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EDT 500 Instructional Design

1. **The Problem.** In a classroom filled with technology, students do not truly understand the the difference between technology and science, technology's impacts on society.

2. **The Need.** I need different presentation software's that I will use during class. I would also like them to be easy enough for students to be able to use them.

- PowerPoint
- Smart Notebook Software
- Prezi

3. **The Audience.**

The audience that I will be presenting to is a 8th grade pre-engineering class. This would be presented six separate forty seven minute periods. The overall understanding of technology has not been discussed with them before and they having an understanding of technology but not what it's impacts are. I have one hundred twenty students in 6 classes. Forty of those students are in a regular reading class and twelve of students are pulled from my class for reading intervention. The classes are split pretty evenly between males and females. The students are immersed in social networking and technology, but seem to take what technologies they have access to for granted. This will take place in a urban school, where the majority of the students are white.

4. **Objectives/Assessment.**

- Explain the relationship between science, technology, engineering and math.
- Distinguish between invention and innovation.
- Describe engineering and explain how engineers participate in or contribute to the invention and innovation of products.
- Describe impacts that technology has had on society.

5. **Content.**

Standards and Benchmarks Addressed

Standards for Technological Literacy

Standard 1: Students will develop an understanding of the characteristics and scope of technology.

- BM F:** New products and systems can be developed to solve problems or to help do things that could not be done without the help of technology
- BM G:** The development of technology is a human activity and is the result of individual or corporate needs and the ability to be creative.
- BM H:** Technology is closely linked to creativity, which has resulted in innovation.
- BM L:** Inventions and innovations are the results of specific, goal-directed research.

Standard 3: Students will develop an understanding of the relationships among technologies and the connections between technology and other fields of study.

- BM D:** Technological systems often interact with one another.
- BM F:** Knowledge gained from other fields of study has a direct effect on the development of technological products and systems.
- BM G:** Technology transfer occurs when a new user applies an existing innovation developed for one purpose in a different function

- BM H:** Technological innovation often results when ideas, knowledge, or skills are shared within a technology, among technologies, or across other fields.
- Standard 4: Students will develop an understanding of the cultural, social, economic, and political effects of technology.**
- BM D:** The use of technology affects humans in various ways, including their safety, comfort, choices, and attitudes about technology's development and use.
- BM F:** The development and use of technology poses ethical issues.
- BM G:** Economic, political, and cultural issues are influenced by the development and use of technology.
- BM H:** Changes caused by the use of technology can range from gradual to rapid and from subtle to obvious.
- BM I:** Making decisions about the use of technology involves weighing the trade-offs between the positive and negative effects.
- Standard 6: Students will develop an understanding of the role of society in the development and use of technology.**
- BM D:** Throughout history, new technologies have resulted from the demands, values, and interests of individuals, businesses, industries, and societies.
- BM E:** The use of inventions and innovations has led to changes in society and the creation of new needs and wants.

6. Instructional Strategies.

Lecture, Research, Small Group Work

7. **Additional Materials.** I would like to have students create a presentation on an Engineering field that interests them with Prezi.

8. **Program Use.** While presenting to my class, I will use PowerPoint, Smart Notebook and Prezi to help facilitate lectures. I will have students complete a Webquest using Smart Notebook and they will present to the class.

9. Summative Evaluation.

Interpretation

- Complete a Webquest project to show how a technological artifact has been innovated over the years.

Empathy

- Understand the importance of engineering and engineering technology in the development of today's society.

10. Appendix