



SCHOOL BOARD ACTION REPORT

DATE: October 19, 2017
FROM: Dr. Larry Nyland, Superintendent
LEAD STAFF: John Krull, Chief Information Officer, jckrull@seattleschools.org
Kyle Kinoshita, Chief of Curriculum and Instruction, kdkinoshita@seattleschools.org
Eric Caldwell, Manager, Instructional Technology and Library Services, ecaldwell@seattleschools.org

For Intro: November 15, 2017

For Action: December 6, 2017

1. TITLE

BTA IV: Approve Phase 1 purchase of Classroom Technology to support Teaching and Learning

2. PURPOSE

The purpose of this Board action is to approve the purchase of new student computers and carts. This will include 80 computer carts, 1280 computers, and required software and services.

3. RECOMMENDED MOTION

I move that the School Board authorize the Superintendent to execute purchase orders through RFP No.06792 with XXXX for a total amount of Not-To Exceed amount of (NTE) \$1,000,000.00, plus Washington State Sales Tax, over fiscal years 2017/2018, in the form of the draft purchase orders attached to the Board Action Report, with any minor additions, deletions, and modifications deemed necessary by the Superintendent, and to take any necessary actions to implement the purchase orders.

4. BACKGROUND INFORMATION

a. Background:

During replacement and expansion of student technology, the Department of Technology Support (DoTS) is improving the coordination and collaboration with the Teaching and Learning division to directly support its core initiatives. These include the re-visioning of secondary schools, Eliminating Opportunity Gaps (EOG), implementation of Multi-Tiered Systems of Support (MTSS) district wide, and supporting high quality teaching and learning, which are all initiatives represented in the Formula for Success. In the model New Pedagogies for Deep Learning developed by education luminary Michael Fullan, who will be working with Seattle Public Schools, deep learning will be accelerated and amplified using digital resources, pedagogical shifts, and technology. Students across the district currently rely on digital technologies for many purposes: accessing a vast span of resources to research ideas, expressing themselves creatively, assessing their knowledge, working collaboratively with others, producing artifacts of

learning, and developing new skills. Computers help to support and reinforce deep content understanding in different content areas. Ample access will ensure that all students, including those historically underserved, will have the same opportunities.

A problem of practice is that while there are emerging opportunities to appropriately enhance and accelerate existing learning and to create new classroom opportunities, the amount of basic technology, such as laptops, are in short supply, or in the case of desktops, are aging into obsolescence.

The emerging theory of action is deploying technology is to prioritize initial distribution to 1) classrooms that have projects or learning approaches that would strengthen learning in the areas of writing, research skills, data analysis, application of learned content knowledge to the solution of a problem (problem-based learning), and the creation of a student product (project-based learning) that demonstrates learning putting technology resources at the point of learning; 2) accelerate and amplify deep student learning of curricula using technology tools; and 3) prioritize need with an equity lens. By prioritizing allocation in this manner, technology can make a difference in helping students meet standards and achievement goals.

A key part of supporting project- and problem-based learning described in 1) above is the work done over the last two years with two cohorts of teachers spanning the district including classrooms from primary to secondary. Phase one of the Technology to Support Teaching and Learning project, which is one of the subjects of this motion, will provide equipment to augment the professional learning of the students in these classrooms. Pilot teachers are designing classroom models that focus on building relationships with students, using various digital materials, and targeting instruction to help students better meet educational objectives. Use of technology and digital resources are part of classroom activities for deep learning for all students. Content knowledge is applied in work produced by students, leading to more enduring deep learning. These teachers are specifically designing models that work in their schools, but will also serve as examples as we move forward with system-wide transformation as envisioned in the secondary re-visioning initiative.

An example of the dedicated application of digital technology to curriculum described in 2) above that supports students attaining standards is in the area of middle school science. A cohort of middle school science teachers use web based resources to engage students in authentic, current and relevant curriculum based on the latest state science standards. The digital platform uses videos to provide all students with a common experience from which to build their content knowledge. Instructional materials include science phenomena, computer simulations, analysis of authentic data sets, non-fiction reading, and robust labs to help students deepen their understanding of the content. Entire engineering units are integrated into the program sequence. Students use scientific content to design solutions to address human problems such as a tsunami warning system or a portable and renewable energy source for disaster rescue workers. The digital platform provides differentiated student readers that are current and relevant, translated into multiple languages, and can be updated in a timely manner. The pre-and post-assessments within a digital platform give students and teachers immediate feedback for responsive adaptation to curricular needs of all students. Students need opportunities to

interface with carefully selected technology tools to build digital competencies and learn how to use technology for deep and meaningful learning. In so doing, students will be prepared for the more challenging work using technology in postsecondary education and careers. The use of these digital tools equips students with 21st century skills for college and career readiness. The result for a school that has utilized these resources the longest are students' performance in the 80% range of students meeting standard on the state science assessment.

Pilot outcomes are directly tied to the next stage of student technology deployment. Teachers involved in the pilots are building units of study and classroom practices that leverage technology to support equity of access to quality core instruction that is differentiated for diverse learners. Through this experience the district will gain insights into what is effective for student learning and where there are challenges. This information will be used in future professional development and to modify subsequent deployments as necessary. We will also develop important tools like clear models of instruction, classroom organization plans, example lesson and unit plans, and examples of practice that can be used as we replace existing equipment. This kind of support is vital in ensuring that technology investments lead to instructional improvement and increased student achievement. The pilots will be deemed successful when each pilot teacher contributes to our knowledge of effective strategies and areas of improvement and provides these tools to support teachers in the next phase of student computer replacement.

Purchasing student technology and the associated budget of a \$15Million is a part of the Buildings, Technology and Academics/Athletics IV (BTA IV) levy. This pilot will help the district make sure the professional development and support are in place for future purchases. As technology hardware ages, it will not operate up-to-date applications, and increasingly restricts access to new educational resources. Older operating systems run by the obsolete technology eventually become security threats as software support is phased out and underscores the need to replace older equipment. Replacement, as detailed above, increases the intentionality in supporting emerging instruction in 21st century skills.

Public support for student computer replacement has already passed via BTA IV where this support was explicitly requested and granted. Providing mobile solutions for our students brings us in line with common practice in districts across the Puget Sound region, and allows our students access to collaboration tools essential to meet their needs.

b. Alternatives:

Do not approve this motion. - This is not recommended. The number of computers available for student use will continue to decrease as the current equipment becomes too old to properly function. Not replacing these computers or simply replacing them without using these pilots to develop and refine models of effective use will diminish our opportunity to utilize technology effectively in our schools

c. Research:

By providing professional development and improving the collaboration between DoTS and Teaching and Learning, Seattle Public Schools will avoid the all-too-common

mistake documented in research of assuming that technology by itself will improve student learning. Summarizing research over four decades, Higgins outlines the more appropriate perspective on technology:

The range of impact identified in these studies suggests that it is not whether technology is used (or not) which makes the difference, but how well the technology is used to support teaching and learning... It is therefore the pedagogy of the application of technology in the classroom which is important: the how rather than the what. This is the crucial lesson emerging from the research.

Higgins, S., Xiao, Z. and Katsipataki, M. (2012) 'The Impact of Digital Technology on Learning: A Summary for the Education Endowment Foundation.' Durham: Durham University.

Another study concretely describes how technology amplifies and accelerates student learning:

Past research suggests that compared to their nonlaptop counterparts, students in classrooms that provide all students with their own laptops spend more time involved in collaborative work, participate in more project-based instruction, produce writing of higher quality and greater length, gain increased access to information, improve research analysis skills, and spend more time doing homework on computers. Research has also shown that these students direct their own learning, report a greater reliance on active learning strategies, readily engage in problem solving and critical thinking, and consistently show deeper and more flexible uses of technology than students without individual laptops.

Gulek, J.C., and Demirtas, H. (2005). Learning With Technology: The Impact of Laptop Use on Student Achievement; *The Journal of Technology, Learning, and Assessment* v. 3 no. 2

Recent case studies of these approaches have shown promise.

- District of Columbia Public Schools, Washington, D.C., has redesigned 17 schools to incorporate blended learning. It has recorded extensive and well-studied student gains in math and reading on district-wide assessments and the National Assessment of Educational Progress since implementing blended learning.
- Enlarged City School District of Middletown, Middletown, New York, received a U.S Department of Education Race to the Top grant in May 2013 to design its blended-learning program. Since implementing the blended program, students in elementary schools using blended learning have shown greater growth than students in traditional classrooms in the district in both reading and math, based on Northwest Evaluation Association (NWEA) Measures of Academic Progress (MAP) scores.

Mackeyl, K. (2015). *Proof Points: Blended learning success in school districts*. Retrieved from <https://www.christenseninstitute.org/publications/proof-points/>

Over the past two summers the Seattle Public Schools Instructional Technology department has been working with teachers on models of instruction supported by technology that focus on personalization, differentiation and student engagement. The intention of this motion is to provide teachers from these two cohorts with the technology resources needed to support the shifts in their instructional practice. The experience from these pilot classrooms will be used to shape suggested models of use as we roll out student computer replacements over the next two years. Through our Office of Superintendent of Public Instruction grant, science teachers receive ongoing professional development to support their learning of how to effectively use web based resources to improve and measure student learning.

5. FISCAL IMPACT/REVENUE SOURCE

Fiscal impact to this action will be the one-time cost for the purchase of XXXX laptops for a total NTE \$1,000,000.00.

The revenue source for this motion is BTA IV.

Expenditure: One-time Annual Multi-Year N/A

Revenue: One-time Annual Multi-Year N/A

6. COMMUNITY ENGAGEMENT

With guidance from the district’s Community Engagement tool, this action was determined to merit the following tier of community engagement:

Not applicable

Tier 1: Inform

Tier 2: Consult/Involve

Tier 3: Collaborate

In February 2013, 72% of Seattle voters approved supported the BTA IV Capital levy. This levy supports the district’s long-range plans to upgrade and renovate aging technology and was the culmination of an eighteen-month long process analyzing the technology needs of the district. The process included countless hours of planning, coordinating efforts throughout the district, community engagement and feedback, extensive Seattle School Board guidance and input that lead to a unanimous Seattle School Board vote in November 2012 that approved the BTA IV projects list.

DoTS and Curriculum, Assessment and Instruction's (CAI) Instructional Technology team collected feedback from teachers and students through surveys and focus groups to determine the

features and model for the student laptop. We also surveyed new schools for 2017 to determine needed features and form factors.

Further engagement occurred at the 2015 Technology Summit, board meetings, meetings with principals, with teachers, and with Teaching and Learning leadership.

7. EQUITY ANALYSIS

Analysis covered two components of the phase one pilot: which schools participated and the cultural relevance of the practices developed in the pilot schools. Ninety-four teachers from across the district applied for the 50 available spots for this pilot program. The Instructional Technology team intentionally evaluated applications on individual teacher qualifications coupled with the school they represented. In the selection process, there was a preference given to teachers applying from schools serving high needs student populations.

At each of the cohort schools, teachers have used the equity lens when developing lessons for their classroom. Our work with these teachers has emphasized concepts of relationships, student agency, differentiation, and personalization.

8. STUDENT BENEFIT

Students are immersed in technology in their daily lives. When students have the opportunity to use technology to support their learning, they are much more likely to graduate with the technology skills needed to be successful in whatever path they choose. Technology in support of strong learning practices like project based learning and deeper learning is also a driver for increased student engagement and achievement.

We want our students to leverage technology to build the skills of collaboration, creativity, communication, critical thinking, citizenship, and character but we don't want to lose sight of the concerns around depersonalization and the ethical and responsible use of technology. It is for these reasons that it is critically important that we invest the time and resources in developing working models for student use of technology.

9. WHY BOARD ACTION IS NECESSARY

- Amount of contract initial value or contract amendment exceeds \$250,000 (Policy No. 6220)
- Amount of grant exceeds \$250,000 in a single fiscal year (Policy No. 6114)
- Adopting, amending, or repealing a Board policy
- Formally accepting the completion of a public works project and closing out the contract
- Legal requirement for the School Board to take action on this matter
- Board Policy No. _____, [TITLE], provides the Board shall approve this item

Other: _____

10. POLICY IMPLICATION

Per Board Policy No. 6220, Procurement, any contract over \$250,000 must be brought before the Board for approval.

11. BOARD COMMITTEE RECOMMENDATION

This motion was discussed at the Curriculum and Instruction Committee meeting on November 7, 2017. The Committee reviewed the motion and moved the item forward to the full Board with a recommendation for consideration.

12. TIMELINE FOR IMPLEMENTATION

Upon Board approval of this motion, purchase orders will be executed to begin the procurement process. Pilot classrooms will begin to receive their new computers beginning January 2018.

13. ATTACHMENTS

- RFP #06792 Packet (to be attached prior to Action December 6)
- Draft Purchase Orders (to be attached prior to Action December 6)
- Purchase of Student and Staff Computers Supplemental Letter
- Computers for New Schools Survey
- Proof Points: Blended Learning Success, District of Columbia Public Schools
- School Distribution List

Dear Superintendent Nyland and Board Directors,



We are writing to share the research, planning, and vision that have informed our request for portable devices in classrooms at Robert Eagle Staff and Meany Middle Schools. We understand the appeal of the devices pictured to the left. Desktop computers can be locked to a desk or tethered to a wall; it takes effort to walk off with a forty-pound machine. For this very reason, however, we believe desktop computers are not the right choice for the twenty-first century classroom. They limit our ability to provide an equitable and excellent education that will eliminate gaps for our students.

Desktops physically limit where students can learn. We believe that learning can and SHOULD occur anywhere, and our gorgeous new campuses were designed for this. There are flexible spaces throughout our buildings that we have been dreaming of creative and high impact ways to use. Although learning does not always occur around technology alone, we are prepared to provide students with opportunities to use technology throughout these spaces, and we would be remiss as professionals if we did not utilize powerful 21st century tools.

Portable technology allows us to turn any space into a learning space, which expands the opportunities that we can provide and puts students at the center of their learning. Imagine our physical scientists using carbon dioxide sensors that hook up to portable devices to measure the amount of pH in the soil around our courtyard, and then clustering in small groups in the break-out spaces lining our commons to create digital models. Imagine our musicians recording themselves in practice rooms, posting recordings to a threaded discussion, and receiving immediate feedback on technique from peers and instructors, or our social scientists holding a mock election in the cafeteria. We are committed to providing all students with cross-disciplinary, hands-on, project-based learning experiences that challenge the way technology has traditionally been used in education. Desktops physically limit the experiences we can offer students and tether us to traditional models of teaching, which have contributed to the achievement gap among students.



A student at Daniel Bagley Elementary sharing his research about a historical figure in Flipgrid, an online bulletin

One of the traditional models that has served to widen this gap is the one-size-fits-all approach to instruction. Portable technology allows us to provide a more flexible, personalized learning experience for students. Students are able to access resources and tools, online or built into a learning management system, that support their individual needs and allow them to go further with their learning through reteaching, alternate modes of instruction, additional practice, immediate feedback, supports (i.e. read-aloud), and opportunities for extending learning. Students could absolutely access these resources and tools on a desktop, sitting alone, at the back of a classroom, facing a wall. However, portable technology has the power to transform the culture of a classroom and an entire school community.



Students at Washington engaging in student-centered, personalized learning.

Imagine walking into a Language Arts classroom. Students are learning how to build counterclaim into their argumentative writing. You notice several students watching a video-recorded lesson and taking notes, students sitting in pairs, playing an online game that sharpens their counterclaim skills, a group of three using a shared document to collaboratively write a counterclaim paragraph, and a small group working with the teacher at the Smart projector to evaluate a counterclaim. Students in this classroom are able to make intentional choices throughout the learning process, work collaboratively and make use of flexible space.

We want to provide the students at Robert Eagle Staff and Meany with more than beautiful new buildings. We want to transform the way they learn. As a school board, you have a unique opportunity to help build learning environments that are student centered and pedagogically sound. Mobile devices in our schools will directly support our students as they practice and master skills necessary to becoming confident, creative and contributory citizens of our society.

Sincerely,
The Robert Eagle Staff and Meany Middle School Design Teams

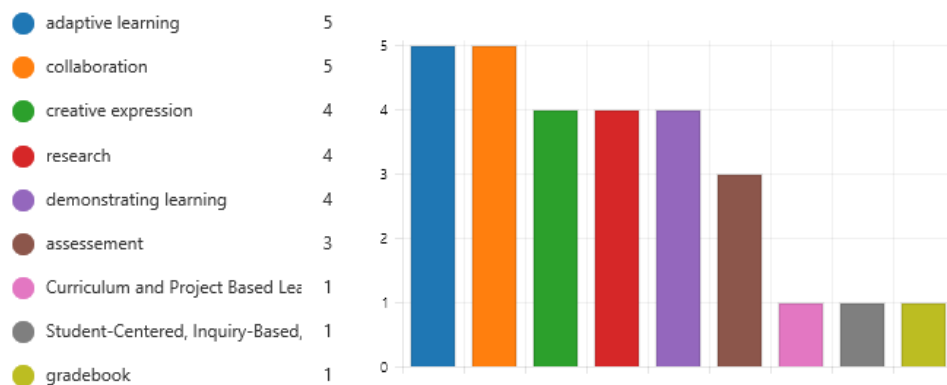
Computers for New Schools Survey

This survey was sent to the principals of the new schools regarding computers for new schools. The responses are as follows:

1. For in classrooms, regarding student computers, my school prefers:



2. My staff uses student computers for:



3. Please elaborate on student computers in your classrooms.

- Chanda Oatis: I am an opening school so, we have not finalized our computer purchase as of yet. I prefer laptops 1:1 if we can get them.
- Marni Campbell: We have the opportunity to create a learning environment that is truly student-centered and inquiry-based. We are also beyond aspiring to 21st century skills--we are in the 21st century. Our students deserve to be able to use learning tools that are adaptive, dynamic, and truly engaging. In this environment, students are not staring at screens. They are being challenged when they are ready, supported when they need to be, and the teacher is the highly skilled architect of the learning.
- Roy Merca: Having 16 computers meets our needs for student computers in a classroom. Having 6 computers only limits the usage for 1/3 or 1/4 of the class. My staff preference is 16.
- Rina Geoghagan: This year teachers are using computers to create different types of projects including power point and/or end of unit projects. Computers are also used for center work in math and literacy. Students are using computers for research projects and typing daily.
- Douglas Ouellette: For Cedar Park's project-based Expeditionary Learning model it will be critical to have mobile technology that is accessible quickly and can be flexibly groups within classrooms spaces and round the school/site, The 16 lap tops is a critical component to allow for student collaboration incorporating technology as a component of learning. Our staff is dedicated to infusing STEM and technological skills into our teaching (including researching and information gathering, data analysis and presentation, and communication) to ensure our students are developing skills and technological creativity to be ready for the jobs of today and tomorrow. Finally, Cedar Park (in conjunction with Decatur) have applied for an instructional waiver to pilot a new web-based science curriculum. This new curriculum incorporates technology into the scientific learning and phenomena-based experiments where students become different types of scientists during each exploration. Having access to our student laptops, which will allow partners to collaborate and explore using technology is a key component of our application process. I cannot stress my support for the academic and instruction benefits of the technology plan that was devised for CedarPark.

Proof Points: Blended Learning Success in School Districts

DISTRICT OF COLUMBIA PUBLIC SCHOOLS

Washington, D.C.

District Profile

District of Columbia Public Schools is the only public school district located in the nation's capital (although about 44% of students attend charter schools that are separate from the district)

47,500 students

111 schools, including three alternative high schools, two adult education schools, two special education schools, three youth engagement schools, and five magnet schools

The student population is 67% African American, 17% Hispanic, and 12% white; 76% of students qualify for free and reduced-price lunch, 16% receive special education services, and 10% are English Language Learners

The district graduation rate is 58%

INTRODUCTION

The District of Columbia Public Schools (DCPS) has developed three main blended-learning initiatives over the past several years:

1. Since the 2013–14 school year, district and school leaders have redesigned 17 schools (10 elementary schools, four middle schools, and three high schools)

to incorporate blended learning. The schools selected for redesigns are in a

K–12 feeder pattern so that students who are introduced to blended learning in elementary school do not have to change instructional methods as they progress through schools.

2. Many schools not selected for redesigns are also using blended learning in a variety of grade levels and subject areas to meet their school-level academic goals.

3. High schools offer credit-recovery programs using the Enriched Virtual model of blended learning in which content is delivered online and students meet with highly qualified teachers in their content areas at least two or three times per week.

To support these efforts, the district has made significant investments in online curriculum, network and wireless infrastructure, end-user devices, and professional development. It has also established a dedicated team at the central office to research, implement, and evaluate blended learning.

DCPS has recorded extensive and well-studied student gains in math and reading on district-wide assessments and the National Assessment of Educational Progress since implementing blended learning.

KEY ASPECTS OF BLENDED LEARNING PROGRAM

- The redesigned elementary schools use the Station Rotation model of blended learning for math and reading, with some variation based on decisions made by school leaders. The redesigned middle school uses the Individual Rotation model of blended learning for math and has worked with New Classrooms to design and implement the blended model.
- Across all schools (not just the blended schools), the district uses a variety of online curriculum products, including Lexia and myON for reading and ST Math, First in Math, and i-Ready for math. Science, social studies, and world languages classes also use online curriculum.
- The district retrained its teacher evaluators, known as Master Educators, on evaluation techniques applicable to blended-learning classrooms.
- The district’s Office of Data and Strategy conducts extensive studies to compare the outcomes of students using different instructional approaches.

Blended Learning Success Proof Points:

Extensive studies by the district found that:

- Students in blended math classes outperformed students in traditional math classes.
- Students in blended reading classes were more likely to improve their state test scores than students in traditional reading classes.

DCPS improvements on the National Assessment of Educational Progress Trial Urban District Assessment (TUDA) also outpaced national averages.

BLENDED LEARNING AT DCPS

Because of the mix of district- and school-level decision-making within the District of Columbia Public Schools (DCPS), blended learning has taken various forms in different schooling settings. For example, in two of the district’s redesigned elementary schools, students in reading and math classes rotate on a fixed schedule through three stations: one station is teacher-led small-group instruction, another is online learning, and a third is either independent practice or project-based learning. In the redesigned middle school, all students have a laptop that allows them to move through online curriculum at their own pace, with support from a team of teachers.

In addition to the redesigned schools, there are smaller blended-learning initiatives occurring in the district’s other schools that focus primarily on math and reading. Across 17 elementary schools, more than 1,000 students in grades 3 through 5 used online learning for at least 50% of their math curriculum during the 2012–13 and 2013–14 school years. Nearly 2,000 elementary students used blended learning extensively for reading during the same time period.

To support these initiatives, DCPS has invested more than \$10 million in purchasing new devices for classrooms and has implemented a four-year refresh cycle for all district-owned devices. The district also brought in experts in the field—including New Schools and Education Elements—to help educators in the redesigned schools to design blended-learning models and choose online curriculum. Many of the blended-learning schools have ongoing access to an instructional technology coach, who helps teachers integrate online curriculum, devices, and

face-to-face instruction. Online curriculum is vetted at the district level, with each individual school selecting among the content options.

DCPS has an Office of Data and Strategy that has conducted an extensive evaluation of blended-learning results. The Office has focused on the use of blended learning across the district, not just on whole-school implementations. It has also focused on identifying strategies that improve outcomes for the lowest performing students.

The district has recorded student gains in math and reading since implementing blended learning. Some of these gains include:

- DCPS used the DC Comprehensive Assessment System (CAS)—the district assessment prior to joining PARCC—to compare achievement scores for students using blended learning for math to those receiving traditional instruction. It found that scores for students in blended math programs rose 19 points, compared to an improvement of five points for students in the control group during the same time period. Students using the blended math program started with an average math achievement score below 70%.
- All DCPS 3rd-, 4th-, and 5th-grade students take the district Total Reading Comprehension (TRC) assessment three times per year to measure reading fluency. Across all subgroups, students who were in a blended-reading program were 13% more likely to improve their TRC scores than students who were not involved in blended learning. The biggest improvement was seen with students who were proficient in the TRC before beginning the program; these students were 32% more likely than students in the control group to improve their TRC score.
- DCPS participates in the National Assessment of Educational Progress Trial Urban District Assessment (NAEP TUDA), which is given to 4th- and 8th-grade students. DCPS students improved reading scores by five points and math scores by seven points, which compares favorably to the national average increase of one point for all participating schools in the NAEP TUDA. Similarly, 8th-grade students improved their math scale score by five points and reading scale score by 11 points, whereas the national average was one and two points, respectively.
- DCPS is seeing positive results with increased attendance and decreased truancy since the transition to blended learning. Across the district, daily attendance has risen 3% and truancy has declined 10% since the implementation of blended learning.

Copyright 2015 Evergreen Education Group

All Rights Reserved

Evergreen Education Group

Clayton Christensen Institute for Disruptive Innovation

Total Number of Carts: 80**Blended Learning**

Number of Carts	School	Principal
1	Adams	Tim Moynihan
3	Ballard	Keven Wynkoop
1	Blaine	Ryan LaDage
1	Dearborn Park	Jessica Conte
2	Denny	Jeff Clark
2	Eckstein	Treena Sterk
1	Franklin	Jennifer Wiley
1	Graham Hill	Deena Russo
1	Greenwood	Tino Castaneda
3	Hale	Jill Hudson
1	Hamilton	Tipton Blish
2	Ingraham	Martin Floe
2	J. Addams	Paula Montgomery
1	K-5 STEM	Ben Ostrom
1	Lafayette	Cynthia Chaput
1	Madison	Bob Gary
1	McClure	Shannon Conner
2	McDonald	Michelle Goldberg
3	Mercer	Chris Carter
2	Middle College	Jennifer Kniseley
1	Northgate	Dedy Fauntleroy
1	Nova	Mark Perry
2	Sacajawea	Rachel Friesen
1	Salmon Bay	Neil Gerrans
4	Southlake	Laura Davis Brown
4	T. Marshall	Katherine May
2	Van Asselt	Monique Manuel
1	Viewlands	Amy Klainer
2	Whitman	Sue Kleitsch
1	Whittier	Melissa Schweitzer

Middle School Science

Number of Carts	School	Principal
1	Hazel Wolf E-STEM K-8	Debbie Nelson
2	Hamilton International	Tip Blish
3	Jane Addams	Paula Montgomery
1	Madison	Bob Gary
3	McClure	Shannon Connor
10	Mercer	Chris Carter
2	Salmon Bay K-8	Neil Gerrans
2	So. Shore K-8	Kristin DeWitte
3	Washington	Susan Follmer

Number of Carts	School	Principal
2	Whitman	Sue Kleitsch