RMS Instructional Technology Plan – 2014- 2017
Roosevelt Middle School
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Vision for integrating technology into the curriculum based on the CCSS and NGSS

The Roosevelt Middle School staff has focused professional development on improving writing instruction in Language Arts courses as well as within all other content areas and, also, to improve science instruction through the use of technology. The goals were established due to data provided by the 4j school district that demonstrated that writing and science should be key areas of growth for Roosevelt students. In addition, Roosevelt staff decided to focus professional development and instructional improvement on three CCSS "anchor standards" that can be improved within any content area. Those anchor standards are to:

- Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
- Read and comprehend complex literary and information texts independently and proficiently.
- Write informative and explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.

Instruction using computers as research, writing, and collaboration tools will be a primary focus for language arts teachers, as well as other teachers within the contents areas. Extension projects that use video and audio recording/editing will also boost technology use in our core content classes.

Science teachers are hopeful to implement new instructional strategies using technology to improve alignment with the Next Generation Science Standards. Roosevelt will offer robotics during the 2015-16 school year as an elective and core science teachers hope to use data probe ware to collect data and improve understanding of science concepts. Science probes, like Oxygen and Carbon Dioxide Sensors, Light and temperature probes, and general chemistry probes, will allow greater exploration and learning through inquiry in science classes.

How will integrating personal learning device (laptop or iPad) potentially address this vision?

Providing students opportunities to read and write information/ informative texts is complex and requires significant technological resources. The staff values resources that allows student access to informational text, the ability to cite and discuss value of sources, and the ability to articulate ideas while providing feedback on quality. The staff, in general, agrees that the most valuable resource for this instruction is through the use of computer labs and "COWS" with sufficient laptops for a classroom. The computers will allow for a comfortable working environment for student research and writing, as well as collaboration and peer/staff editing of work through programs, like google documents. Presentations using audio and visual editing software and/or presentation software will enable extension and stronger communication of central ideas. There is a strong preference on staff for laptop or desktop computers rather than smaller iPad or iPad-mini devices. This preference is based upon a perception of durability as well as student comfort.

Personal learning devices help facilitate data collection with science probes and robotics engineering. Generally, data or programming can occur on smaller devices, however, a set of computers in our science classrooms will assist science teachers in taking ownership of a technology based science classroom.

In order to fully implement our vision of collaborative reading and writing, as well as data collection with science probeware, **Roosevelt Middle School is asking for 10 Computer Carts with 36 laptops per cart.** These carts will allow differentiation of technology for departments (3 for Language Arts, 1 for French Immersion, 2 for Science, 2 for Social Sciences, 1 for Mathematics, 1 for Electives), so that Language Arts and Science could fully integrate instructive aligned with school goals.

What is the school commitment and design for on-going professional development?

If all teachers will be expected to provide instruction that meets the goals of the anchor standards of the CCSS, then all staff will need professional development on the use of writing and reading tools on laptop computers. For example, the use of google docs, presentation software, search tools within internet browsers, and "track changes" or "comments " within document software are critical tools that allow for improved research, presentation, and editing in student writing. The school is committed to providing all staff professional development in the use of these tools. This professional development will be provided as full staff professional development during the 2014-15 school year, as well as the ongoing professional development and support for individual staff.

Science teachers will also receive professional development in the use of science probe ware as well as the EV3 Resource Set (robotics processors). This will help the teachers gain comfort with inquiry science through technology as well as engineering projects through robotics.

Professional Development	Who?	When?
Writing and researching with technology	Language Arts and Core Content Teachers	Fall, Winter of 2015
Robotics and Engineering with EV3	Science teachers	Summer and fall of 2015
Science Inquiry through probes	Science teachers	All of 2015-16 school year

Three-year Equipment Matrix/ Discussion

The current (as of June 2014) inventory of all Roosevelt Equipment is....

Technology	Location	Usable	Capacity	Primary Type	OS	Last imaged	Notes
C1 Lab COW	Room C1	36	36	MacBook Air 6,1	10.8	Spring 2014	
C6 lab	Room C6	34	34	IMac4,2;5,2;12,1;eMac	10.7, 10.5, 10.4	Fall 2013	8- 12,1; 25 - 4,2; 1 emac
D10 lab	Room D10	34	34	IMac9,1&2; 2Macbooks	10.6	Fall 2013	
COW 1	Library Barn	32	32	IBooks G4	10.4	?	
COW 2	Room D7 (Jenoge)	32	32	MacBook1,1	10.6	Fall 2013	1 MacBook7,1
COW 3	Room B8 (Catherine)	20	20	MacBooks3,1;4,1	10.6	Fall 2013	
COW 4	Room C6 lab barn	32	32	MacBook 1,1;2,1;3,1;7,1	10.6	Fall 2013	3 Macbook 7,1
COW 5	Room B3	16	20	MacBook 7,1;2,1 iBook G4	10.6; 10.4	Fall 2013	8 MacBook 7,1
COW 6	Room C4	19	20	MacBook2,1;7,1	10.6	Fall 2013	1 MacBook 7,1
COW 7	Library Barn	32	32	MacBook 6,1;4,1	10.6	Fall 2013	
Library Students	Library	4	4	IMacs 10,1	10.6	Fall 2013	
Classroom desktops	B6, A3, B7	3		IMac 5,2	10.6	Fall 2013	
Backups/testing	Tech room	4		MacBook1,1;2,1;4,1	10.6	Spring 2014	
	Total	298					

Teacher Technology- There are ~25 MacBook Pro computers used by teachers at Roosevelt and all teachers have a document camera and many have a Smart Board. All teachers also have access to a multimedia projector.

The current set of computer labs and COWS provide for a high volume of computer use for some teachers. There is a strong commitment of writing instruction and research, however, there are conflicts due to the age of many of the laptops and the size of some of the classrooms. Another factor to account for is that Roosevelt will have a new facility for the beginning of the 2016-17 school year. Rather than having spaces for three computer labs in the new facility, there will not be any designated computer labs in the new facility. Therefore, all desktop computers should be replaced (eventually) with laptops that are more flexible and movable.

In addition to the computer assets listed above, it is assumed that all teachers will/should be provided document cameras and projectors. All Roosevelt teachers use these resources and will need replacements due to wear and high use. If these resources and replacements can be provided through bond resources (technology bond funds or building "furniture" funds), then building resources can be used to purchase additional technology.

Roosevelt Middle School is committing, through use of ASB technology funds and an EEF grant, to create a robotics elective for students. The EV3 units can be used for robotics engineering, as well as science data collection. The materials for this program, as well as training for a lead teacher, will be a large monetary investment.

Year One

The most immediate need for replacement are iBook G4 laptops. These machines are really not in use due to an outdated operating system and well-worn equipment. These machines are within COW 1 (32 machines) and part of COW 5 (8 machines). A replacement of these computers is urgent.

As Roosevelt invests in science probe ware and EV3 robotics computer hardware/training, it would be helpful to invest additional laptop computer resources into the Roosevelt science program. A science specific set of laptops would assist in teacher ownership and teacher commitment to technology use within the curriculum. **Roosevelt would like 4 laptop carts (of the 10) with 36 computers each during the 2014- 15 school year.** At least one of these carts will be designated to science immediately, so that robotics and probe ware curriculum can be explored.

Year Two- Three

As the rest of the resources age, the replacement of laptop computers in all COWS and desktop computers (that could become COWS) is imperative. Nearly all of these machines will be antiquated by the end of the 2017 school year and will not be in use if not replaced. **Roosevelt would like 6 laptop carts (of the 10) with 36 computers each during the two school years of 2015- 16 and 2016- 17.** As stated earlier, there is a strong preference for laptop computers over smaller PEDs or desktop computers. If there are not at least 300 functioning student machines at Roosevelt, then the capacity for teachers to meet the goals of the CCSS will be greatly diminished. When all of the laptop carts have arrived, the placement and assignment of COWS to various departments will be complete.

Roosevelt hopes for additional resource investment in science inquiry using science probes and robotics. Also, a recording studio in the new Roosevelt facility will allow for expansion into using technology resources for video and digital arts.

School Commitment

Roosevelt Middle School is undergoing a two year process of replacing teacher, administrator, and support staff computers. At the beginning of the 2013-14 school year, RMS purchased 12 teacher laptops and will purchase 12 additional laptops to begin the 2014-15 school year. If teachers hope to instruct students on using technology to improve writing and research, the teachers need adequate equipment as well. In addition, support staff will need technology replacement in order to meet the needs of managerial work and communication.

Roosevelt is also investing building resources into a robotics and science inquiry curriculum. Roosevelt will invest ~$5000 of discretionary funds, as well as building FTE to a robotics elective.

Review Timeline

Year	Investment
2013- 14	Roosevelt purchases 12 teacher laptop computers
2014- 15	Roosevelt purchases 12 additional laptop computers School District supplies 4 laptop COWS of 36 computers each Roosevelt purchases Robotics hardware and software
2015- 16	Roosevelt purchases probe ware for science department School District supplies 3 laptop COWS of 36 computers each
2016- 17	School District supplies 3 laptop COWS of 36 computers each