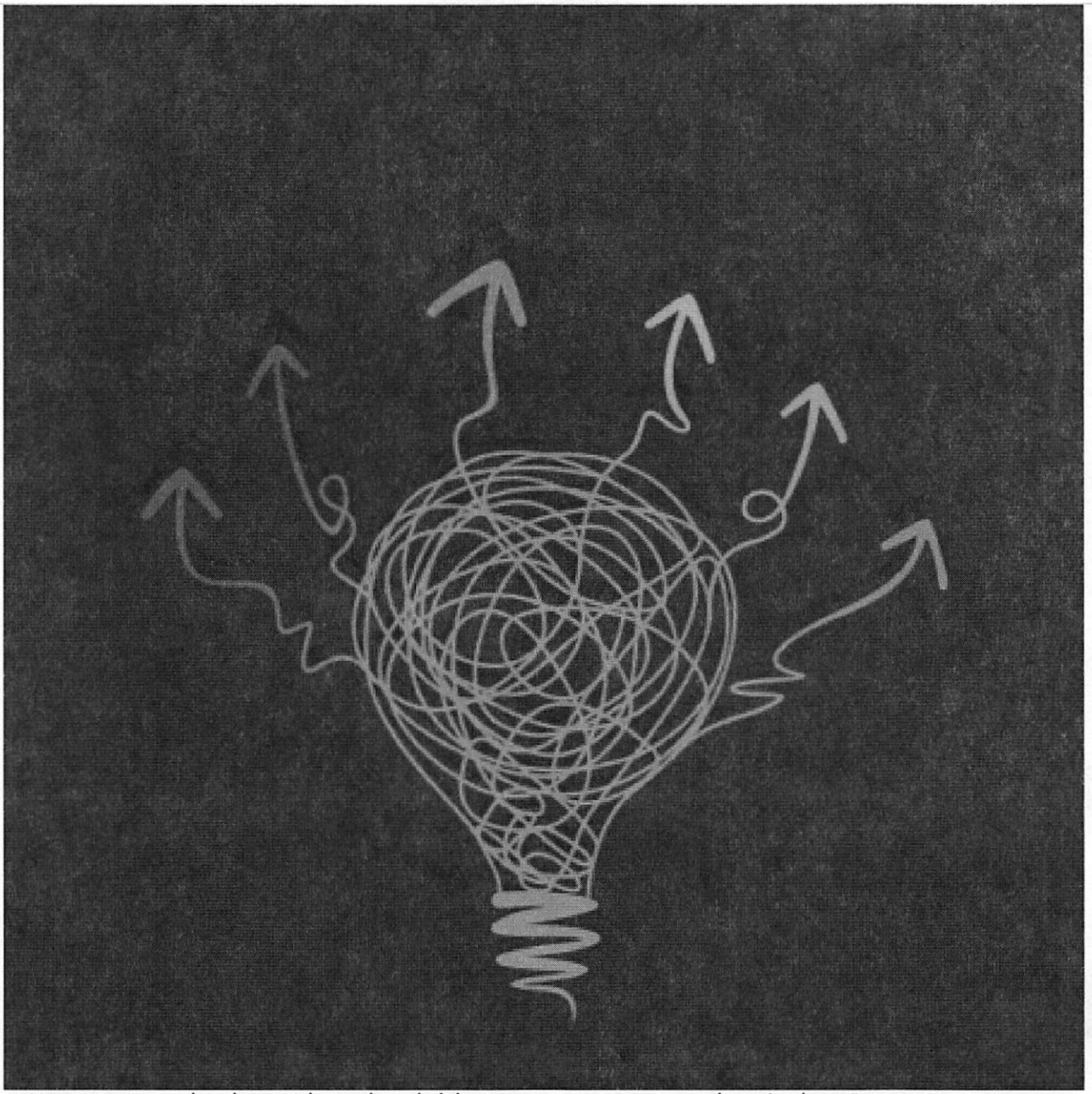
"Opening Our Ideas" (https://www.youcubed.org/downloadable/opening-our-ideas/)

How a detracked mathematics approach promoted respect, responsibility, and high achievement.

(https://www.youcubed.org/downloadable/fluency-without-fear/)

Fluency Without Fear (https://www.youcubed.org/downloadable/fluency-without-fear/)

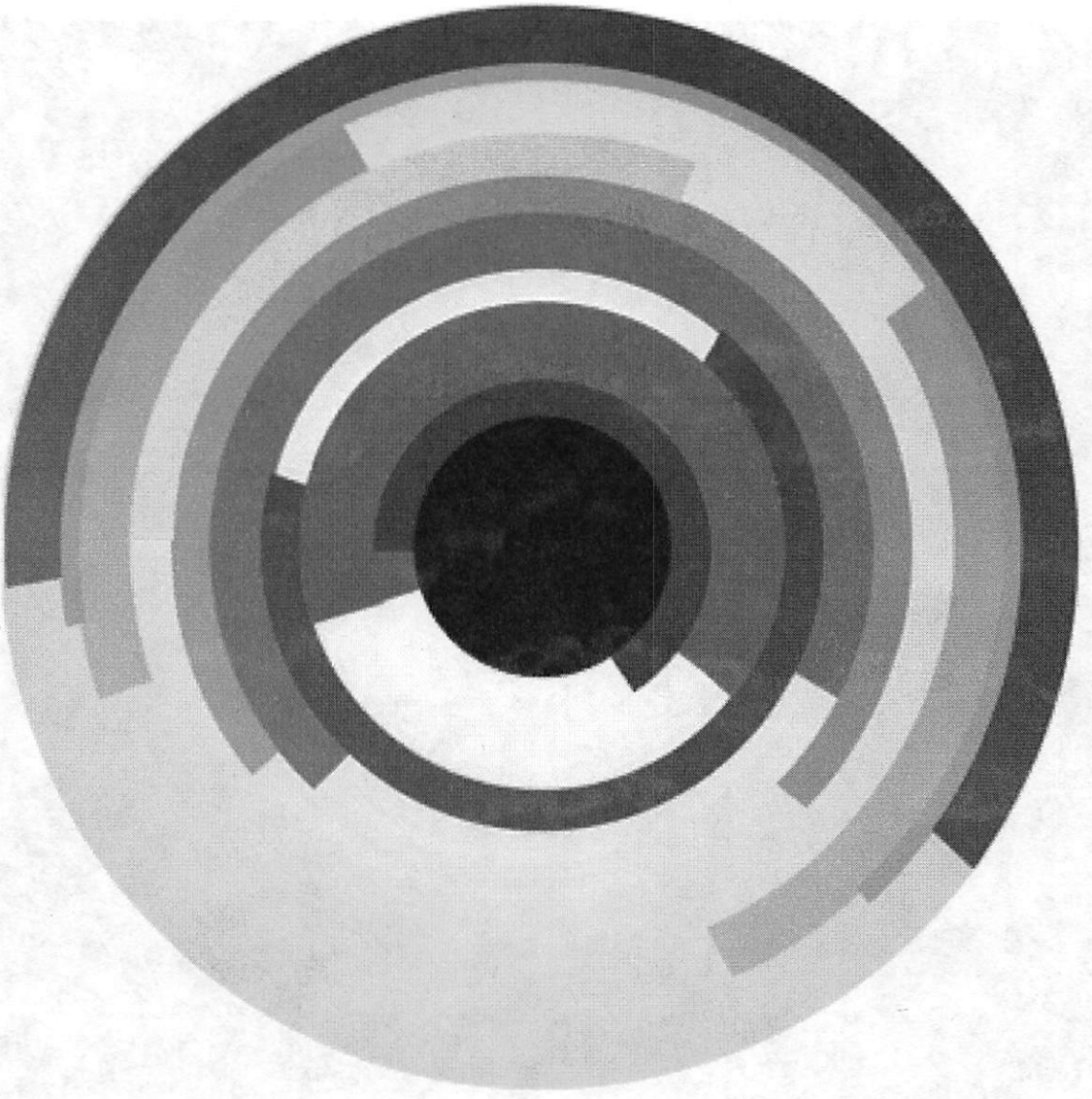
Research Evidence on the Best Ways to Learn Math Facts



(https://www.youcubed.org/downloadable/assessment-growth-mindset/)

Assessment for a Growth Mindset (https://www.youcubed.org/downloadable/assessment-growth-mindset/)

A new method of assessment promises to offer students a changed relationship with their learning.



(https://www.youcubed.org/downloadable/seeing-as-understanding/)

Seeing as Understanding (https://www.youcubed.org/downloadable/seeing-as-understanding/)

The Importance of Visual Mathematics for our Brain and Learning

youcubed® (https://www.youcubed.org)

6) Research Articles

Anderson, R.K.; Boaler, J.; Dieckmann, J.A. (2018). Achieving Elusive Teacher Change through Challenging Myths about Learning: A Blended Approach (http://www.mdpi.com/2227-7102/8/3/98). Educ. Sci. 8, no. 3: 98.

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Boaler, J., Chen, L., Williams, C. & Cordero, M. (2016). Seeing as Understanding: The Importance of Visual Mathematics for our Brain and Learning (https://bhi61nm2cr3mkdgk1dtaov18-wpengine.netdna-ssl.com/wp-content/uploads/2017/04/JACmaths-seeing-article.pdf). J Appl Computat Math 5: 325.

Boaler, J. (2013). Ability and Mathematics: the mindset revolution that is reshaping education (https://bhi61nm2cr3mkdgk1dtaov18-wpengine.netdna-ssl.com/wp-content/uploads/14_Boaler_FORUM_55_1_web.pdf). *FORUM*, 55, 1, 143-152.

Plenary Talk (https://bhi61nm2cr3mkdgk1dtaov18-wpengine.netdna-ssl.com/wp-content/uploads/intellectualfreedom.pdf), ICME 12, July 2012, COEX, Seoul, Korea.

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Boaler, Jo & Sengupta-Irving, Tesha (2006). Nature, Neglect and Nuance: Changing Accounts of Sex, Gender and Mathematics (https://bhi61nm2cr3mkdgk1dtaov18-wpengine.netdna-ssl.com/wp-content/uploads/boaler_senguptainthandbook.pdf). in Chris Skelton & Lisa Smulyan (eds). *Handbook of Gender and Education*. Sage Publications (pp 207-220).

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Boaler, J., Wiliam, D., & Brown, M. (2000). Students' experiences of ability grouping – disaffection, polarization and the construction of failure (https://bhi61nm2cr3mkdgk1dtaov18-wpengine.netdna-ssl.com/wp-content/uploads/BoalerWiliamBrownBERJ.pdf). *British Educational Research Journal*, 26, 5, 631-648.

Boaler, J (1998). Open and Closed Mathematics: Student Experiences and Understandings (https://bhi61nm2cr3mkdgk1dtaov18-wpengine.netdna-ssl.com/wp-content/uploads/2015/04/Jo-JRME-article.pdf). Journal for Research in Mathematics Education Vol. 29, No. 1, 41–62

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Wenatchee School District 246

April 23, 2019

To: Board of Directors

From: Brian Flones
Superintendent

Prepared By: Sarah Hanchey
Director of Curriculum and Instruction

Re: Learning and Teaching

INSTRUCTIONAL MATERIALS COMMITTEE ADOPTION RECOMMENDATION

The Instructional Materials Committee is recommending the Board approve the following curriculum material for district adoption. This aligns with the Wenatchee Learns Strategy 3: *Use the Best Tools and Resources to Advance Learning.*

THIS IS THE FIRST READING

Approval will be recommended at the next meeting.

- *Precalculus: Enhanced with Graphing Utilities* for Core Instructional Material adoption. Authored by Sullivan. Published by Pearson (2017). To be used at the high school level. *Precalculus: Enhanced with Graphing Utilities* is aligned to the Common Core State Standards (CCSS). This text is recommended for use as the main instructional resource for the course. The adoption of this curriculum will benefit our students by providing them with quality resources to learn precalculus skills and concepts. It is available to view at the District Office. More information regarding the online component can be found here: Math XL

THIS GROUP OF POLICIES/PROCEDURES HAVE BEEN RECOMMENDED BY WSSDA FOR REVISIONS & Possible WSD Changes Added

_3000___ Policy Series Review

Policy	Title	Suggested Action	District Recommendation	Rationale
3226P	Interviews and Interrogations of Students		FYI	Intent of Policy is to provide clarity as to the roles and responsibilities of law enforcement and other government agencies.
4500	Unmanned Aircraft and Model Aircraft		Approve	Requirements for use of unmanned aircraft at school events
4200	Safe and Orderly School Conduct		Approve	Format changes
1620	Bd & Superintendent Relationship	Action	Action	Added References – Policy Language is the same.
1620P	Procedure	Information	Information	Put back into our Procedures Number changed 2011
				4/2019

Procedure - Interviews and Interrogations of Students on School Premises

To minimize interruption to the instructional program, the district discourages interviews and interrogations of students on school premises. When the circumstances warrant an onsite interview/interrogation, staff will follow the protocols in this procedure.

I. Entry to a School

a. A law enforcement officer (e.g., police officer, sheriff deputy, and immigration agent), child protective services worker, or health department official shall contact the principal or designee upon entering a school building and present proper identification.
b. School building administrative personnel will cooperate as specified below, treating interviews of students as witnesses, victims, and suspects differently.

II. Interview of Student Witness/Victim of Criminal Activity

a. Students of any age who are witnesses to a crime or victims of a crime may be interviewed without parent/guardian consent.
b. Should it become apparent during a witness/victim interview that the student under the age of 12 years of age is the suspect of a crime, law enforcement shall immediately stop questioning until parental consent is obtained.
c. The principal or designee will make a reasonable effort to notify the parent/guardian of the interview if, in the opinion of the law enforcement officer(s), the notification will not hinder the investigation. By law, the principal or designee may not prevent the interview and will so inform the parent/guardian.
d. When prior notice has been given to the parent/guardian, the principal or designee will convey any expression of objection by the parent/guardian about the interview to the law enforcement officer(s).
e. If the parent/guardian is not present for the interview, the principal/designee will be present unless the student specifically requests otherwise.

III. Interview of Student Witness/Victim, Child Abuse or Neglect Investigation:

a. Students of any age who are witness to, or victims of, abuse or neglect may be interviewed so long as the interviewer obtains the student's consent in the presence of the principal or principal designee. A student may not be interviewed without his or her consent unless the interviewer has a warrant or determines that exigent circumstances exist.
b. Should it become apparent during a witness/victim interview that the student under 12 years of age is the suspect of a crime, law enforcement shall immediately stop questioning until parent/guardian consent is obtained.
c. The principal or designee will make a reasonable effort to notify the parent/guardian about the interview if, in the opinion of the law enforcement officer(s), the notification will not hinder the investigation.
d. When the parent/guardian has been given prior notice, the principal or designee will convey any expression of objection by the parent/guardian about the interview to the law enforcement officer(s).

e. If the parent/guardian is not present, the principal/designee will be present unless the student specifically requests otherwise.
f. If the principal or designee believes the student is being intimidated, threatened, or coerced he/she may request to take a break and make those concerns known to the interviewer. The principal or designee can then decide whether to continue, temporarily suspend, or terminate the interview.
g. The school will document the date, time, place, interview length, student name, consent to be interviewed, the interviewer, and any additional parties present.

IV. **Interview of Student Suspect of Criminal Activity:**
a. Student suspects under the age of twelve may be interviewed only with parent/guardian consent.
b. Washington State law permits students twelve years and older, who are suspects of a crime, to be interviewed without parent/guardian consent.
c. The principal or designee will make a reasonable effort to notify the parent/guardian of the interview if, in the opinion of the law enforcement officer(s), the notification will not hinder the investigation. By law, the principal or designee may not prevent the interview from taking place and will so inform the parent/guardian.
d. When prior notice has been given to the parent/guardian, the principal/designee will convey any expression of objection about the interview made by the parent/guardian to the law enforcement officer(s).

V. **Interview of Student Sought by Health Department Officials:**
a. The principal or designee will permit a health department official to conduct a confidential interview with a student suspected of being in contact with an individual infected with a communicable disease when the interview is during school hours, and the principal will not release the student to travel to the health department.

VI. **Interview of Student Sought by Immigration Agents:**
a. If an immigration agent requests access to a student or a school site, staff shall deny immediate access, alert the principal, and forward the request to the Superintendent and/or General Counsel for review.
b. The Superintendent and/or General Counsel shall ask for the immigration agent's credentials, ask the agent why the agent is requesting access, and ask to see a warrant
c. To be valid, the warrant must state the purpose of the interview, identifies the search location, references a specific person, include an accurate date, and be signed by a federal or state judge.
d. Immigration agents must also provide written authority, instructing them to enter District property, and for what purpose from one of the following Immigration and Customs Enforcement (ICE) officials, the Assistant Director of Operations, Homeland Security Investigation (HIS), the Executive Associate Director (EAD) of HIS, the Assistant Director for Field Operations, Enforcement and Removal Operations (ERO), or the EAD of ERO.

e. Upon receipt and examination of the required information, the Superintendent and/or General Counsel will determine whether immigration agents will be allowed to contact or question the individual named on the warrant and will communicate that decision to the principal or designee.
f. The Superintendent and/or General Counsel or designee will make a reasonable effort to notify the parent/guardian of the interview.
g. The Superintendent / General Counsel principal or designee will ask to be present during the interview and ensure the agents are not given access to information, records, or areas beyond that specified in the warrant.

VII. Access to Student Records

a. If the parent/guardian or student over 18 years of age has not filed a written objection to the release of directory information, anyone may request and be granted the directory information about students as designated in the district's Student Records policy and procedure (see Model Policy and Procedure 3231). The actual residential addresses of participants in the state Address Confidentiality Program are not to be available for release as directory information. Social Security numbers, student identification numbers (with authentication factors such as a secret password or personal identification number) or other personally identifiable information is not considered directory information.
b. Student records protected by the federal Family Educational Rights and Privacy Act (FERPA) may only be examined or released following written permission of a minor student's parent/guardian or and adult student, pursuant to a court order or subpoena, or in response to a health or safety emergency.

VIII. Taking a Student into Custody

a. In a criminal matter, an officer is not required to have a warrant in order for the school to release the student into law enforcement custody. The principal or designee will make immediate reasonable effort to notify the parent/guardian unless directed not to by the law enforcement officer because child abuse or neglect is alleged against the parent/guardian, or some other similar, specified reason exists for prohibiting notification.
b. School authorities may request that the law enforcement officer put his or her reasoning for denial of parent/guardian notification into writing.
c. A student may not be taken into custody at school on a truancy petition.
d. Immigration agents are required to have a subpoena or warrant signed by a judge in order for the District to release a student into custody.

Adoption Date:

Unmanned Aircraft System and Model Aircraft

The unapproved use or possession of an unmanned aircraft system (UAS) (commonly referred to as "drone") or model aircraft on district property or at a district–sponsored event is prohibited. This means, individuals and entities shall not, at any time, without prior district approval, use or possess a UAS or model aircraft on, in, above, or upon any district property or premises, including those owned, leased, maintained, or used by the district.

The district reserves the right to remove or refuse entry or admission to any individual or entity who violates this policy. The district further reserves the right to exclude any individual or entity who violates this policy from future entry upon district property or entry to district-sponsored events. Students and employees violating this policy may be subject to disciplinary action or discharge. Any violator may also be reported to authorities, including local law enforcement and the Federal Aviation Administration (FAA).

Definitions

1. Unmanned Aircraft System:
Unmanned aircraft system means an unmanned aircraft and associated elements (including communication links and the components that control the unmanned aircraft) that are required for the pilot in command to operate safely and efficiently in the national airspace system.

2. Unmanned Aircraft:
Unmanned aircraft means an aircraft that is operated without the possibility of direct human intervention from within or on the aircraft.

3. Model Aircraft:
A model aircraft means an aircraft that is:

A. Capable of sustained flight in the atmosphere;
B. Flown within visual line of sight of the person operating the aircraft; and
C. Flown for hobby or recreational purposes.

Approval Process

Any individual or entity wishing to use or possess a UAS or model aircraft on district property or at a district-sponsored event must receive pre–approval. Individuals and entities must seek pre–approval from the superintendent or designee.

Any individual or entity who receives pre–approval to use or possess a UAS or model aircraft on district property or at a district-sponsored event must abide by district policies and procedures, any special restrictions put in place by the person granting pre–approval, the laws set forth in the FAA Modernization and Reform Act of 2012, and any laws adopted by state and local authorities.

The superintendent or designee may require those using or possessing a UAS or model aircraft to: (a) provide proof of insurance; (b) enter into an agreement which holds the district harmless from any resultant claims or harms to individuals and damage to property; and (c) any additional requirements as determined appropriate by the district.

Cross References:

3240 - Student Conduct Expectations and Reasonable Sanctions
4200 – Safe and Orderly Learning Environment
4260 – Use of School Facilities
4310 – District Relationships with Law Enforcement and other Government Agencies
5281 – Disciplinary Action and Discharge

Legal References:	FAA Modernization and Reform Act of 2012, Pub. L. No. 112-95, Sections 331, 336, 126 Stat. 11
Management Resources:	2018 – August Issue

Adoption Date: __/19
Classification: Discretionary

SAFE AND ORDERLY LEARNING ENVIRONMENT

Contacts With Staff

The learning environment and the staff's time for students shall be free from interruption. Except in emergencies, staff shall not be unreasonably interrupted in their work. Brief messages shall be recorded so as to permit the staff member to return the call when free.

The time before and after student contact time shall be flexible, but shall take into account the needs of students. Certificated employees ~~shall decide how to use the 45 minutes~~ will be available for consultation with students and community members outside the student day with the expectation that employees will be in their work location 15 minutes before the start of the student day. Students and ~~patrons~~ community members are urged to make appointments with staff to assure an uninterrupted conference.

No one shall solicit funds or conduct private business with staff on school time and premises.

Visitors

The board welcomes and encourages visits to school by parents, other adult residents of the community and interested educators. The superintendent shall establish guidelines governing school visits to insure orderly operation of the educational process and the safety of students and staff.

Disruption Of School Operations

~~If any person is under the influence of drugs or alcohol or is disrupting or obstructing any school program, activity, or meeting, or threatens to do so or is committing, threatening to imminently commit or inciting another to imminently commit any act which would disturb or interfere with or obstruct any lawful task, function, process or procedure of any student, official, classified or certificated staff member or invitee of the school district, the superintendent or staff member in charge shall direct the person to leave immediately. If such a person refuses to leave, the superintendent or staff member shall immediately call for the assistance of a law enforcement officer~~.

The superintendent or staff member in charge will direct a person to leave immediately if any person is:

A. Under the influence of controlled substances, including marijuana (cannabis) or alcohol; or
B. Is disrupting or obstructing any school program, activity, or meeting; or
C. Threatens to do so or is committing, threatening to imminently commit; or
D. Inciting another to imminently commit any act which would disturb or interfere with or obstruct any lawful task, function, process or procedure (of any student, official, classified or certificated staff member or invitee) of the school district.

If such a person refuses to leave, the superintendent or staff member will immediately call for the assistance of a law enforcement officer.

Legal Reference:	RCW 28A.635.020	Willfully disobeying school administrative personnel or refusing to leave public property, violations, when — Penalty
	RCW 28A.635.030	Disturbing school, school activities, or meetings
	RCW 28A.635.090	Interference by force or violence — Penalty
	RCW 28A.635.100	Intimidating any administrator, teacher, classified employee, or student by threat of force or violence unlawful — Penalty

	RCW 28A.605.020	Parents' access to classroom or school sponsored activities
	~~20 U.S.C. § 9528~~	~~No Child Left Behind Act, Military Recruiter Provision~~
	20 U.S.C. 7908	Armed Forces recruiter access to students and student recruiting information
Cross Reference:	Policy 3510	Associated Student Bodies
	Policy 3124	Removal-Release of Student During School Hours
Management Resources:	2013 - February Issue	

Adoption Date: 08.08.94
Wenatchee School District
Revised: 6.14.11, ___/19

The Board-Superintendent Relationship

The successful operation of schools requires a close, effective working relationship between the board and the superintendent. The relationship must be one of trust, goodwill and candor. As the legally designated governing body, the board retains final authority within the district. The board exercises powers expressly required and implied by law. The superintendent is the board's professional advisor, to whom the board delegates executive responsibility, including such powers required to manage the district in a manner consistent with board policy and state and federal law.

The superintendent, as an executive officer of the board (secretary), is responsible for the administration of the schools under applicable laws and policies of the district. The board delineates the duties of the superintendent and uses them as the basis for evaluating the superintendent's performance. Unless specifically limited, the superintendent may delegate to other staff the exercise of any powers and the discharge of any duties imposed by district policy or a vote of the board. The delegation of power or duty does not relieve the superintendent of responsibility for the actions taken under such a delegation.

In order to perform their responsibilities, board members must be familiar with the operations within the schools. The superintendent will establish communication procedures which can enhance the board member's understanding of student programs and school operations.

Legal References:	RCW 28A.320.010 Corporate powers RCW 28A.330.050 Duties of superintendent as secretary of the board RCW 28A.330.100 Additional powers of the board (First Class Districts Only) RCW 28A.400.010 Employment of superintendent — Superintendent's qualifications, general powers, term, contract renewal RCW 28A.400.030 Superintendent's duties
Management Resources:	2013 - February Issue

Adoption Date:
Classification: **Discretionary**
Revised Dates: **04.98; 12.11; 02.13**

Procedure - The Board-Superintendent Relationship

The following communications procedures are established:

A. **Staff Communications to the Board**
All communications or reports to the board or individual board members from principals, supervisors, teachers, or other staff members shall be submitted through the superintendent. This will not deny any staff member's right to appeal to the board regarding administrative decisions, provided that the superintendent will have been notified of the forthcoming appeal and that it is processed according to the applicable procedures on complaints and grievances.

B. **Board Communications to Staff**
All official communications, policies, and directives of staff interest and concern will be communicated to staff members through the superintendent. The superintendent will employ all such media as are appropriate to keep staff fully informed of the board's priorities, concerns and actions.

C. **Visits to Schools**
Individual board members interested in visiting schools or classrooms will make arrangements for visitations through the principals of the various schools. Such visits will be regarded as expressions of interest in school affairs and not as "inspections" or visits for supervisory or administrative purposes. Official visits by board members will be carried on only under board authorization and with the full knowledge of staff, including the superintendent, principals and other supervisors.

D. **Social Interaction**
Staff and board members share a keen interest in the schools and in education. When they meet at social affairs and other functions, informal discussion on such matters as educational trends, issues, and innovations can be anticipated. Discussions of personalities or staff grievances are not appropriate.

Adoption Date:
Classification:
Revised Dates: **; 12.11**

Wenatchee School District No. 246
MEMORANDUM

To: Wenatchee School Board
Brian Flones, Superintendent

From: Larry Mayfield, Chief Financial Officer

Date: April 11, 2019

Re: Enrollment Reports for **April 2019**

The **April 2019** count of K-12 students is **7,621.21 full-time equivalents (FTE)**. Running Start enrollment is included. Running Start is reported for the months of October through June.

Based on a two-year trend it appears average annual full-time equivalent enrollment (AAFTE) compared to budgeted enrollment will be:

a.	Elementary Schools	greater than budget by 49 FTE
b.	Middle School Schools	greater than budget by 14 FTE
c.	Wenatchee High School	less than budget by (68) FTE
d.	Westside High School	less than budget by (8) FTE
e.	Skillsource	greater than budget by 2 FTE
f.	Valley Academy	less than budget by (3) FTE
g.	Wenatchee Valley Tech Skills Center	less than budget by (14) FTE
h.	**Subtotal (excluding Run Start & Open Doors)**	**less than budget by (28) FTE**
i.	Running Start	greater than budget by 22 FTE
j.	Open Doors/Reengagement	greater than budget by (0) FTE
k.		

Reduction in apportionment revenues is estimated to be $71,000 net of estimated Running Start and Open Doors budget surplus.

Running Start, Open Doors/Skill Source and Alternative Learning FTE are shown as separate line items for comparison to budget numbers on the original F-195 Budget.

Exhibit A - Monthly FTE Enrollments.

Exhibit B - Annual Average FTE enrollment, as reported to SPI, since 2006-07.

Exhibit C - FTE enrollment by school and by grade level for the current month and the same month in the prior year (2017-18).

Exhibit D – Graph #1 – Monthly Total Enrollment.

Exhibit E – Graph #2 – Monthly Building FTE Enrollment and Projected FTE Enrollment for Elementary Buildings, Middle School Buildings, Wenatchee High School, Westside High School, Wenatchee Valley Technical Skills Center and Valley Academy of Learning Buildings.

Exhibit F – Graph #3 – FTE Enrollment by Building & Program.

Exhibit G – Elementary Classification Sheet.

Exhibit H – Official Count Day Enrollment by Grade Level, Building and Program. Budgeted enrollment and predictions are displayed as well.

WENATCHEE SCHOOL DISTRICT NO. 246

Monthly Average FTE Enrollment 2018-19 School Year

GRADE	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	AVERAGE	2018-19 BUDGET	AVG to BUD DIFFERENCE
1/2 Day Kindergarten	-	-	-	-	-	-	-	-	-	-	-	0	0.00
All-Day Kindergarten	486.48	497.95	499.57	495.14	496.55	495.40	497.98	497.98			495.88	498	(2.12)
FIRST	518.00	520.29	521.82	522.82	518.82	523.13	522.13	524.29			521.41	498	23.41
SECOND	558.36	558.36	555.36	554.36	555.36	558.36	559.21	554.41			556.72	541	15.72
THIRD	564.00	566.00	569.00	570.00	569.00	571.00	569.00	570.00			568.50	566	2.50
FOURTH	574.00	575.00	575.00	572.77	569.77	573.00	576.00	567.00			572.82	566	6.82
FIFTH	562.00	565.00	566.00	566.00	563.00	566.00	569.00	574.05			566.38	565	1.38
SIXTH	555.80	554.80	555.48	554.80	557.80	555.69	554.69	551.69			555.09	545	10.09
SEVENTH	589.48	591.48	591.48	594.48	592.48	591.27	595.27	594.27			592.53	578	14.53
EIGHTH	549.16	551.02	549.59	551.05	548.24	550.26	551.36	547.54			549.78	561	(11.22)
NINTH	588.67	591.09	589.69	589.55	589.08	585.77	592.11	591.97			589.74	595	(5.26)
TENTH	540.83	539.29	537.99	530.31	533.31	537.69	537.76	531.80			536.12	612	(75.88)
ELEVENTH	457.78	441.79	444.88	440.88	435.71	434.39	435.53	425.36			439.54	483	(43.46)
TWELFTH	502.42	467.79	464.41	460.98	462.70	456.94	449.82	437.06			462.77	444	18.77
Kindergarten	486.48	497.95	499.57	495.14	496.55	495.40	497.98	497.98	-	-	495.88	498	(2.12)
GRADES 1-5	2,776.36	2,784.65	2,787.18	2,785.95	2,775.95	2,791.49	2,795.34	2,789.75	-	-	2,785.83	2,736	49.83
GRADES 6-8	1,694.44	1,697.30	1,696.55	1,700.33	1,698.52	1,697.22	1,701.32	1,693.50	-	-	1,697.40	1,684	13.40
GRADES 9-12	2,089.70	2,039.96	2,036.97	2,021.72	2,020.80	2,014.79	2,015.22	1,986.19	-	-	2,028.17	2,134	(105.83)
K-12 Subtotal	7,046.98	7,019.86	7,020.27	7,003.14	6,991.82	6,998.90	7,009.86	6,967.42	-	-	7,007.28	7,052	(44.72)
Running Start	-	290.34	276.86	266.28	267.01	261.60	254.14	251.41			266.81	240	26.81
Open Doors	66.36	80.19	88.36	92.32	82.31	86.30	85.14	88.85			83.73	90	(6.27)
Alternative	229.53	295.96	302.25	302.84	286.58	296.54	307.65	313.53			291.86	290	1.86
TOTAL	**7,342.87**	**7,686.35**	**7,687.74**	**7,664.58**	**7,627.72**	**7,643.34**	**7,656.79**	**7,621.21**			**7,649.68**	**7,672**	**(22.32)**

Exhibit A

WENATCHEE SCHOOL DISTRICT NO. 246

Aveage Annual FTE Enrollment 2006-07 to Present

GRADE	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Thru Oct 2018-19
KINDERGARTEN	325.23	256.86	116.96	122.84	112.17	133.51	116.35	76.00	80.90	20.80	-	-	-
ALL DAY KINDER		79.00	323.67	337.56	345.67	363.68	335.50	437.61	429.60	533.21	526.18	499.11	495.88
FIRST	583.11	639.86	591.49	571.00	587.64	542.76	617.63	575.55	620.01	596.50	572.57	544.35	521.41
SECOND	546.18	582.82	614.54	585.44	550.85	563.55	541.33	613.44	557.85	581.99	556.40	569.19	556.72
THIRD	577.61	517.25	576.33	618.96	588.12	545.74	549.19	566.04	606.64	547.60	566.76	561.23	568.50
FOURTH	522.99	574.31	529.02	569.18	614.14	576.66	536.59	546.98	571.30	593.90	541.37	565.31	572.82
FIFTH	486.97	531.43	578.29	536.22	560.76	607.33	573.57	544.19	560.36	539.50	589.77	541.00	566.38
SIXTH	620.13	510.27	559.34	622.04	549.62	590.30	649.06	589.00	543.32	554.94	544.35	581.06	555.09
SEVENTH	548.39	612.88	516.99	576.10	617.67	545.57	606.48	654.62	584.36	528.73	567.70	556.42	592.53
EIGHTH	554.19	539.08	613.53	539.12	574.79	625.61	552.01	620.59	644.19	584.41	522.79	564.69	549.78
NINTH	651.42	604.75	599.07	630.85	561.78	584.60	652.18	548.75	619.92	622.99	584.43	528.06	589.74
TENTH	620.21	596.66	569.28	548.37	611.61	545.59	570.70	620.98	553.04	599.52	613.12	576.93	536.12
ELEVENTH	524.59	569.84	527.16	591.15	593.50	625.30	562.71	568.94	573.12	536.48	497.09	516.07	439.54
TWELFTH	384.40	465.71	511.17	674.92	690.73	659.13	665.68	583.40	594.84	543.74	437.01	458.52	462.77
KINDERGARTEN	325.23	335.86	440.63	460.40	457.84	497.19	451.85	513.61	510.50	554.01	526.18	499.11	495.88
GRADES 1-5	2,716.86	2,845.67	2,889.67	2,880.80	2,901.51	2,836.04	2,818.31	2,846.20	2,916.16	2,859.49	2,826.87	2,781.08	2,785.83
GRADES 6-8	1,722.71	1,662.23	1,689.86	1,737.26	1,742.08	1,761.48	1,807.55	1,864.21	1,771.87	1,668.08	1,634.84	1,702.17	1,697.40
GRADES 9-12	2,180.62	2,236.96	2,206.68	2,445.29	2,457.62	2,414.62	2,451.27	2,322.07	2,340.92	2,302.73	2,131.65	2,079.58	2,028.17
Total K-12	6,945.42	7,080.72	7,226.84	7,523.75	7,559.05	7,509.33	7,528.98	7,546.09	7,539.45	7,384.31	7,119.54	7,061.93	7,007.28
Running Start	101.59	86.18	128.56	140.00	138.52	138.34	133.51	125.55	172.90	155.49	203.80	268.61	266.81
Skill Source/Open Door								89.23	89.98	101.14	90.41	86.20	83.73
Alternative										253.49	313.53	301.00	291.86
TOTAL	**7,047.01**	**7,166.90**	**7,355.40**	**7,663.75**	**7,697.57**	**7,647.67**	**7,662.49**	**7,760.87**	**7,802.33**	**7,894.43**	**7,727.28**	**7,717.74**	**7,649.68**
Percent Change		**1.7%**	**2.6%**	**4.2%**	**0.4%**	**(0.6%)**	**0.2%**	**1.3%**	**0.5%**	**1.2%**	**(2.1%)**	**(0.1%)**	**(1.0%)**

Exhibit B

WENATCHEE SCHOOL DISTRICT NO. 246 — Current Month 2018-19 FTE Comparison to Same Month 2017-18

School	REF ONLY April 2016	REF ONLY April 2017	April 2018	April 2019	increase (decrease)	Grade	REF ONLY April 2016	REF ONLY April 2017	April 2018	April 2019	from 17-18 to 18-19 increase (decrease)
Columbia	479	436	407	391	(16)	1/2 Day K	21				0
Lewis & Clark	471	492	484	474	(10)	ADK	542	533	497	498	0
Lincoln	504	509	527	503	(24)	1	595	569	549	524	(25)
Mission View	533	548	517	534	17	2	585	551	566	554	(12)
Newbery	529	509	477	493	15	3	550	570	562	570	8
Sunnyslope	294	293	304	327	23	4	593	543	564	567	3
Washington	609	567	566	566	0	5	533	586	543	574	31
Elementary	**3,418**	**3,353**	**3,282**	**3,288**	**6**		**3,418**	**3,353**	**3,282**	**3,288**	**6**
Foothills	619	588	609	592	(18)	6	555	544	583	552	(31)
Orchard	398	429	484	490	5	7	528	564	551	594	43
Pioneer	648	606	604	612	8	8	581	515	564	548	(16)
Middle Schools	**1,664**	**1,623**	**1,698**	**1,694**	**(5)**		**1,664**	**1,623**	**1,698**	**1,694**	**(5)**
WHS	1,920	1,793	1,725	1,713	(12)	9	615	576	526	592	66
WSHS	229	264	262	250	(12)	10	595	608	567	532	(35)
High Schools	**2,149**	**2,057**	**1,987**	**1,963**	**(24)**	**11**	524	490	502	425	(77)
						12	518	416	438	437	(1)
Skill Source	7	9	2	3	1		**2,252**	**2,091**	**2,033**	**1,986**	**(47)**
Skill Source/Open Door	102	89	85	82	(3)						
Open Doors/Grad Alliance	20	8	8	7	(1)	**Total Regular**	**7,335**	**7,067**	**7,014**	**6,967**	**(46)**
Valley Academy	162	167	169	169	(0)						
WVTech Ctr	191	182	188	164	(24)						
Other Enrollment	**482**	**454**	**453**	**426**	**(27)**						
						ALE	257	324	314	314	0
Subtotal Enrollment	**7,713**	**7,487**	**7,420**	**7,370**	**(50)**	Open Door	122	97	93	89	(4)
Running Start	155	203	268	251	(17)	Running Start	155	203	268	251	(17)
Total Enrollment	**7,869**	**7,691**	**7,688**	**7,621**	**(67)**		**7,869**	**7,691**	**7,688**	**7,621**	**(67)**
Juvenile Detention Center	12	14	13	5	(8)						
Special Ed	918	929	940	1,034	94						

Exhibit C-1

WENATCHEE SCHOOL DISTRICT NO. 246 — Increases & (Decreases) Current Month 2018-19 FTE to Same Month 2017-18

School	increase (decrease) April 2017	increase (decrease) April 2018	increase (decrease) April 2019	Grade	increase (decrease) April 2017	increase (decrease) April 2018	increase (decrease) April 2019
Columbia	(43)	(30)	(16)	1/2 Day K	(21)	0	0
Lewis & Clark	21	(8)	(10)	ADK	(9)	(35)	0
Lincoln	5	18	(24)	1	(26)	(20)	(25)
Mission View	15	(31)	17	2	(34)	15	(12)
Newbery	(20)	(31)	15	3	20	(8)	8
Sunnyslope	(1)	11	23	4	(50)	21	3
Washington	(42)	(1)	0	5	53	(43)	31
Elementary	**(65)**	**(71)**	**6**		**(65)**	**(71)**	**6**
Foothills	(31)	22	(18)	6	(11)	39	(31)
Orchard	31	56	5	7	36	(13)	43
Pioneer	(42)	(2)	8	8	(66)	49	(16)
Middle Schools	**(42)**	**76**	**(5)**		**(42)**	**76**	**(5)**
WHS	(127)	(68)	(12)	9	(39)	(50)	66
WSHS	35	(2)	(12)	10	13	(41)	(35)
High Schools	**(92)**	**(70)**	**(24)**	**11**	(34)	12	(77)
				12	(102)	22	(1)
Skill Source	2	(7)	1		**(161)**	**(58)**	**(47)**
Skill Source/Open Door	(13)	(4)	(3)				
Open Doors/Grad Alliance	(12)	0	(1)	**Total Regular**	**(268)**	**(53)**	**(46)**
Valley Academy	5	3	(0)				
WVTech Ctr	(9)	6	(24)				
Other Enrollment	**(27)**	**(2)**	**(27)**				
				ALE	67	(10)	0
Subtotal Enrollment	**(226)**	**(68)**	**(50)**	Open Door	(25)	(4)	(4)
Running Start	48	65	(17)	Running Start	48	65	(17)
Total Enrollment	**(178)**	**(3)**	**(67)**		**(178)**	**(3)**	**(67)**
Juvenile Detention Center	2	(1)	(8)				
Special Ed	11	11	94				

Exhibit C-2

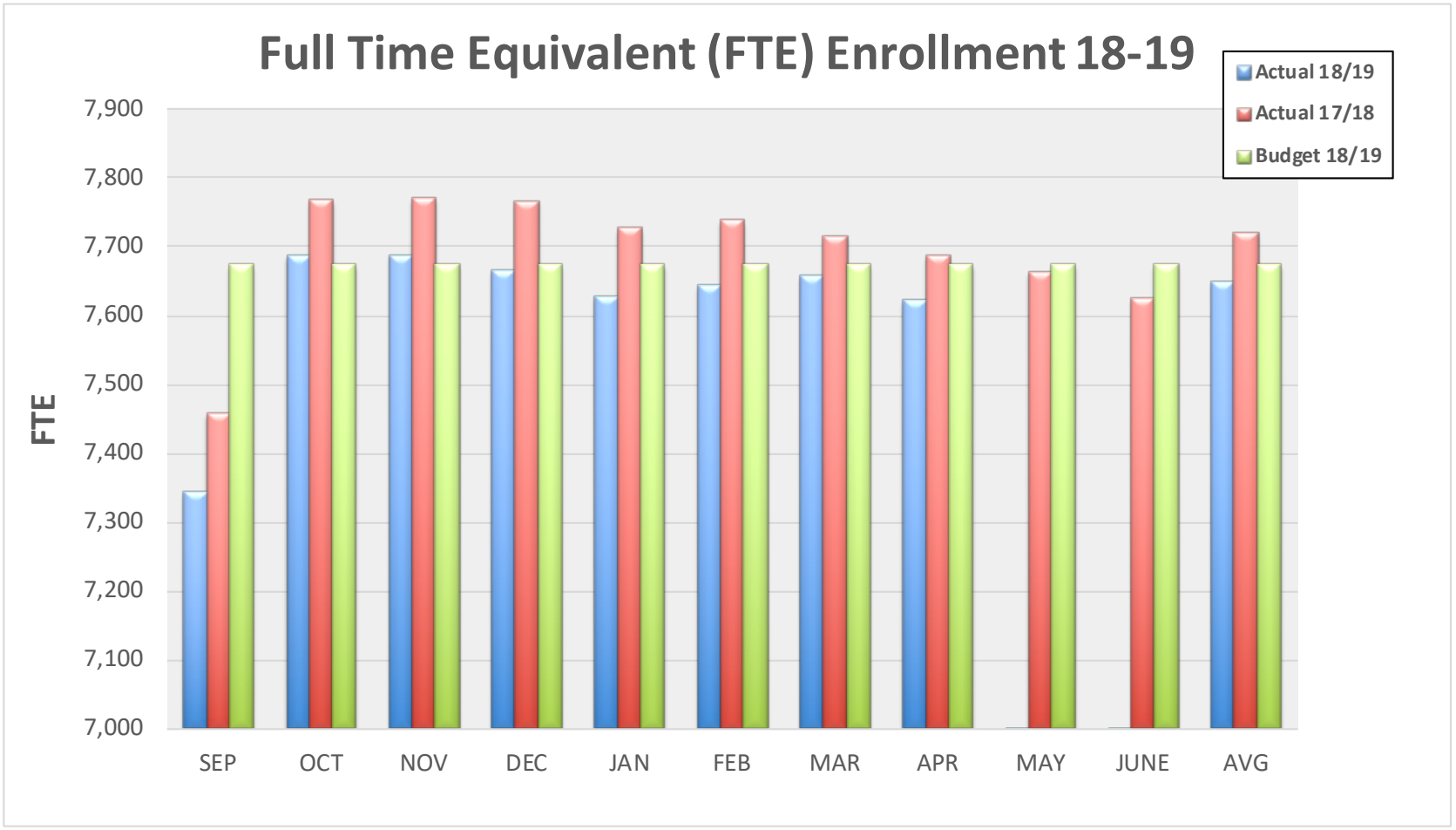
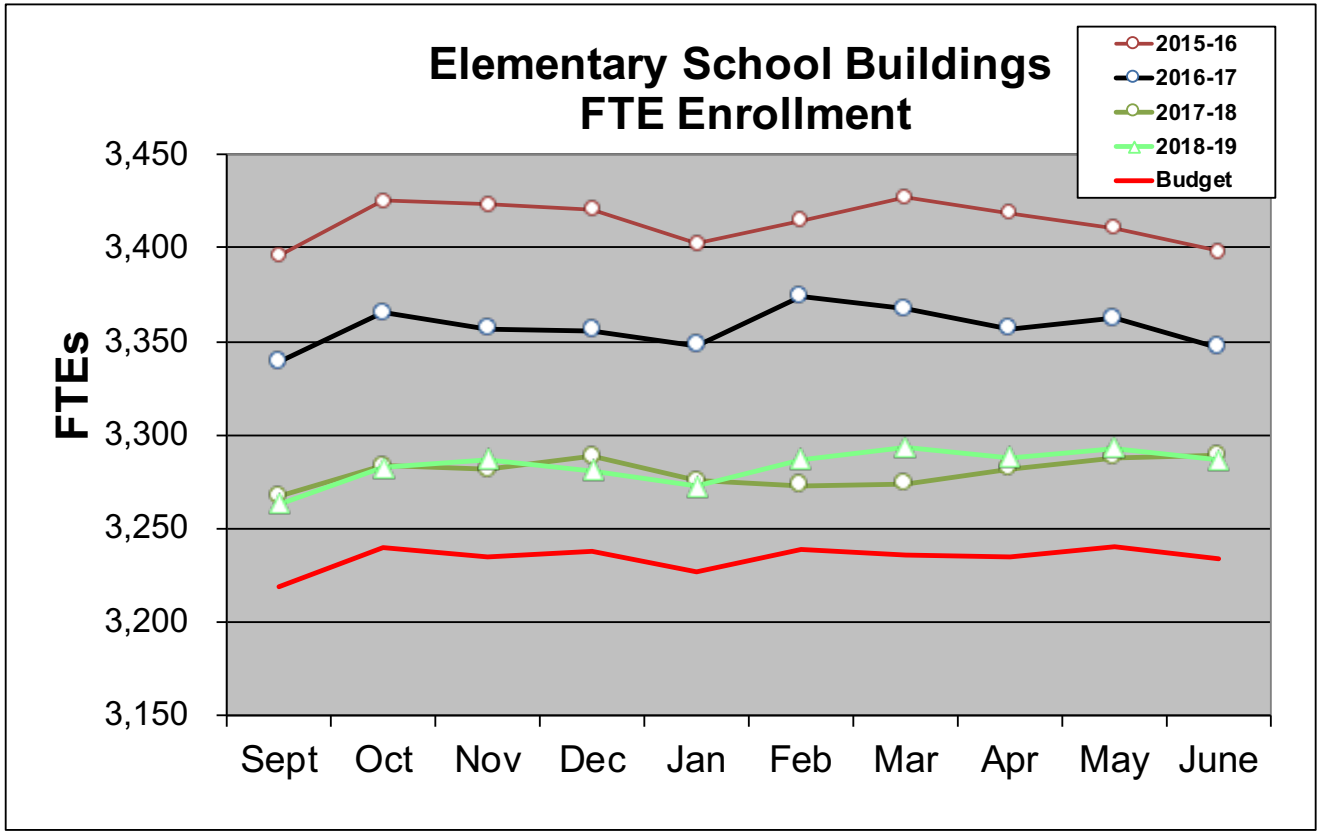

Full Time Equivalent (FTE) Enrollment 18-19
Actual 18/19
Actual 17/18
Budget 18/19
FTE
7,900
7,800
7,700
7,600
7,500
7,400
7,300
7,200
7,100
7,000
SEP
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUNE
AVG

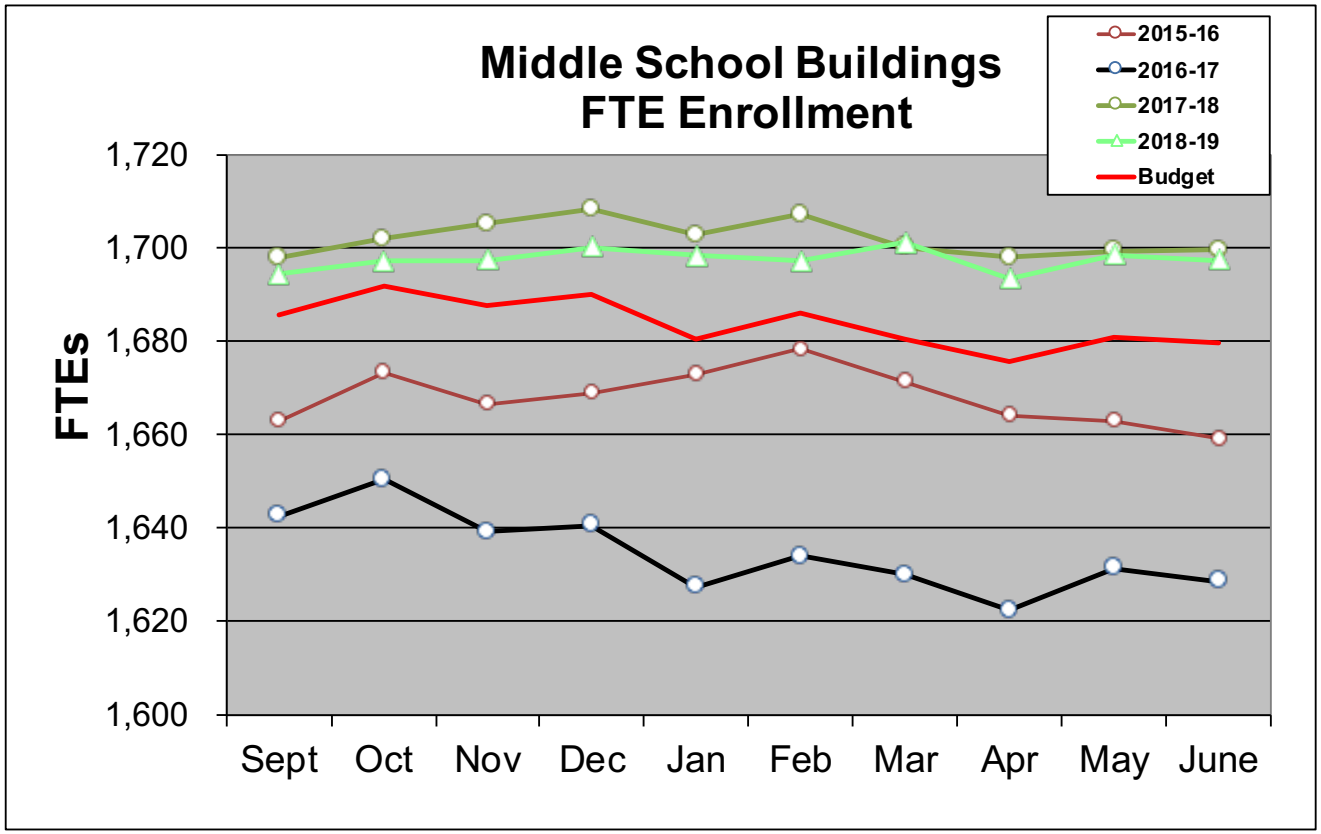
Exhibit D



18-19 Elementary School Enrollment

	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Average	Change in Ave	% Change
15-16	3,395.77	3,425.05	3,423.03	3,420.53	3,402.03	3,414.52	3,427.02	3,418.47	3,410.47	3,397.97	**3,413.49**		
16-17	3,339.00	3,365.00	3,357.00	3,356.00	3,348.00	3,374.00	3,367.00	3,357.00	3,362.00	3,347.00	**3,357.20**	(56.29)	**(1.65%)**
17-18	3,267.19	3,283.65	3,281.22	3,288.18	3,275.18	3,273.02	3,274.02	3,282.12	3,288.12	3,289.12	**3,280.18**	(77.02)	**(2.29%)**
18-19	3,262.84	3,282.60	3,286.75	3,281.09	3,272.50	3,286.89	3,293.32	3,287.73	3,293.09	3,286.27	**3,283.31**	3.13	**0.10%**
Budget	**3,218.80**	**3,239.49**	**3,234.41**	**3,237.31**	**3,227.08**	**3,238.70**	**3,235.77**	**3,234.85**	**3,240.21**	**3,233.39**	**3,234.00**		
(Undr)/Over	**44.04**	**43.11**	**52.34**	**43.78**	**45.42**	**48.19**	**57.55**	**52.88**	**52.88**	**52.88**	**49.31**		

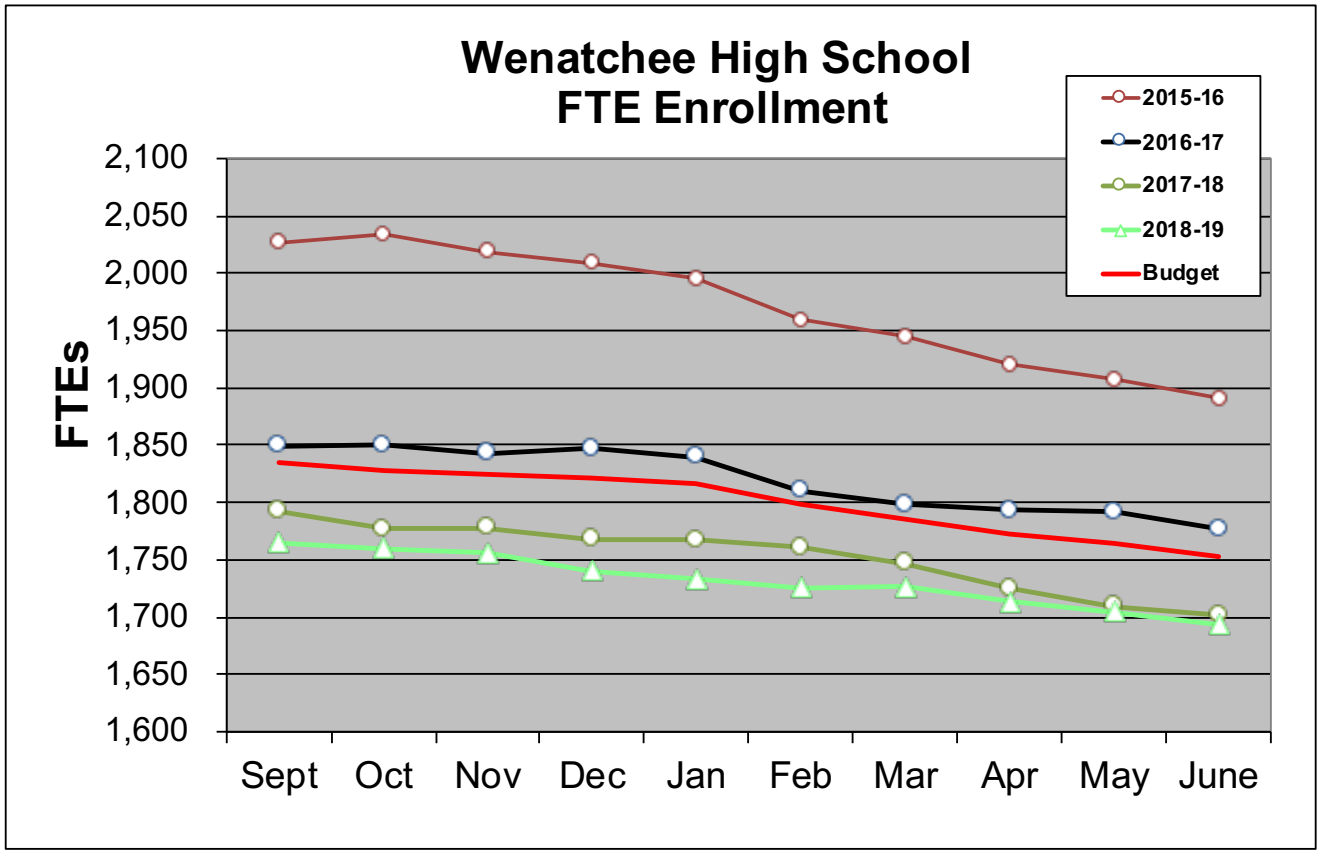
Exhibit E-1



18-19 Middle School Enrollment

	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Average	Change in Ave	% Change
15-16	1,662.96	1,673.38	1,666.74	1,669.06	1,672.96	1,678.54	1,671.55	1,664.16	1,663.03	1,659.31	**1,668.17**		
16-17	1,642.58	1,650.56	1,639.30	1,640.65	1,627.42	1,634.09	1,630.10	1,622.50	1,631.50	1,628.75	**1,634.75**	(33.42)	**(2.00%)**
17-18	1,698.01	1,702.01	1,705.24	1,708.42	1,702.83	1,707.27	1,700.32	1,698.03	1,699.39	1,699.69	**1,702.12**	67.38	**4.12%**
18-19	1,694.44	1,697.30	1,697.55	1,700.33	1,698.52	1,697.22	1,701.32	1,693.50	1,698.73	1,697.49	**1,697.64**	(4.48)	**(0.26%)**
Budget	**1,685.88**	**1,691.93**	**1,687.87**	**1,690.16**	**1,680.66**	**1,686.27**	**1,680.75**	**1,675.76**	**1,680.98**	**1,679.75**	**1,684.00**		
(Undr)/Over	**8.56**	**5.37**	**9.68**	**10.17**	**17.86**	**10.95**	**20.57**	**17.74**	**17.74**	**17.74**	**13.64**		

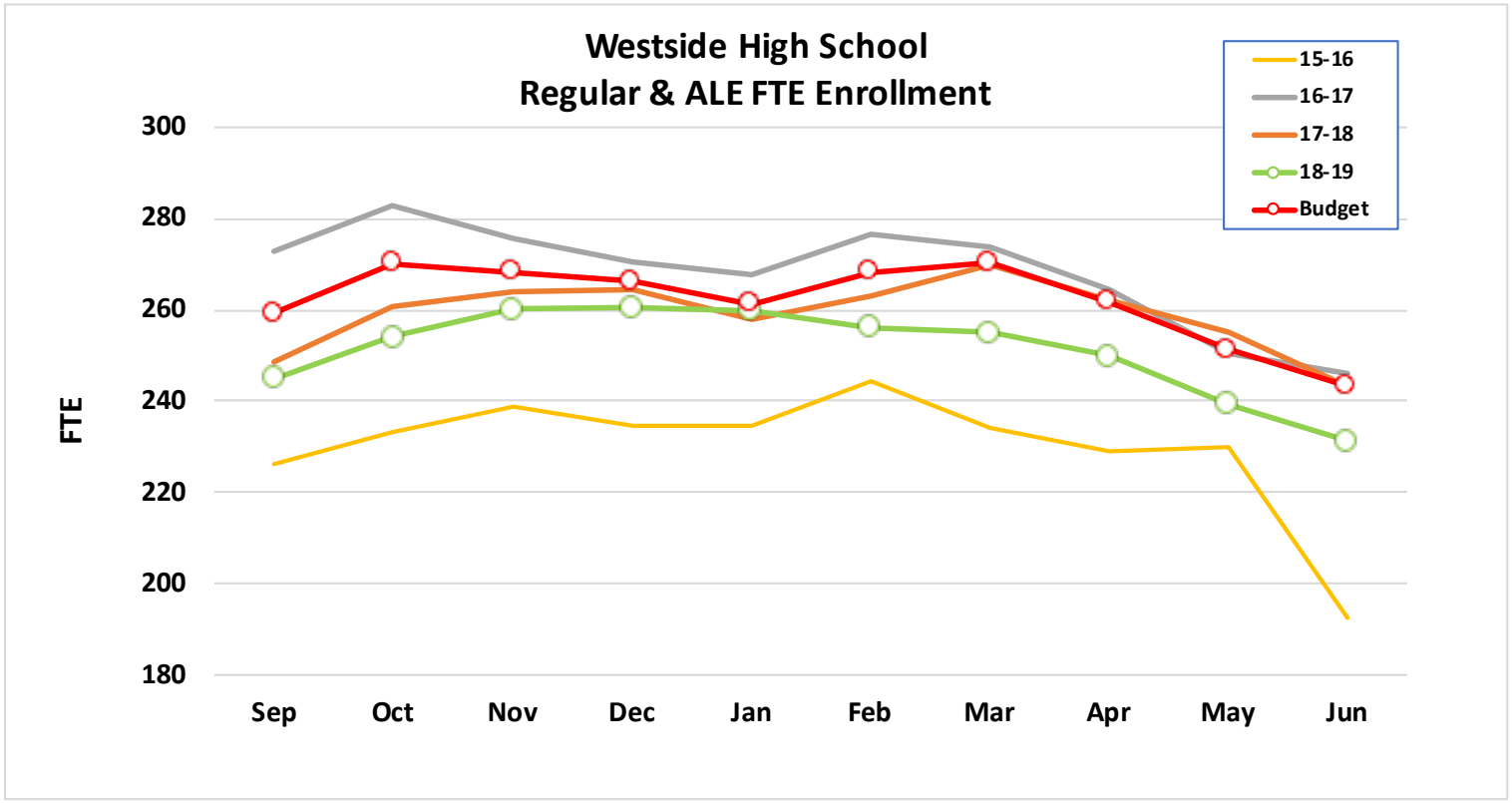
Exhibit E-2



18-19 Wenatchee High School Enrollment

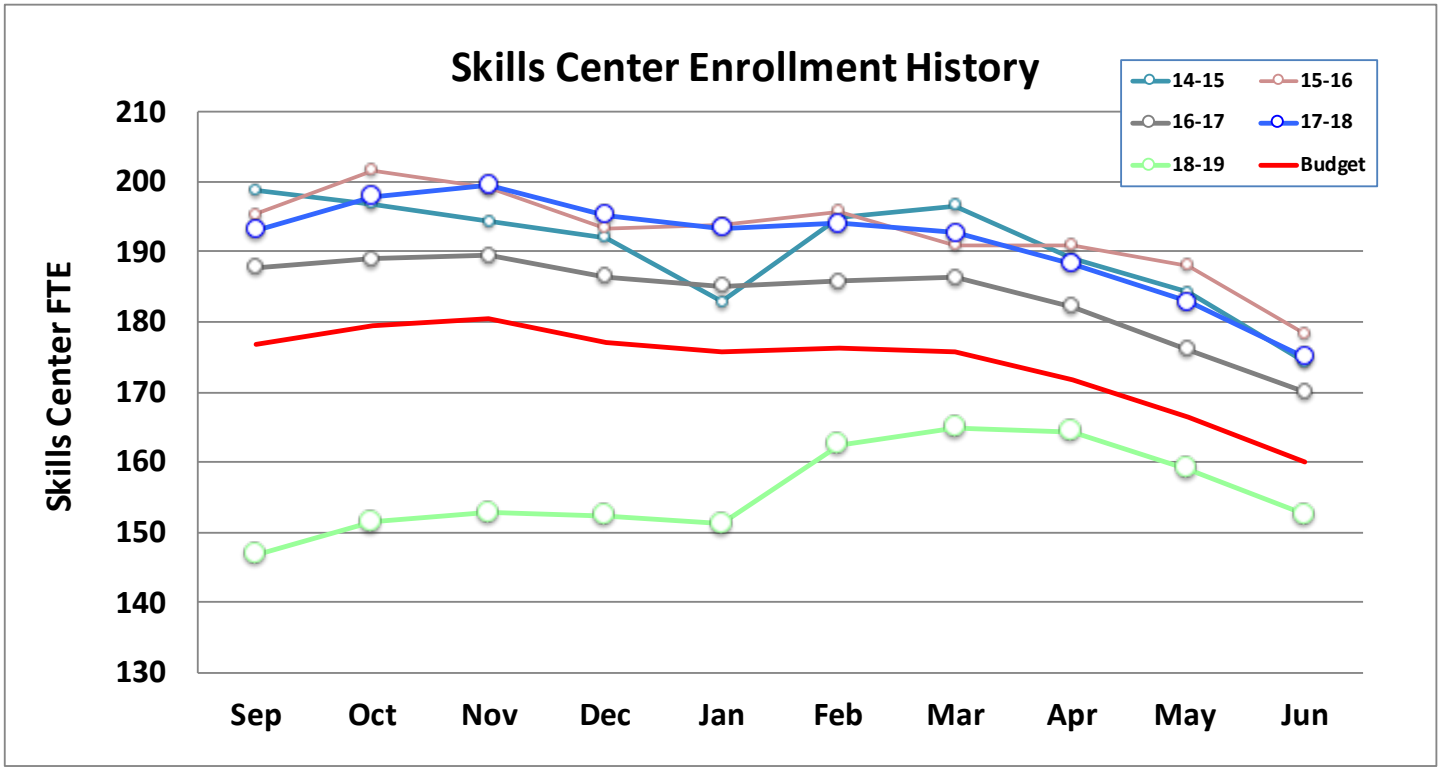
	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Average	Change in Ave	% Change
15-16	2,026.60	2,034.00	2,018.40	2,008.80	1,995.40	1,959.40	1,945.00	1,920.20	1,907.40	1,891.20	**1,970.64**		
16-17	1,849.56	1,850.36	1,843.16	1,847.00	1,839.56	1,810.20	1,798.04	1,793.04	1,791.32	1,777.08	**1,819.93**	(150.71)	(7.65%)
17-18	1,792.22	1,776.94	1,778.07	1,768.32	1,766.89	1,760.93	1,746.53	1,724.91	1,709.33	1,701.90	**1,752.60**	(67.33)	(3.70%)
18-19	1,764.78	1,760.09	1,755.88	1,740.48	1,733.12	1,725.98	1,726.90	1,713.14	1,704.42	1,693.51	**1,731.83**	(20.77)	(1.19%)
Budget	**1,834.89**	**1,827.59**	**1,824.53**	**1,821.56**	**1,817.09**	**1,799.29**	**1,785.91**	**1,772.50**	**1,763.78**	**1,752.86**	**1,800.00**		
(Undr)/Over	(70.11)	(67.50)	(68.65)	(81.08)	(83.97)	(73.31)	(59.01)	(59.36)	(59.36)	(59.36)	(68.17)		

Exhibit E-3



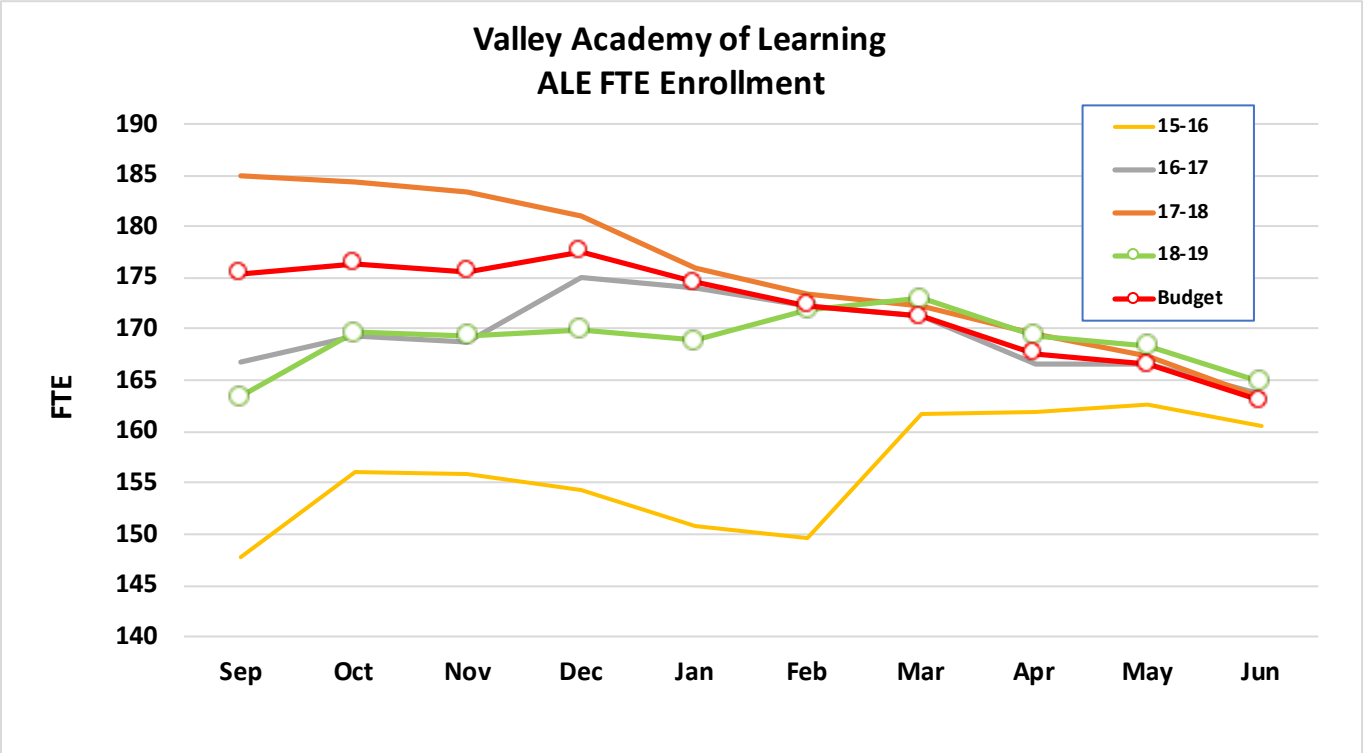
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Change in Ave	% Change
15-16	226.06	233.34	238.80	234.79	234.77	244.38	234.21	228.86	229.92	192.54	229.77		
16-17	272.88	282.85	275.54	270.58	267.70	276.50	273.93	264.27	250.45	246.07	268.08	38.31	16.67%
17-18	248.54	260.54	263.89	264.64	257.77	263.24	269.85	262.23	254.90	243.28	258.89	(9.19)	(3.43%)
18-19	244.96	254.18	260.21	260.53	259.85	256.11	255.04	249.80	239.28	231.33	251.13	(7.76)	(3.00%)
Budget	259.24	270.17	268.20	266.10	261.26	268.35	270.36	261.77	251.25	243.30	262.00		
(Undr)/Over	(14.28)	(15.99)	(7.99)	(5.57)	(1.41)	(12.24)	(15.32)	(11.97)	(11.97)	(11.97)	(10.87)		

Exhibit E-4



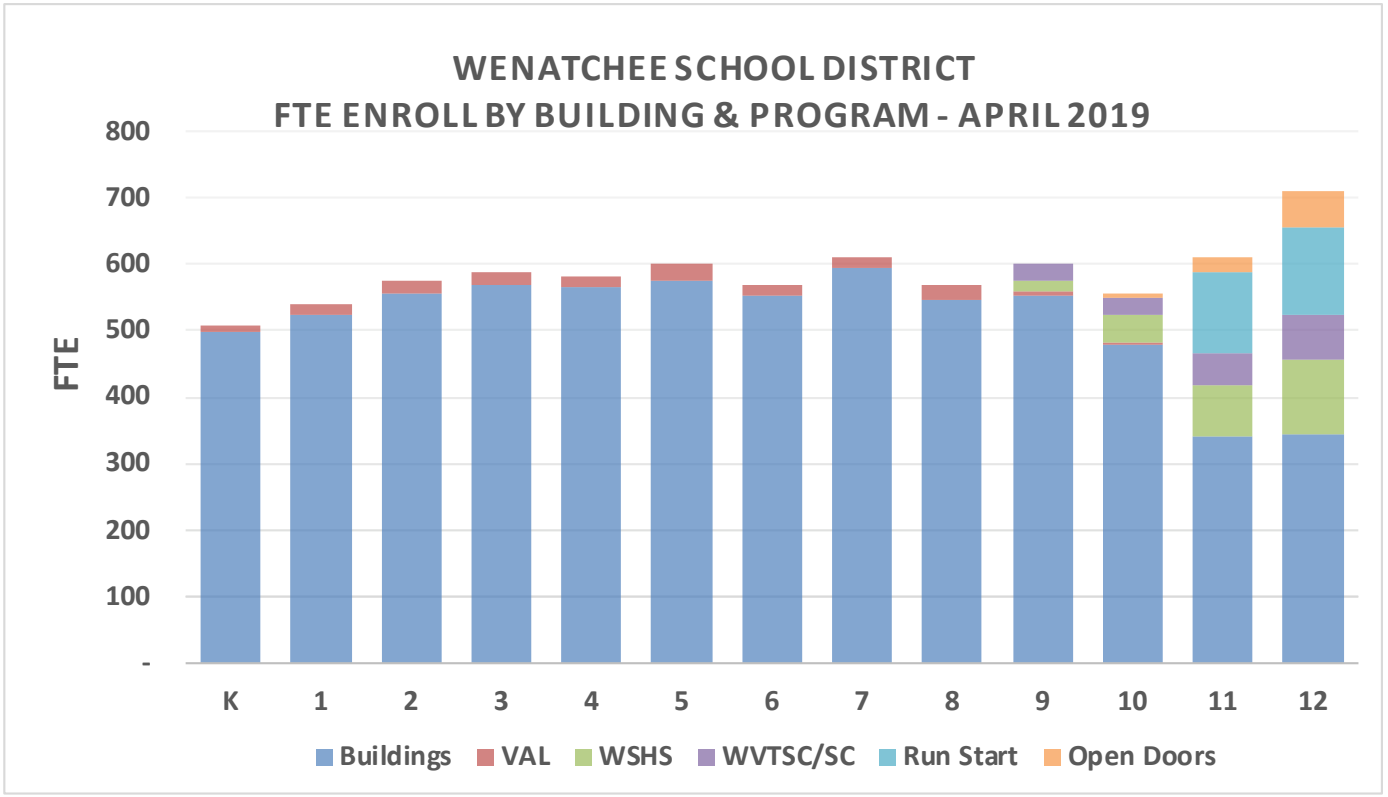
									Estimates				
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Summer School	Funded Average
13-14	173.75	196.59	192.27	189.24	187.89	196.54	197.98	194.41	188.29	180.18	189.71	18.74	208.45
14-15	198.78	196.80	194.38	192.03	182.88	194.80	196.54	188.97	184.20	174.33	190.37	19.38	209.75
15-16	195.32	201.58	199.15	193.37	193.94	195.79	190.99	191.05	188.05	178.33	192.76	18.70	211.46
16-17	187.80	188.94	189.54	186.45	185.19	185.77	186.37	182.17	176.14	170.05	183.84	21.40	205.24
17-18	193.09	197.92	199.51	195.28	193.45	194.05	192.67	188.35	182.89	174.97	191.22	16.00	207.22
18-19	146.82	151.53	152.87	152.36	151.22	162.53	164.90	164.36	159.03	152.53	155.81	20.00	175.81
Budget	176.70	179.47	180.49	177.09	175.66	176.21	175.85	171.89	166.56	160.06	174.00	16.00	190.00
Over/(Under)	(29.88)	(27.94)	(27.62)	(24.73)	(24.44)	(13.68)	(10.95)	(7.53)	(7.53)	(7.53)	**(18.19)**	4.00	**(14.19)**

Exhibit E-5



	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Average	Change in Ave	% Change
15-16	147.75	156.10	155.85	154.23	150.73	149.67	161.70	161.96	162.62	160.62	156.12		
16-17	166.86	169.34	168.68	175.02	173.95	172.25	171.22	166.64	166.64	163.64	169.42	13.30	8.52%
17-18	147.75	156.10	155.85	154.23	150.73	149.67	161.70	161.96	162.62	160.62	156.12	(13.30)	(7.85%)
18-19	163.45	169.69	169.40	169.90	168.90	171.92	173.02	169.41	168.41	164.84	168.89	12.77	8.18%
Budget	175.40	176.35	175.57	177.51	174.48	172.32	171.20	167.57	166.58	163.01	172.00		
(Undr)/Over	(11.95)	(6.66)	(6.17)	(7.61)	(5.58)	(0.40)	1.82	1.84	1.84	1.84	(3.11)		

Exhibit E-6



	K	1	2	3	4	5	6	7	8	9	10	11	12	Total
Buildings	497.98	524.29	554.41	570.00	567.00	574.05	551.69	594.27	547.54	551.40	477.68	340.76	343.30	6,694.37
VAL	8.50	14.89	22.12	19.67	14.57	26.33	16.88	15.30	20.44	7.71	3.00			169.41
WSHS										16.70	42.16	77.54	113.40	249.80
WVTSC/SC										26.34	26.84	48.24	65.95	167.37
Run Start												120.07	131.34	251.41
Open Doors										-	6.88	25.25	56.72	88.85
	506.48	**539.18**	**576.53**	**589.67**	**581.57**	**600.38**	**568.57**	**609.57**	**567.98**	**602.15**	**556.56**	**611.86**	**710.71**	**7,621.21**

VAL = Valley Accademy of Learning
WSHS = Westside High School
WVTSC = Wenatchee Valley Technical Skill Center

Exhibit F

Official Count Day **April 2019** **Elementary Classification Sheet**

	24 KINDER	#	*24* GRADE 1	#	*25* GRADE 2	#	*25* GRADE 3	#	*27* GRADE 4	#	*27* GRADE 5	#		Ave Class Size	Tchrs	SpEd
Columbia	Ryan-Kelzenberg (Shel)	17	Ells, Joe	20	Bentsen, Carolyn **B**	19	Armen, Moira	17	Avila, Dahlia	22	Cline, Gretchen	25				
	Wiggins, Cameron	17	McCarl, Megan	23	Card-Roley, Laurie	17	Heffron, Rebecca	17	Haug, Alision	18	Hill, Courtney	24	**FTE**			
	Young, Ann	16	Weaver, Katie	19	Vanatta	20	Kniveton, Jenifer	17	Hetterle, Rachel	21	Honeycutt, Tamara	24	390.90			
							Searles, Rachel	18	Smith, Lynette	20			**Head**			
	Speech	1														
		51		62		56		69		81		73	392	19.55	20	1
Lewis & Clark	Jarvis, Oliva **B**	18	Jagla, Angelita	21	Alvarez, Itzia **B**	21	Black, Maria **B**	21	Malloy, Juanita **B**	17	Brandt, Theresa	26				
	Limon, Donna	18	Navarro, Nancy B	21	Collins, Alanna	20	De La Mora **B**	20	Pulse, Fonda	19	Ross, Melodie	26	**FTE**			
	Rumley-Wells, Kim	18	Solis, Adelita **B**	21	Lopez, Daniz **B**	21	Nunez, Ginger	22	Roberts, Teresa	17	Sanchez, Juan **B**	27	474.47			
	Yanez, Carmen **B**	18	West, Marie	21	Martinez, Eva	21	Rudell, Laura	23	Zavala, Hugo **B**	19						
													Head			
		72		84		83		86		72		79	476	20.70	23	
Lincoln	Charles, Katie	20	Blankenship, Marea **B**	16	Guerrero, Marta	25	Heinz, Teresa	23	Gaytley, Todd	22	Bullis, Jake	22				
	Clive, Cassandra	20	Hurt, Allison (Shelt'd	20	Rodriguez, C **Shelt'd**	19	Mason, Kristina **B**	22	Mahler, Cynthia	18	Ferson, Darrin	19	**FTE**			
	Gonsalez, Rocio **B**	15	Pattison, Lisa	18	Schmidt, Sandra	23	Nelson, Tessa	23	Parr, Kevin **Shelt'd**	22	Nicpan-Brown, Tina	21	502.76			
	Smith, Candy (Shelt'd)	18	Rodriguez, Melody	16	Vath, Danielle	22	Williams,Dianna **B**	22	Rang, Kadie	23	Williams, Jeffrey **B**	19				
	SpEd McFarland	2	SpEd McFarland	3	SpEd McFarland	2	SpEd McFarland	2	SpEd McFarland		SpEd McFarland					
	SpEd Noble	2	SpEd Noble	3	SpEd Noble	1	SpEd Noble		SpEd Noble		SpEd Noble	1	**Head**			
		77		76		92		92		85		82	504	20.33	24	16
Mission View	Hepton, Tiffany	18	Aalgaard, Dawn	22	Avila, Armando	25	Brown, Sarah	26	Avila, Mario **B**	25	Pass, Scott **B**	26				
	Martinez, Lupe	18	Chang-Marr, Maria	17	Christensen, Jen	25	Chavez, Gabriela B	26	Downey, Coni	26	Phelps, Theresa	26	**FTE**			
	Mendoza, Liliana	17	Montalvo, Patricia	23	Vander, Holly	24	Martinez, Brandy	26	Lewis, Lisa	25	Wirth, Debra	25	534.00			
	Orozco Blanco, Eliza **B**	15	Obanion, Heidi	22	Zavala, Guadalupe **B**	25	Savage, Tamara	26	Moon, Robyn	26						
	Ingram, Cathy												**Head**			
		68		84		99		104		102		77	534	23.22	23	
Newbery	Wright, Carrie	1	Wright, Carrie	3	Wright - 1 / Wiser -	1	Dickson, Kimberly	20	Peterson, Tracy	27	Brooks, Ingrid	26				
	Fischer, Leticia	18	Arneson, Imelda **B**	16	Gousie, Gabrielle	19	Gutierrez-Zamora B	21	Schott, Robert B	24	Kniveton, Kyle B	26				
	Valdovinos, Cari	19	Garza, Ashley	20	Morrell, Blake	21	Kansky, Ana	19	Stubbe, Stephanie	25	London, Flora	24	**FTE**			
	Vivanco, Matilde **B**	24	McLaughlin, Lori	20	Page, Brooke **B**	15	Keene, Stephanie	20			Preuss, J. Austin	25	492.58			
	Wise, Jill	19	Woolsey, Tami	17	Riggan, Brooke	20	Wright, Carrie		Wright, Carrie		Wright, Carrie	3	**Head**			
		81		76		76		80		76		104	493	21.09	23	8
Sunnyslope	Holland, Courtney	20	Anspach, Julie	27	Gale, C	27	Dalbeck, Abby	24	Baier, Erika	24	Lammert, Amy	31	**FTE**			
	LeFebvre, S	21	Springer, M	28	Howard, Jeri	27	Martin, Peggy	24	Weber, K	23	Morgan, T	30	327.00			
	Steitz, Lisa	21											**Head**			
		62		55		54		48		47		61	327	25.15	13	
Washington	Arredondo, Zuly	23	Hannah, Betsy	22	Anguiano, Stephanie	24	Bucholz, Heidi	22	Gillespie, Terry	26	Christensen, Monika	25				
	Connor, Michelle	22	Oltman, Erin	22	Clayson, Wendi	24	McGinnis, Lance	22	Parr, Maia	26	Roche, Laura	25	**FTE**			
	Reiber, Erin	22	Porter, Leandra	22	Huson, Lynda	24	Reinfeld, Jill	22	Smeller, Sarah	26	Sutton, Jana	24	566.02			
	Rolfs, Kristi	21	Wilkins, Renee	22	Lake, Caroline	23	Williams, David	23	Smith, Jodee	25	Walsh, Tracy	24	**Head**			
	SpEd Poirier, Emile	1	SpEd Poirier, Emile		SpEd Konshuk, Ladonna		SpEd Poirier, Emile	2	SpEd Poirier, Emile	1	SpEd Poirier, Emile	1	567	23.38	24	6
	Gregg, Phil	1			SpEd Poirier, Emile											
		90		88		95		91		104		99			150	
	TOTAL FTE	497.98		524.29		554.41		570.00		567.00		574.05	**3287.73**			
	TOTAL Head Count	501		525		555		570		567		575	**3293**			
	Special Ed Count	8		9		4		4		1		5				
	Average Class size	18.96		20.64		22.04		21.77		22.64		24.78				
	# of BEA Teachers/Classes	26		25		25		26		25		23	150			

B = Bilingual
D = Dual Language

Includes SpEd Students						
# of Teachers	26	25	25	26	25	23
# of Students	501	525	555	570	567	575
Ave Class Size	19.27	21.00	22.20	21.92	22.68	25.00

Exhibit G

April 2019

Enrollment by Grade Level, Building & Program

Official Count Day

	K	FTE	1	FTE	2	FTE	3	FTE	4	FTE	5	FTE	Head Total	FTE Total	Budget	Over (Under)	Prediction AAFTE	Prediction Ovr(Undr) Budget	Affect on Apport.
Columbia	51	50.02	62	62.00	56	55.88	69	69.00	81	81.00	73	73.00	392	390.90					
Lewis & Clark	72	72.00	84	84.00	83	82.42	86	86.00	72	72.00	79	78.05	476	474.47					
Lincoln	77	76.47	76	75.29	92	92.00	92	92.00	85	85.00	82	82.00	504	502.76					
Mission View	68	68.00	84	84.00	99	99.00	104	104.00	102	102.00	77	77.00	534	534.00					
Newbery	81	80.47	76	76.00	76	76.11	80	80.00	76	76.00	104	104.00	493	492.58					
Sunnyslope	62	62.00	55	55.00	54	54.00	48	48.00	47	47.00	61	61.00	327	327.00					
Washington	90	89.02	88	88.00	95	95.00	91	91.00	104	104.00	99	99.00	567	566.02					
Total	501	497.98	525	524.29	555	554.41	570	570.00	567	567.00	575	574.05	3293	**3,287.73**	**3,234.00**	**53.73**	**3,283.31**	49.31	
	6		**7**		**8**														
Foothills	194	193.54	200	199.82	200	198.58							594	591.94					
Orchard	160	160.00	186	185.45	145	144.24							491	489.69					
Pioneer	198	198.15	209	209.00	205	204.72							612	611.87					
Total	552	551.69	595	594.27	550	547.54							1697	**1,693.50**	**1,684.00**	**9.50**	**1,697.64**	13.64	
	9		**10**		**11**		**12**												
WHS	572	551.40	495	477.68	405	340.76	425	343.30					1897	1,713.14	1,800.00	(86.86)	**1,731.83**	(68.17)	
WSHS	19	16.70	44	42.16	83	77.54	125	113.40					271	249.80	262.00	(12.20)	**254.24**	(7.76)	
Total	591	568.10	539	519.84	488	418.30	550	456.70					2168	**1,962.94**	**2,062.00**	**(99.06)**	**1,986.07**		
	9		**10**		**11**		**12**												
Skillsource	3	1.29	4.00	1.72	0	0.00	0	0.00					7	**3.01**	**0.00**	**3.01**	**1.85**	1.85	
	K		**1**		**2**		**3**		**4**		**5**								
Valley Academy	17	8.50	15	14.89	23	22.12	20	19.67	16	14.57	27	26.33	118	**106.08**	120.00	(13.92)			
	6		**7**		**8**														
	18	16.88	15	15.30	21	20.44							54	**52.62**	37.00	15.62			
	9		**10**																
	8	7.71	3	3.00									11	**10.71**	15.00	(4.29)			
													183	**169.41**	**172.00**	**(2.59)**	**168.89**	(3.11)	
Special Ed-Bldg 511													0	**0.00**	**0.00**	**0.00**			
	9		**10**		**11**		**12**												
Wenatchee Valley Technical	1	25.05	5	25.12	42	48.24	54	65.95					102	**164.36**	**190.00**	**(25.64)**	**175.81**	(14.19)	
Skill Center												**Subtotal FTE**		**7,280.95**	**7,342.00**	**(61.05)**	**7,313.57**	**(28.43)**	($ 237,702) $ 8,360.97
					11		**12**												
Running Start						120.07		131.34					274	**251.41**	**240.00**		**262.16**	22.16	
Open Doors - Skillsource	0	0.00	7	6.88	25	24.25	52	50.72					84	**81.85**	90.00	(8.15)			
Open Doors - Grad Alliance	0	0.00	0	0.00	1	1.00	6	6.00					7	**7.00**	0.00	7.00			
	0	0.00	7	6.88	26	25.25	58	56.72					91	**88.85**	**90.00**	**(1.15)**	**90.27**	0.27	
												Total FTE		**7,621.21**	**7,672.00**	**(62.20)**	**7,666.00**	**(6.00)**	

Juvenile Detention Center							4	4.00	0.00	
									48.00	0-2
	Age	FTE	Age	FTE	Age	FTE			69.00	3-5
Special Education	0-2	56.00	3-5	119.00	K-21	859.00	1034	1,034.00	800.00	K-21

Juvenile Detention Center							4	4.00	0.00	
									48.00	0-2
	Age	FTE	Age	FTE	Age	FTE			69.00	3-5
Special Education	0-2	56.00	3-5	119.00	K-21	859.00	1034	1,034.00	800.00	K-21

	56.01	8.01	
	103.67	34.67	
	843.22	43.22	

Exhibit H

Wenatchee School District #246
April 23rd, 2019

To: Board of Directors

From: Brian Flones
Superintendent

Prepared By: Cabinet

Re: Budget Reduction Implementation Worksheet

We are providing you with a planning document to guide us through the impact on work processes and staff responsibilities related to the 2019-20 budget reductions. We have been working with the principals, directors, and labor management representatives as needed to identify changes that need to take place for the next school year. The implementation worksheet headings are formatted in the following manner:

Grade Level: Identifies the grade levels that are impacted

Area of Reduction/Position: Identifies the specific areas that were impacted by the budget reductions

Plan-Do: Identifies what adjustments will be made to continue with the work processes.

Plan-Don't: Identifies the work processes or changes that will not happen or be reduced.

Cabinet Response: Based upon the input that has been provided this will be the work plan for each of the areas impacted by the reductions.

Please read through the plan prior to the meeting. We will provide an overview of each area and focus on the work plan at the meeting.

Grade Level	Area of Reduction / Position	Plan - Do	Plan - Don't	Cabinet Response
K-12	Librarian/Counsel or Extended Contracts	work calendars to all affected staff, flex to needs of building and students MS-Meet with our counselors and librarians to figure out their 180 day schedule, will most likely have them not work all PLC days and not work all parent conference days so they can work before and after school is out with scheduling WHS: Counselors - Flex calendars with a rotation of days so that not all counselors are out of the building on the same days. Use the district PLC calendar days as flex days for the counselors. Use the parent conferences as flex days as well. WHS: Librarian - Work the 180 school days that students are present . Flex the district parent conference days and PLC days on the calendar. Elem-the counselors will work their extended contract days during August or June, and will be subbed out during PD days. Elem-the librarians will take their two days during conference days		Plan: Calendars are submitted with appropriate adjustments. Most are flexing the conference days and some the PD days to work August.
K-12	LIT	Plan for half the stipends and half the meetings MS-take a specific number of hours and spread them out over the calendar based on site need	MS-Don't have district-wide LIT trainings work with individual LIT teams if they need support Elem-We won't meet for 20 hours Elem-No district Trainings	Plan: District training on August 20th 3:30 - 5:00, Principal and full team, meeting is half the time of last year.

		WSHS: Meet once a month for only an hour instead of two - Increase eMeetings for time-sensitive items. WHS: Reduce the number of meetings to once every other month instead of every month. Maintain the same number of LIT representative with the stipends cut in half. Elem-10 hours for LIT activities per year instead of 20 hours. Elem-Some bldgs may increase time with LAP Grant Dollars.	Targeted schools may need support for additional time	Monthly meetings maintain at 1 hour per month. All stipends will be paid at 50%
K-12	District Team Leader	District Teams meet for team collaboration, district facilitation is eliminated - Principals/Sarah to discuss. MS-Have Sarah build a rotation schedule for different buildings to be responsible for building agendas for each meeting time WHS: Not within our control at the building level. Looking for district guidance. Elem-Not within our control at the building level. Looking for district guidance. Sarah and Coaches work to facilitate these meetings @ elementary level		Plan: For the 90-minute collaboration times only, teams will still meet, rotate facilitation. If they want outside facilitation, contact Sarah Hanchey for coaching support.
K-8	Data Paras	Consult with Principals MS-we need a person in our kennel, den, nest, could we use high poverty dollars for this or coverage from other paras in the building? Teams will have to enter their own CBA data ~~Elem-Clarification on what hours~~	**LT - teachers will need to do data entry**	Plan: Teachers enter data or principals come up with a plan - no additional timesheeting for this work.

		~~will they be assigned for next school year.~~ (Answered by Kelly Lopez 3/14) Elem-Academic data entered by teachers Elem-Discipline input will fall on Office Manager and/or Teachers Elem-Fund Data Para's through LAP Grant in some bldgs		
K-12	PBIS/SEL	Duties absorbed at the building - no team timesheets at buildings. MS-continue to timesheet through high poverty dollars, put PBIS teams in the LID calendar, every other month full staff meetings, PBIS team WSHS: Continue to work with the PBIS team monthly using LAP dollars where available WHS: Monday morning designated LIT time will work with committee work, including PBIS (safety committee, AP, AVID, etc).. Elem-The best we can	Elem-Check in Check out-weakened Monthly PBIS meetings may be gone Tier 2 and 3 will be reduced in mtg times CICO, Tier ⅔ team, managing token economy, professional development, team leader, teach to lessons, proactive parent meetings, program evaluation, data analysis, SWIS management, supervision, safety, para educator meetings, paraeducator training, para educator quality control, incentive programs, assemblies, student clubs, Student Success Team member,	Plan: Working on a plan. Evaluating potential available resources
K-12	District Volunteers	MS- have family advocates continue to monitor at the building level Elem-Office Manager/Office Staff and Family Advocate	Volunteer processing move to HR Elem-This may just go away	Plan: HR will do the annual clearance of all returning volunteers in August. Buildings will clear new volunteers through the year. Will resume shared database. Operational Tech to support volunteer sign-in hardware
K-12	Webmaster	MS-have a staff member classified or certified update the weekly stuff WHS/WSHS: Work will be re-assigned to a secretary in the building. (Counseling Office	MS-Entire website clean up each year	Plan: Building specific links, events, news, pictures, banners, and all other

		Secretary?) Elem- Work will be transferred to other staff/Dependent on Buildings/Admin		departments will be maintained at the building and department level. District webmaster / communication director will push out only district events/news and edit the shared links and shared content available to all sites. District webmaster will provide guidance on building/department website best practices as requested. MS-have a staff member classified or certified update the weekly stuff WHS/WSHS: Work will be re-assigned to a secretary in the building. (Counseling Office Secretary?) Elem- Work will be transferred to other staff/Dependent on Buildings/Admin
K-12	TRT	Using Tech Ninjas and volunteer Techie Teachers as go to resources MS-TSS take on some of the work, tech ninjas get trained this spring WHS/WSHS: TSS will move into this role. Department heads will also take on some of this work. Support for Skyward, Google, etc. Elem-TSS will be moved into this role and they will need support. We will need support from		Plan Function as a technical advisor in the technology committee. Identify, troubleshoot and/or secure resources for the maintenance and repair of hardware and software Assist the building in the process of

				organizing developing and delivering appropriate staff training programs concerned with technology education. Assist in the evaluation of software and hardware being considered for purchase Support the awareness of hardware and software standards, training certificated staff in the use of hardware and server access and troubleshooting technical problems related to approved academic programs TSS and other leaders within the building will have to provide the instructional technology support outside of the personal device initiative at grades 5-8. The help desk will be available for virtual assistance by hangout, chat, phone, and email for instructional-based support (G-Suite, Clock-hours, Ordering, etc). The ticket system will be modified to route appropriate tickets through the TSS.

				Staff training at sites will be dependent upon the building staff and leadership. WOD's might be available on a limited basis without pay, but with the possibility of clock hours.
9-12	On-line Learning	WHS: Seniors and Juniors who have previously requested Online PE & Health will be prioritized in the master schedule. Elem- N/A	WHS: Will not offer any online courses. Directed study could be an option for a student.	Plan: WHS: Will not offer any online courses. Directed study could be an option for a student.
K-5	Asst. Principals	Elem-Principals pick up all work (Major impact to programs) • Evals • Scheduling • Discipline • managing staff • all parent meetings • planning/delivering PD (Marzano, building/district initiatives) • building/district committees • supervision	Elem-Attendance • 10+ excused/tardies • OUs • choice monitoring and maintenance • Truancy court hearings • parents meetings • Attendance contract follow through PBIS Tier 2/3 Discipline Support District Meetings will need to be rescheduled outside the school day Safety & Security Collaboration/planning with building admin Staff support/availability Student Support Team member	Plan: Safety and Security is a mandatory required duty - supervision, all safety drills, building security. District will manage choice decisions Building must use homeroom, letters on absences can be auto generated. PBIS will continue at the building level, this is the district behavior management system District meetings will be at the discretion of the superintendent
WSHS /WVTSC	Dean of Students	Duties back to the Director and Principal of respective schools		Plan: Duties absorbed by Principal and Director

Athletics	Assist. Athletic Director		**All Coaches Compliance (170 – 200 Coaches)** · WIAA, Safe Schools and First Aid & CPR – This will be delegated back to each building level and they will be responsible for monitoring this; · Volunteers – Each building will now be responsible for making sure that all of their volunteer coaches are meeting the same requirements as the paid coaches; · Payroll Actions, Timesheets, Hiring and Resignations – All of this will go back to each building level including elementary track; · Clock Hours – The task of keeping track of WIAA mandated clock hours will go back to each building level; · Payroll Steps – This will also go back to each building level.	Plan: MS Hiring and coaching compliance standards will be done at the building level by the AP and Athletic Coord. HS will be done by the athletic department.
			Lifeguards/Pool Workers · Advertising, posting and doing hiring paperwork – This will be regulated back to the pool director; · Payroll and Timesheets – Keeping track of all of this information will also fall back on the pool director.	Plan: Need to communicate John Pringle plan with Eric.
			WSD Facility Scheduling · All Pool Scheduling will go directly to the Pool Manager; · All Fields and Gyms for each district site will be delegated back to each middle school/elementary school;	Plan: The Athletic Department will do the initial yearly scheduling for District athletic teams and community youth organizations.

			· Apple Bowl & Rec Park – Athletic Director will take over all of these duties.	All subsequent scheduling will be done at the building level.
			Athlete Clearance · This is a much bigger task than people understand. Just at the high school alone, we have cleared over 1,200 kids this year. The plan is/was to expand what we are doing with Family ID and incorporate clubs, music, drama and field trips. The clearance process is a big liability area for us between physicals, driving forms/permission and agreement to rules and regulations. Having someone dedicated to the use of the Family ID program is critically. There are too many functions and features for someone to half way deal with. LeAnne currently serves as the district expert for the high school and all three middle schools. To be able to expand the use of this program it is critical to have someone doing it all of the time. This job is a seasonal thing, but the middle schools have different seasons than the high school and thus it is more than three times a year type of thing. · Someone needs to get the medical clearance forms for each sport, provide the coaches with a medical alert list, create skyward lists and be able to coach the coaches on taking attendance and other uses of the program.	Plan: MS - all clearance will be done at the building by AP/ Athletic Coord. HS - all clearance will be done by the Athletic Department

			Awards and Certificates · This will have to be taken over by the coaches or one of the other secretaries at WHS; · Someone will also have to take over the tracking of each athlete's award history. This information is used to determine a variety of awards and clubs at the end of each athlete's career.	Plan - MS done at building level HS - The athletic department will continue this
			Answering Phones/General Questions · I am not sure who will take on this responsibility. Having someone serving as the frontline person is invaluable for what we do. The athletic director is in and out of the office on a regular basis and only having one person left in the office will make this job that much more difficult.	Plan - This will be done with the two staff currently in the athletic office
			WSD Facility Billing · All facility billing will have to go back to district office or each site.	Plan: Buildings will need to send all facility agreements to the District Office for billing