

End of Unit Quiz
today on the
Universal Systems

The History of Engineering

STANDARD:ENGR-FET 1

ENGR-FET 2

ENGR-FET 5

The History of Engineering

Please copy the following Essential Questions. It will count for 10% of your portfolio:

1. What are some key historical events and their impacts on engineering and technology?
2. What are some social issues that have influenced innovation and technological development?
3. Who are some key persons who have contributed to technological change?

VOCABULARY WORDS FOR THIS UNIT

- ▶ **Invention**
- ▶ *Timeline*
- ▶ *Catapult*

▶ **What is Engineering defined as?**

**REVIEW INTRODUCTION OF
ENGINEERING**

▶ **Definition of Engineering**

- ▶ *The application of math, natural sciences, and technology use to change resources into products to satisfy human needs.*

REVIEW INTRODUCTION OF
ENGINEERING

HISTORICAL EVENTS

- ▶ Invention of the automobile and the assembly line
- ▶ Invention of the light bulb
- ▶ Invention of the radio
- ▶ Invention of the telephone & Television
- ▶ Invention of flight



SOCIAL ISSUES THAT INFLUENCED TECHNOLOGY DEVELOPMENT

- ▶ People in society found it difficult to get ketchup out of the original design bottle, thus engineers and designer had to **redesign** (the final step of the engineering design process – we'll learn more about this sometime this year) a new way of removing ketchup by designing the bottle upside down.



MORE SOCIAL ISSUES THAT INFLUENCED TECHNOLOGY DEVELOPMENT

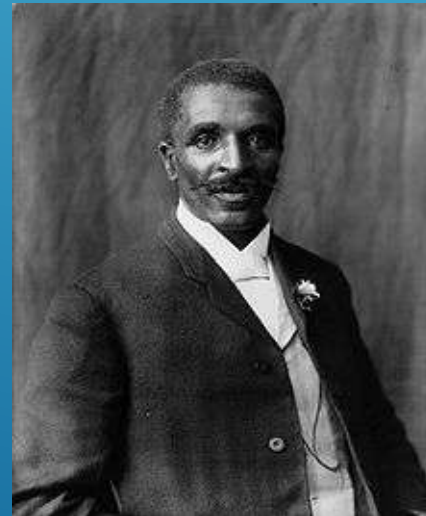
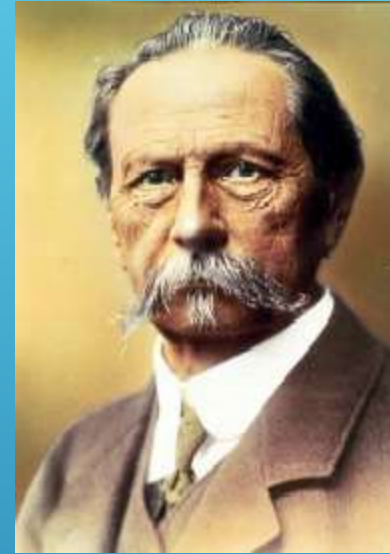
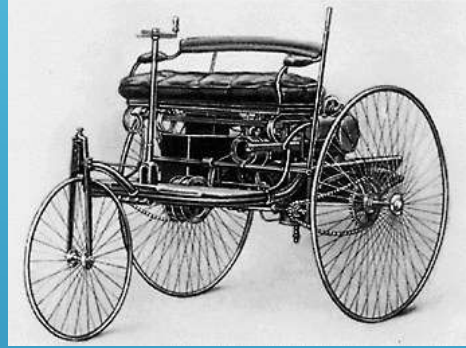
- ▶ Not until people were killed in accidents, engineers redesigned seatbelts for safer vehicles.



- ▶ What other social issues have lead to the redesign or innovation of a new technology?

KEY PERSONS WHO HAVE CONTRIBUTED TO TECHNOLOGICAL CHANGE:

- ▶ Alexander Graham Bell
- ▶ Thomas Edison
- ▶ Karl Benz
- ▶ George Washington Carver
- ▶ Henry ford
- ▶ Wilbur & Orville Wright
- ▶ Dr. Robert Goddard
- ▶ Leonardo Da Vinci
- ▶ Bill gates
- ▶ James Watt
- ▶ Joseph Strauss
- ▶ Steve Jobs



ASSESSMENT TASK #1:

1. Research 6 famous historical Inventors and Innovators. (3 from the list provided)
2. Then prepare a PowerPoint slide (1 inventor per slide) show involving each inventor/innovator.
3. Each slide must indicate the inventor's name, and a photo of him/her, a picture of the invention, state what he/she invented, what year it was invented, his/her engineering discipline, and how the invention impacted society.
4. The overall slide show must be appealing with added transitional effects such as fade in/out etc.

Sample of 1st slide

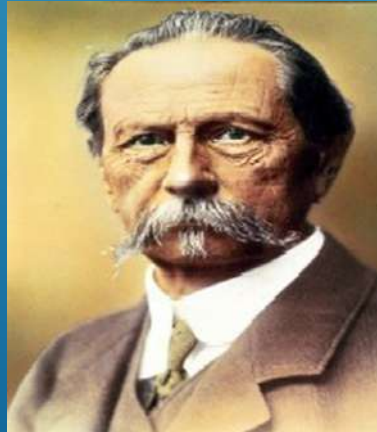
HISTORICAL INVENTORS

Coach James
September 5, 2015

SAMPLE OF 2ND SLIDE

MODEL EXAMPLE OF TASK: KARL BENZ

1. **The invention & year created:** Karl Benz was famous for the invention of the automobile in 1886
2. **Discipline:** Mechanical Engineering was Karl Benz's discipline.
3. **Impact on society:** Karl Benz's invention provided a faster means of transportation allowed from one place to another.



GRADING RUBRIC:

1. (2 pts.) for inventor's name
2. (2 pts.) for photo of the inventor
3. (2 pts.) for a picture of the invention
4. (2 pts.) for stating what he/she invented
5. (2 pts.) for indicating the year the invention was credited
6. (4 pts.) for indicating the engineering discipline
7. (4 pts.) for explaining how the invention impacted society.
8. (2 pts.) for overall appearance of the slide show

ASSESSMENT TASK #2: TECHNOLOGY BEFORE I WAS BORN

Build and test an online 3D catapult

<http://www.forgefx.com/casestudies/prenticehall/ph/catapult/catapult.htm>

ASSESSMENT TASK #3:

Build a “Teeny Tiny” catapult by following the procedures in the instruction packet. Your grade will be based on your ability to follow written text, while constructing a technology product from the past.

The first known catapult was invented by Leonardo da Vince.

http://alg2.weebly.com/uploads/6/6/7/1/6671925/how_to_build.pdf