ISSAQUAH SCHOOL DISTRICT
ENDS 4: TECHNOLOGY
MONITORING REPORT
April 26, 2017

Students will understand and apply current and emerging technologies to extend their personal abilities and productivity.

Interpretation:

- We interpret **students** to mean all students in our K-12 educational system and students who have recently graduated.

- We interpret **understand and apply** to mean that students use technology appropriately throughout their K-12 school experience.

- We interpret **current and emerging technologies** to include the wide array of technology from personal cell phones to highly specialized software and hardware that is being continually created, upgraded, extended, and implemented throughout our society.

- We interpret **to extend their personal abilities and productivity** to mean that our students at every level are using technology to collaborate, innovate, communicate, investigate and solve problems in a safe, legal, and ethical manner.

Reasonable progress:

We have confidence that our students are meeting the target of Ends 4 as they use technology appropriately embedded in classroom instruction. Learning activities are aligned with Washington Educational Technology Standards and Common Core Standards in Educational Technology when appropriate. Students have opportunities to learn, and to demonstrate these skills and proficiencies at school as they progress through the elementary grades and the variety of content areas in their middle and high school years.

Evidence:

Technology in the context of the classroom is not unlike technology in a career or daily life. In school the focus is on learning and instruction using tools that are most appropriate and best serve the learning needs of each student whether a tablet, laptop, graphing calculator, pencil, or ruler. At work or in daily life, the choices are the same – which tool works best for an activity. In our classrooms different tools including a variety of technology choices are provided for

students and teachers along with access to curriculum and to Internet resources. The impact of technology is difficult to measure as it is challenging to separate from student learning activities or teacher instruction. Instead we build the capacity for students to reach E-4 by providing appropriately integrated opportunities within instruction and learning experiences across all content areas. Students use various tools including technology of their choice in collaborating, innovating, problem solving, and creation of projects and publications that are meaningful and enhance what they know and can do. These opportunities start in Kindergarten and build every year throughout a student's educational life and experiences in the Issaquah School District.

Our target which is included in the current ISD-IEA contract is for all classroom teachers in the Issaquah School District to provide an OSPI Tier 3 classroom. *"**ISD Technology Training:** Each Fall, the District will publish a menu of paid technology training options to support staff in reaching Tier 3 classroom integration."*

OSPI created the Tiers of Technology Integration into the Classroom Indicators to help teachers determine the kind of classroom they were providing for their students and provide growth examples. In a Tier 1 classroom technology is used by the teacher for their job. In a Tier 2 classroom the teacher facilitates student group activities and student use of technology. A Tier 3 classroom provides a powerful, student-centered 21st century learning environment in which students are actively engaged in using technology in individual and collaborative learning activities. In Tier 3 classrooms students demonstrate E-4.

The Washington State Educational Technology Standards combine with the integrated technology Common Core State Standards to provide a framework for a Tier 3 learning environment. Particularly in Issaquah with the phenomenal support of our community, we have the classroom technology to implement the standards within the district's curriculum.

Special Services

Special services uses technology to provide accommodations for students with special needs so they can participate in both the special education and general education classrooms. The various technologies are selected based on student need.

- iPads (21) are used with students who have reading and writing disabilities. Students use the iPad to take pictures of documents that they need to be read aloud. Students also use the iPad to take notes on the electronic version of the worksheet or test.
- iPads (28) are used as voice output communication devices for students who are non-verbal or are minimally verbal. Students use the iPads to help communicate their wants, needs and ideas. Apps on the devices organize language in a visual way for students to create sentences and use them to speak. Students with reading and writing disabilities use laptops (33) with software that provides spelling and reading support. When students are given a reading assignment in class and asked to write a response, students get an electronic document, have it read aloud to them with software and use word

Ends 4

prediction spelling support to write a response. Students are able to comprehend and express ideas at a much higher level with access to this support.

- FM systems (13) are used with students with hearing impairments. These are devices that are worn by the teacher. The auditory information is sent directly to the receiver attached to a student's hearing aid. Without these systems, the hearing aids amplify all noise in the classroom and not just the teacher's voice. The FM systems get the most important noise (teacher's voice) directly to the student.

- Redcat Sound Field systems (8) amplify the teacher's voice through a microphone to the whole classroom. These are also used with students with hearing loss so they are getting the teacher's voice at a louder volume than the other noise in the classroom.

- iPads and apps are used with special services staff as teaching tools specifically geared for students with disabilities. Apps used are designed for fine motor, speech and language development, early academic and cognitive skills, social skills, scheduling or general support for students with learning disabilities.

- All middle and high schools use a site license for Co:Writer. Forty individual licenses are used at the elementary level. The program is designed to help students write complete and correct sentences with improved spelling. As the student begins to type, Co:Writer predicts the word and provides suggested "guesses." Co:Writer's grammar-based word prediction gives appropriate predictions for what is written. If the word is presented in the list of predicted words, the student can select the word by pressing the corresponding number and continue on to the next word. If the word is not in the list, the student continues typing until it appears on the list or until the word is complete. The program provides auditory output to allow the student to hear what they are writing in addition to seeing it. The speech options can be set so the student can hear letters, words and/or sentences. Given a particular writing topic, a word bank with high-content words can be set on the screen as well.

- Snap & Read site licenses are used at all middle and high schools. Ten individual licenses are used at the elementary level. The program is designed to help students listen to written text. The student can highlight text in any format on the computer and hear it read aloud. The student can adjust the voice and rate of speech. The words are highlighted when read aloud. When used as a Google Chrome extension there are additional features, including outline support, simplifying text and translating text.

- Draftbuilder site licenses at all middle and high schools along with 25 individual licenses at the elementary level is used to help students organize their thoughts for producing written language. They give outline and mind mapping support.

English Language Learners

- ELL iPads are available for checkout from the ELL office. The iPads are loaded with iTranslate and iTranslate Voice apps to support Emerging ELL students as needed.
- All ELL teachers have received instruction in using apps including Recap as supplementary speaking practice and formative assessment of ELL students.

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- All ELL teachers have been trained in how to use OneNote, and each ELL teacher team uses that platform for communications and information sharing.
- IMS and IHS have online components to the *Inside and Edge* curriculum, which include text read-aloud options and visual support. Students have individual logins.
- Secondary ELL teachers have received instruction in how to use Actively Learn as an online reading support.

Classroom teachers use a variety of online tools to differentiate for ELL students. The list below was compiled by Ed Tech TOSAS and shared during GLAD trainings.

- ReadWorks has articles, audio, step reads, paired texts, and article-a-day assignments (a collection of articles for the week on a similar theme to build background knowledge – students also create and add to their own "Book of Knowledge")
- News in Levels has three levels of each article
- For the Teachers, teachers choose a skill, choose an article (available at three levels), and assign students to differentiate levels (grades 3+)
- Breaking News English has 7 levels of articles (0-6)
- CommonLit has news articles, poems, short stories, historical documents for grades 5-12 (they are working on grades 3-4) – it provides leveled readings with prompts on the same theme (not the same text rewritten for different levels)
- Tween Tribune has articles from the Smithsonian at multiple levels for K-12 (also in Spanish and related to technology)
- British Council has leveled articles (limited selection)

Graduation Requirement

The TechSmart class is required at sixth grade at BLMS, IMS, MMS, PLMS, and in seventh grade at PCMS. TechSmart meets the high school requirement for technology. The curriculum is attached.

School	# of students who took Tech Smart 2015-16	% of students taking Tech Smart	# of students who Passed	Passing Rate
Issaquah MS	252	98.1%	251	99.6%
Maywood MS	360	96.5%	359	99.7%
Pine Lake MS	314	99.7%	314	100.0%
Beaver Lake MS	273	98.9%	273	100.0%
Pacfic Cascade MS	335	97.4%	332	99.1%

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Students who enter the Issaquah School District after middle school have several options by which they can meet the technology graduation requirement, including but not limited to taking the Introduction to Computer Science class or the Technology Challenge Test. Students can check the Course Guide each year for other classes that meet the high school graduation requirement.

The data from eighth grade records show how many incoming freshmen for the class of 2020 have not met the Tech Proficiency Requirement.

Beaver Lake Middle School	Issaquah Middle School	Maywood Middle School	Pacific Cascade Middle School	Pine Lake Middle School	Grand Total
35	57	49	46	52	239

When classes were selected to meet the technology graduation requirement the criteria was to examine what skills were missing in a typical classroom to identify what class(es) could fill the gaps in the Educational Technology Standards to support creating a technologically adept student. For example, most classes use a word processor within their learning activities so teaching word processing skills would not be required in a class to meet high school technology proficiency as students would have that skill. However, creating original works or functions to perform tasks would be skills that would contribute to that development.

Additional courses were reviewed in the fall of 2016. The process identified where technology standards were taught within the course. Six additional subject areas representing 21 courses were added to the list of courses that meet the technology graduation requirement. Students who took these courses within the last four years were given the 'tech met' milestone in their student record. The document mapping the tech standards within the course content is attached. Tech Requirements Rubric (link)

High School		
Previous	Computer Science (Intro, Adv., AP, IB)	INT245, COM336, COM335, COM600, COM651, COM650, COM801
	Web Design	COM330, COM800

Added Fall 2016, records updated last four years	TV/Video Production	INT150, INT250, INT251, INT350, INT351,INT450, INT451, INT452, COM800, COM802
	Graphic Design	INT240, INT241, INT242, TEC101
	Yearbook	INT160, INT161, INT162, TEC100
	Intro to Engineering and Eng. Robotics	INT435, INT442
	Interactive Media	INT140
	Photography	ART125, ART225

Ends 4

This chart represents a point-in-time. Students may retake the test as many times as needed.

School	# of tests administered	# of students who passed	Passage Rate
Issaquah High School	202	170	84%
Liberty High School	24	20	83%
Skyline High School	125	104	83%
Tiger Mountain High School	7	7	100%

This chart represents a point-in-time. Students may retake the test as many times as needed.

Technology Classes

Elementary

Science and Technology Magnet Program

The Issaquah School District offers three Science and Technology Magnet Programs, serving 4th and 5th grade students in unique multi-age classrooms. Each magnet serves 50+ students in a two-year program. Each program covers all standard 4/5 district adopted curriculum, with an added emphasis on science and technology. Grade specific math instruction is provided. Magnet programs are located at Briarwood, Clark, and Cascade Ridge Elementary schools, with each program fully integrated into the home school. The district science curriculum, which includes engineering design, is expanded through the use of simulations, field trips, guest speakers and experiences focused on scientific process and investigation. All of these approaches are designed to encourage creativity and draw personal connections to real-world application of the concepts under study. Each school offers expanded science – technology learning opportunities that can contribute to a distinct curricular focus at each magnet.

Science Technology Magnet Program: 2015-2016

	Students in Class	Male	Female	Total Applicants	Male	Female	Declined Placement	Male	Female
4th grade GY 2024									
BW	26	11	15	82	37	45	6	3	3
CA	25	19	6	97	56	41	5	3	2
CL	25	15	10	82	43	39	5	3	2
5th grade GY 2023									
BW	26	16	10	57	37	20	5	3	2
CA	24	12	12	85	42	43	23	12	11
CL	25	17	8	70	39	31	16	12	4

Ends 4

A variety of technology classes are offered from grades six through twelve.

<u>Middle School</u>

School	# of students who took class in 2015-16	# of students who Passed	Passage Rate
Issaquah Middle School			
Digital Photograph (KDP078)	75	75	100.0%
TV Production (KTP678)	10	10	100.0%
Video Media (KVI678)	28	28	100.0%
Maywood Middle School			
Digital Photograph (KDP078)	offered every other year		
Automation & Robotics (KRA078)*	36	36	100.0%
Design & Model (KDM078)***	32	32	100.0%
Pine Lake Middle School			
Video Production7 8 (KVP078)	67	67	100.0%
Beaver Lake Middle School			
Digital Photograph (KDP078)	46	44	95.7%
Video Production 7 8 (KVP078)	35	35	100.0%
Pacific Cascade Middle School			
Digital Photograph 6 (KDP060)	84	84	100.0%
Digital Photograph (KDP078)	11	11	100.0%
ILYNX (KIL078)	6	6	100.0%
Video Production 6 (KVP060)	85	85	100.0%
Video Production 7 8 (KVP078)	7	7	100.0%
Adv Video Production (KVD078)**	12	12	100.0%

*New Course Code
**PCMS Adv Video Production has been offered since 2010-11
***MMS Design & Modeling has been offered since 2013-14
PLMS: Digital Photograph 6 (KDP060) & Automation & Robotics (KRA078) were not offered in the 2015-16 school year.
BLMS: Visual Arts (KVA678) & Web Design (KWD678) were not offered in the 2015-16 school year

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MS Enrollment Distribution by Gender (2015-16)

District STEM: Female 19%, Male 81%
District STEM/Tech: Female 42%, Male 58%
District Overall: Female 50%, Male 50%

Female   Male

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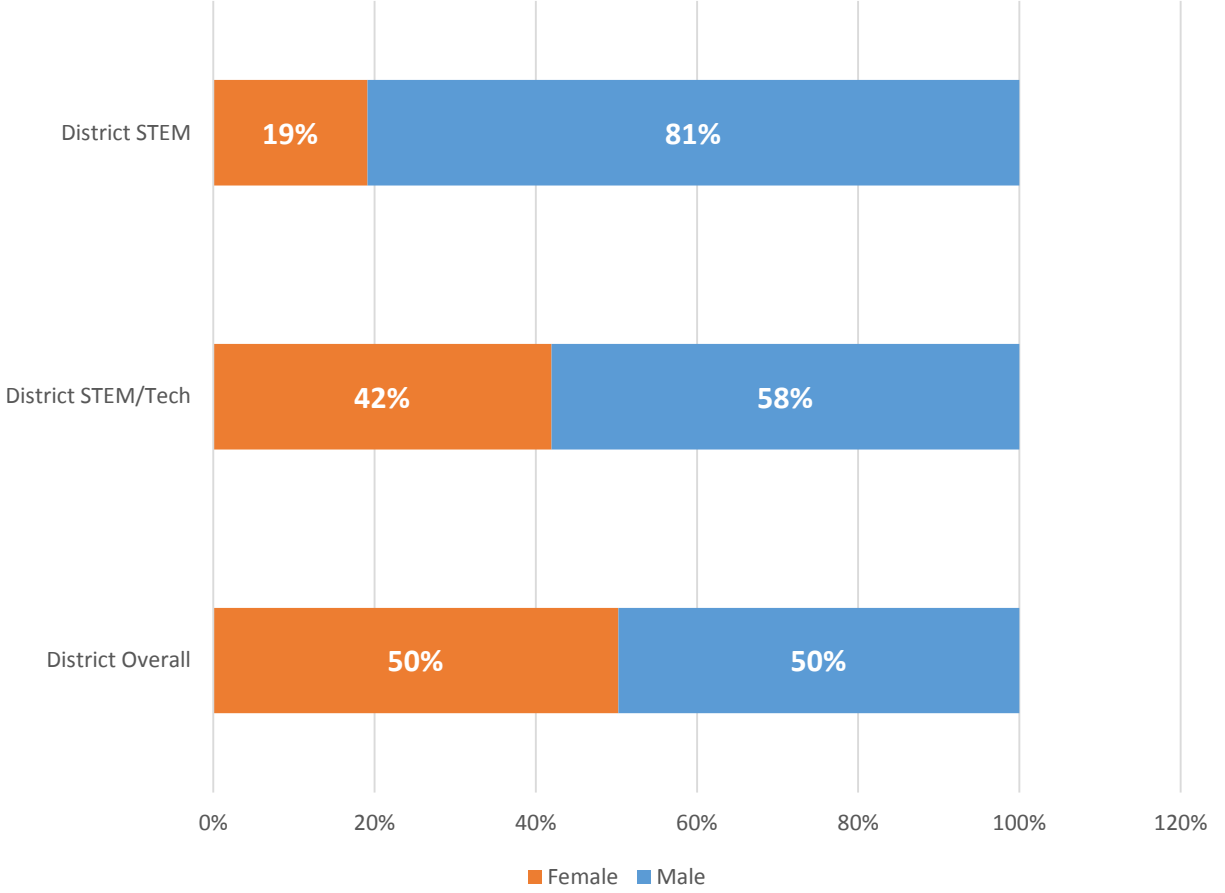
MS Enrollment by Ethnicity

	American Indian/Alaskan Native	Asian	Black/African American	Hispanic/Latino of any race	Native Hawaiian/Other Pacific Islander	White	Two or More Races
District Overall	0.2%	27.2%	1.8%	7.5%	0.4%	57.0%	5.9%
District STEM/Tech	0.4%	23.4%	2.8%	4.5%	0.7%	61.6%	6.6%
District STEM	0.0%	22.1%	4.4%	4.4%	0.0%	58.8%	10.3%

■ District Overall ■ District STEM/Tech ■ District STEM

Ends 4

MS Enrollment by Service

	% of ELL	% of 504	% of SE
District Overall	2.9%	4.6%	8.2%
District STEM/Tech	2.6%	4.5%	7.7%
District STEM	2.9%	0.0%	8.8%

District Overall   District STEM/Tech   District STEM

<u>High School</u>

For the purposes of the tables and charts below, STEM classes are defined as classes with a strong focus in **two or more** areas from the fields of Science, Technology, Engineering and Mathematics.

Ends 4

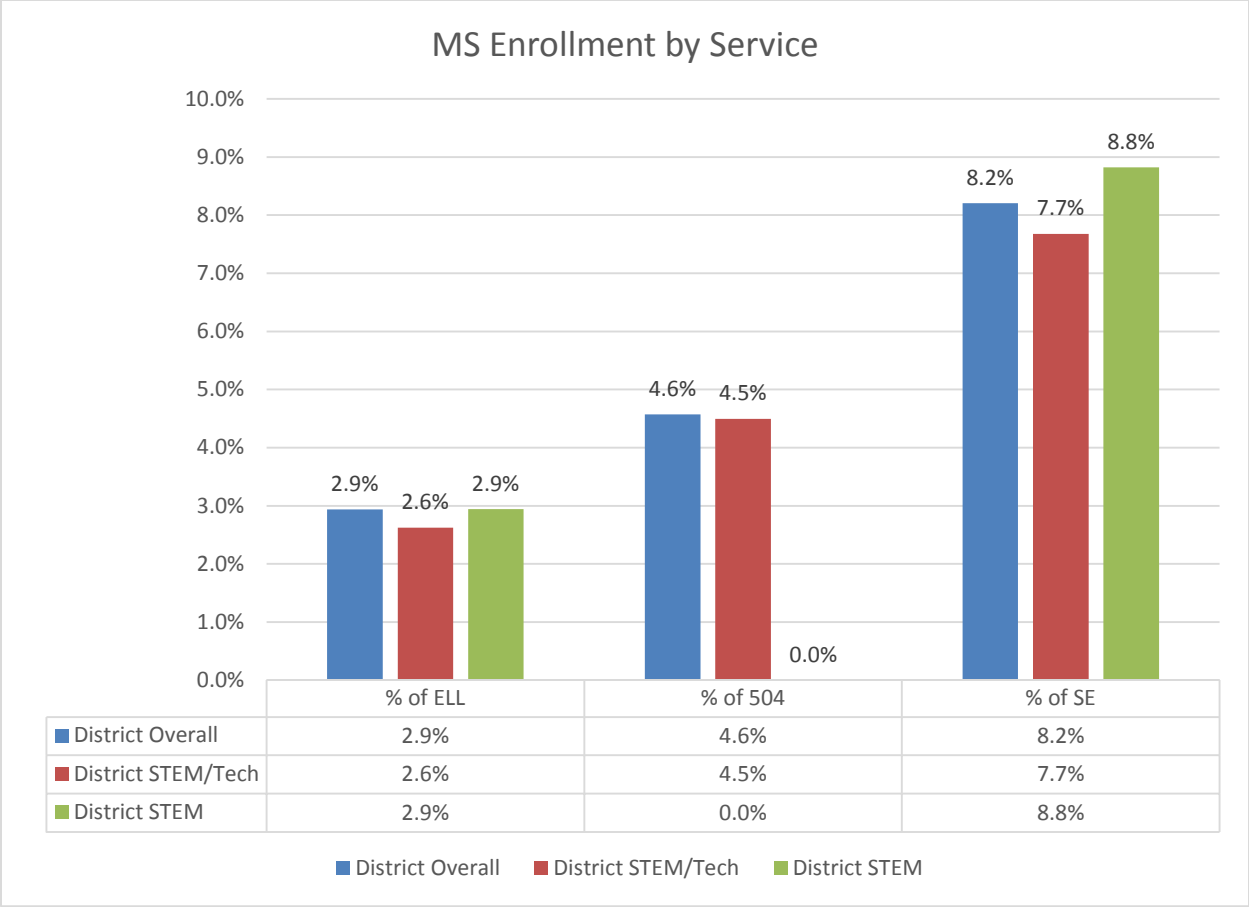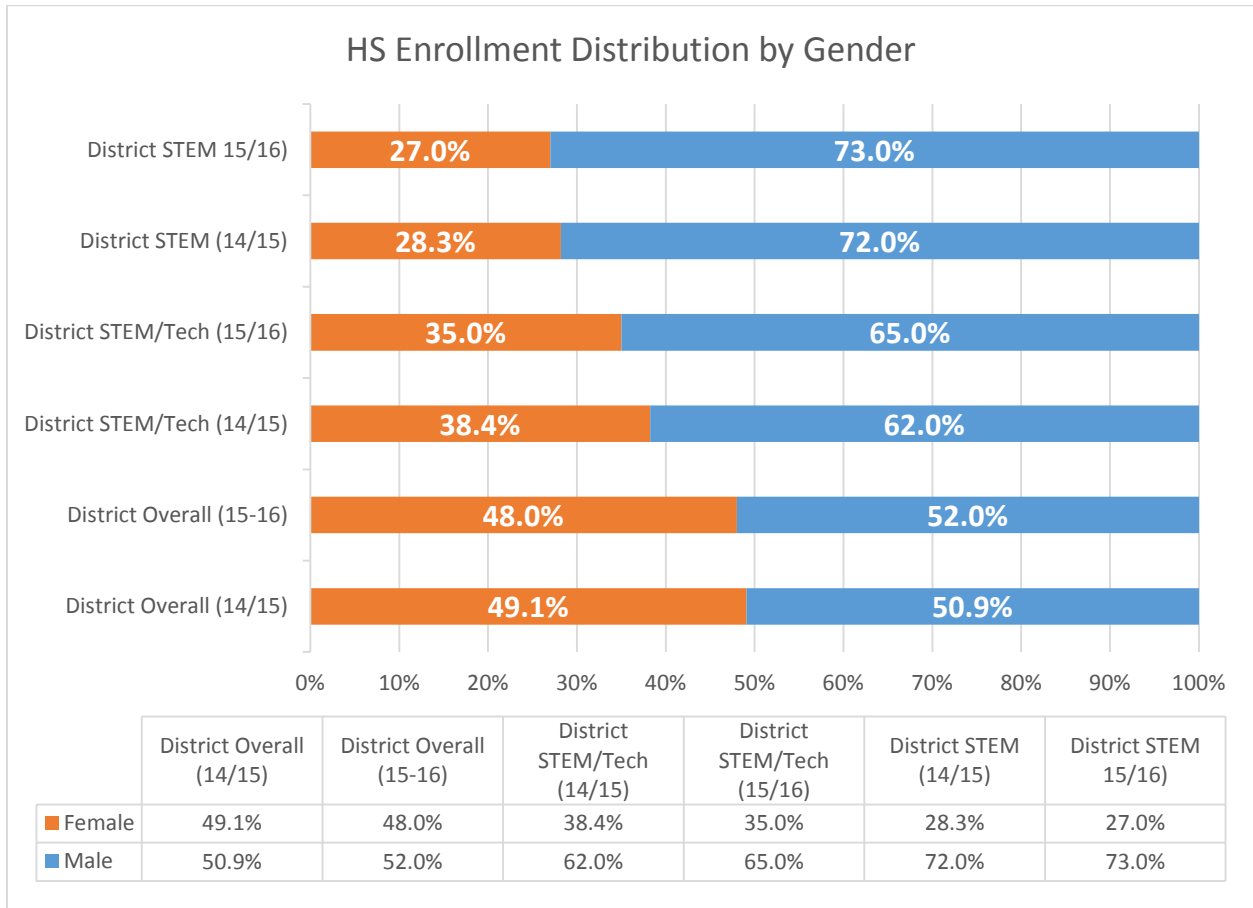| School	# of students who took class in 2015-16	# of students who Passed	Passage Rate	AP/IB Tests AP/IB Tests Taken	AP/IB # who passed	AP/IB Passage Rate
Issaquah High						

STEM

School	# of students who took class in 2015-16	# of students who Passed	Passage Rate	AP/IB Tests Taken	AP/IB # who passed	AP/IB Passage Rate
Intro to Computer Science (INT245)	85	79	92.9%			
AP Computer Science A (COM600)	85	73	85.8%	85	68	61	90%
Advance Computer Science Topics/Projects (COM335)	22	22	100.0%			
Intro to Engineering Design (INT435)	52	50	96.2%			
Engineering Robotics (INT442)	31	31	100.0%			
Web Site Design (COM330)	22	19	86.4%			
Project in Robotics (7TEC04)	12	9	75.0%			
Photography 1 (ART125)	200	192	96.0%			
Photography 2 (ART225)	79	78	98.7%			
Journalism 1 (ENG350)	19	18	94.7%			
Journalism 2 (ENG351)	5	4	80.0%			
Yearbook 1 (INT160)	13	13	100.0%			
Yearbook 2 (INT161)	3	3	100.0%			
Yearbook 3 (INT162)	1	1	100.0%			
Graphic Design I (INT240)	58	52	89.7%			
Graphic Design II (INT241)	16	15	93.8%			
Interactive Media 1 (INT140)	11	11	100.0%			
I-Vision TV/Video Production 1 (INT251)	16	15	93.8%			
I-Vison T/Video Production 2 (INT351)	12	12	100.0%			
Graphic Design 3 (TEC101)	1	1	100.0%			
Liberty High						

STEM

School	# of students who took class in 2015-16	# of students who Passed	Passage Rate	AP/IB Tests Taken	AP/IB # who passed	AP/IB Passage Rate
Intro Computer Science (INT245)	78	77	98.7%			
AP Computer Science (COM600)	36	34	94.4%	37	23	13	57.0%
Intro to Engineering Design (INT435)	53	51	96.2%			
Web Site Design (COM330)	137	132	96.4%			
Robotics Lab (7TEC01) 7th period	14	14	100.0%			

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	Audio Eng (TEC718) Online	*2*	*2*	*100.0%*				
	Journalism (ENG350)	50	50	100.0%				
	Journalistic Writing (ENG354)	20	20	100.0%				
	Intro Video Production (INT150)	72	71	98.6%				
	Yearbook (INT160)	39	39	100.0%				
	Graphic Design 1 (INT240)	121	108	89.3%				
	TV/Video Production 1 (INT250)	27	27	100.0%				
	TV/Video Production 2 (INT350)	7	7	100.0%				
	TV/Video Production 3 (INT450)	1	1	100.0%				

Skyline High

STEM	Intro Computer Science (INT245)	133	132	99.2%				
	IB Computer Science SL (COM650)	86	86	100.0%	86	31	30	97.0%
	IB Computer Science HL (COM651)	15	15	100.0%	15	12	11	92.0%
	Robotics Lab (7TEC01) 7th period	16	16	100.0%				
	Web Site Design (COM330)	138	137	99.3%				
	Advance Ele Engineering (7ELE05)	22	22	100.0%				
	Journalistic Writing (ENG354)	34	34	100.0%				
	Adv Journalistic Writing (ENG355)	4	4	100.0%				
	Yearbook (INT160)	31	31	100.0%				
	Yearbook 2 (INT161)	3	3	100.0%				
	Yearbook 3 (INT162)	1	1	100.0%				
	Graphic Design I (INT240)	174	173	99.4%				
	Graphic Design II (INT241)	67	67	100.0%				
	Television Production (INT250)	57	54	94.7%				
	Television Production 2 (INT350)	21	21	100.0%				
	TV Production 3 (INT451)	3	3	100.0%				
	Digital Photo (ART751) Online	2	2	100.0%				
	Graphic Design P1 (ART757) Online	1	1	100.0%				

Ends 4

High School Technology Class Enrollment

HS Enrollment Distribution by Gender

	District Overall (14/15)	District Overall (15-16)	District STEM/Tech (14/15)	District STEM/Tech (15/16)	District STEM (14/15)	District STEM 15/16
Female	49.1%	48.0%	38.4%	35.0%	28.3%	27.0%
Male	50.9%	52.0%	62.0%	65.0%	72.0%	73.0%

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HS Enrollment Distribution by Ethnicity
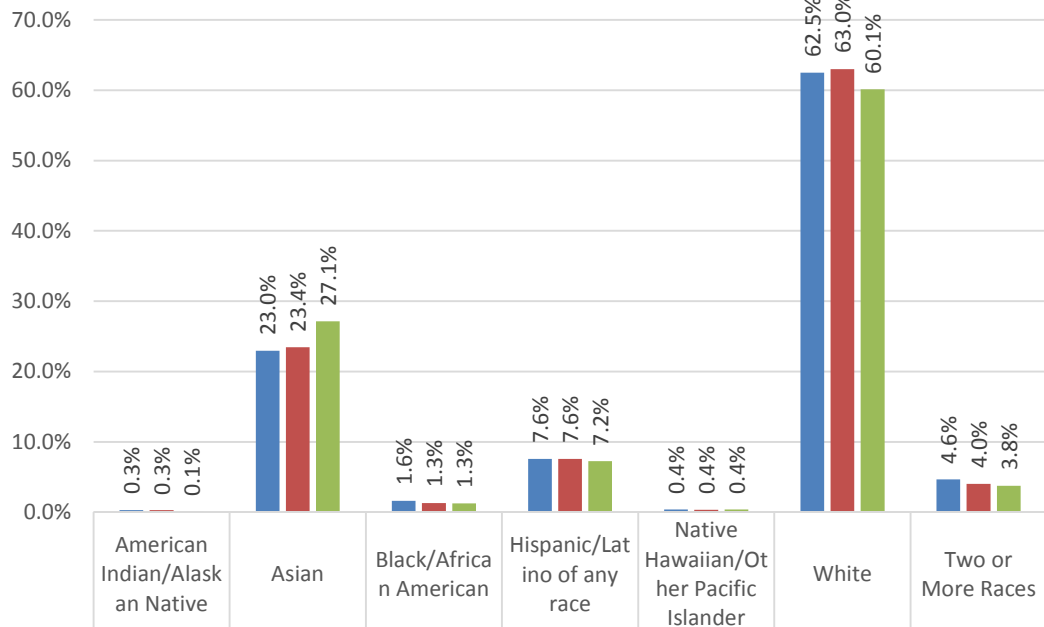
	American Indian/Alaskan Native	Asian	Black/African American	Hispanic/Latino of any race	Native Hawaiian/Other Pacific Islander	White	Two or More Races
District Overall	0.3%	23.0%	1.6%	7.6%	0.4%	62.5%	4.6%
District STEM/Tech	0.3%	23.4%	1.3%	7.6%	0.4%	63.0%	4.0%
District STEM	0.1%	27.1%	1.3%	7.2%	0.4%	60.1%	3.8%

■ District Overall ■ District STEM/Tech ■ District STEM

Ends 4

HS Enrollment by Service
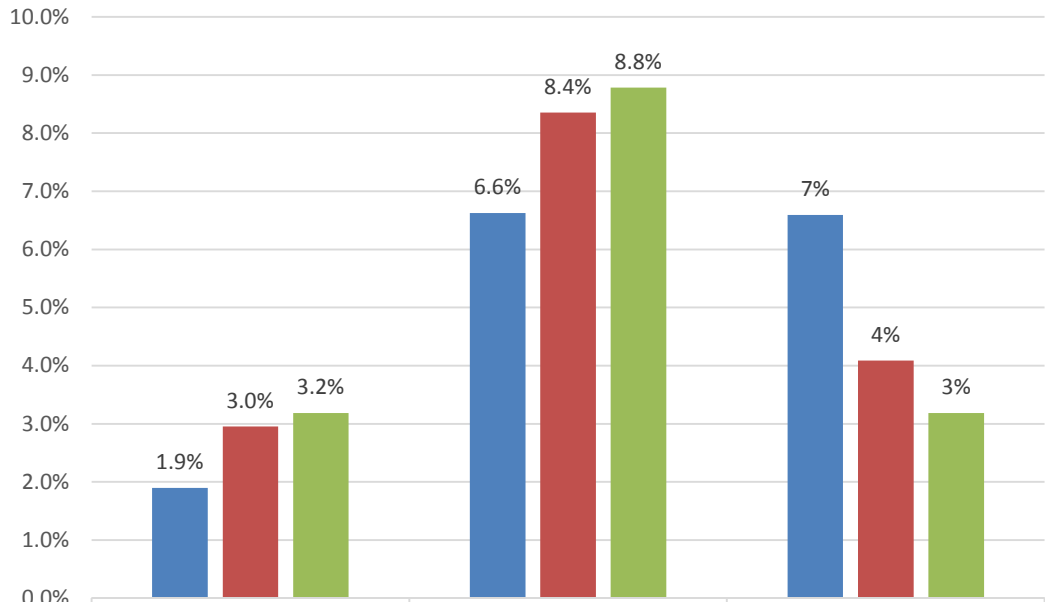
	% of ELL	% 504 students	% SE
District Overall	1.9%	6.6%	7%
District STEM/Tech	3.0%	8.4%	4%
District STEM	3.2%	8.8%	3%

District Overall   District STEM/Tech   District STEM

Ends 4

Technology Options Outside School Hours

Many schools have classes outside the school day that are provided by staff, PTA, and some outside vendors. On the next page is a listing.

School	Outside School Day Technology Classes and Clubs (2015/16)
Liberty	Robotics, Physettes, Yearbook, Technology Student Association
MMS	Robotics
Apollo	Scratch Club, Lego Jr. Engineer
Briarwood	Scratch
Maple Hills	Scratch Club
Newcastle	Scratch
IHS	IT Magazine (Journalism), I-Vision, Yearbook, Code, Engineering, Robotics, Theatre Tech, Video Game, Technology Student Association
IMS	Scratch Club, Robotics Club
PCMS	Robotics and Hours of Code
Clark	Scratch; Lego Club, Engineering Club
Cougar	Lego Jr. Engineer, Techno Club
IVE	Scratch, Lego Engineering
Grand Ridge	Techno Club, Lego
Sunset	TechSmart Kids: Intro to Coding, Scratch
Skyline	Automotive, Computer Science, E Games, Engineering Club, Journalism, Robotics, Rocketry, Start Up, Tech Theatre, Technology Student Association, Yearbook
BLMS	Robotics, Scratch Club, Yearbook, Hour of Code and Gaming Club
PLMS	Robotics Club
Cascade	TechVenture Mindcraft, Lego Jr.
Challenger	Techno Club (Eastside Enrichment), Scratch
Creekside	Engineering for Kids, Scratch
Discovery	TechVentures Kids (coding), Bricks4Kids, Scratch
Endeavour	Robotics
Sunny Hills	Scratch

Ends 4

Digital Citizenship

The Children's Internet Protection Act (CIPA) requires schools to provide Internet Safety training every year to all students. There is no provision from CIPA for what curriculum is used so each school makes its own choices of Internet Safety Curriculum. In Issaquah all schools are required to complete Internet Safety Training and [submit a completed form](#) certifying that they have done so. The completed certifications are sent to the Executive Director of Compliance and Legal Affairs.

Capacity Building:

- Increase computer science learning and coding opportunities for all students.

Board approval:

Ends 4