

The Nature of STEM: Nature of Technology and Me

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As an eighth grade history and English Language arts teacher, I am not normally focusing on stem instruction in my classroom as a core competency. It is not covered in the standards of my subject, however, I am still tasked with instructing students on how to use

technology in general. I am choosing to focus on the nature of technology, as this is one of the main focuses in my class and in my classroom as a whole. I chose this as I do not directly instruct in math or science or engineering, but I am instructing students on the use of technology in their classes and in their lives. Some of these students depend on each of their classes and their school as a whole to provide them with technology, as the school sits in a low socioeconomic zone. This resource must be taught in order for the students to be able to lift themselves into the careers of the 21st century.

In my current classroom, I am in forcing the tenants of technology instruction by requiring students to complete assignments via technological means. I invoke many standards , but most commonly, teach standard one (ITEA, 2007)"the core concepts of technology". In my history classes I focus on standards: four, "The cultural, social, economic, and political effects of technology; and standard six, "The role of society in the development and use of technology"(ITEA, 2007). I focus students on completing tasks using the classroom provided chrome books, as well as learning multiple programs to present data, including normal Microsoft office programs or more advanced programs like Flipbook or ProPresenter. This focus is to try and bridge the gap between the technology available in the normal school site, and the endless availability of materials online.

I can provide further instruction and will focus more on instructing more of the nuances of technology in my classes, including history and types created in line with California Standards for Eighth grade history Instruction. One tie in will be the effect of technology on the history of the United States. I have already focussed students on studying the inventions of the Industrial Revolution and their impact on the economy and politics country wide. This assignment alone focussed students on ITEA standards 8-13(ITEA, 2007). This was and will be again accomplished by having students identify an invention from the Industrial revolution and try to

rebuild it, as well as exploring the history of it, including: who made it, where it was made, who it helped, and its impact on the economy. I look to not only reinforce this, but to enhance my instruction of stem in the classroom by tying in the importance and the background of technology as a whole, including medical technologies, agricultural, power, communication, construction, and manufacturing technologies to fulfill standards fourteen through twenty(ITEA, 2007)

My incorporation of inventions and the technology behind them falls in line with the principles of the Nature of Engineering as well. Most effectively, my classroom correlates with principle three, “K–12 engineering education should promote engineering habits of mind” (Katehi, Pearson, and Feder, 2009). As a history teacher, I will specifically focus on the ethical and moral aspects of technology in history. “Systems thinking equips students to recognize essential interconnections in the technological world and to appreciate that systems may have unexpected effects that cannot be predicted from the behavior of individual subsystems” (Katehi, Pearson, and Feder, 2009). Some examples to highlight would include the study of the flame thrower and its effect on warfare in World War One, or the advent of the atomic bomb.

Bibliography

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