



Class Title: Blue Hands-on Study: History of Inventions

Subjects Covered: Science and Social Studies

Teacher Name: Trish Poston

Class Day: Monday

Class Size: 10

Overall Class Cost: \$50

Individual Student Supply Fee: \$0

Class Fee: \$96

Ages or color group served: Blue

What level is this class: Level 3

Prerequisites: A willingness to learn, participate and follow directions. There may be team activities for some classes, so students just be willing to work with others.

Graduation Requirements: HCU attendance policy

Individual class project completed

Homework Requirements: There will be some homework

Class Description:

This hands-on study class combines the science lesson of scientists and their amazing discoveries with the impact of making history. Students will spend the semester learning about brilliant scientists whose discoveries inspired other scientists to impact moments in history, to today's dependence on the advancement of said discoveries, and encourage students to think about how the future could be impacted by continuous improvement on discoveries and inventions. Each lesson will also entail a lesson on vocabulary words to ensure understanding. By the end of the semester, students will have created a timeline that follows each week's lesson, creating a visual representation of the progress of inventions and their contribution to major world events.

Week 1:

Class Expectations and goals

Supplies for class project and initial set up

Class discussion:

- What makes a scientist brilliant?
- Inventions you couldn't live without
- What current inventions would you like to see improved?
- Vocabulary words and Historical moments

Week 2:

Computers: 1800's

-Charles Babbage

- Ada Lovelace
- George Boole

Vocabulary words/ Historical moments

Week 3:

Computers and Programming:

- Tommy Flowers
- Alan Turing
- Konrad Zuse
- John von Neumann
- Grace Hopper

Vocabulary words/ Historical moments

Week 4:

Internet and WWW

- ARPANET
- Bob Kahn
- Vincent Cerf
- Tim Berners-Lee

Vocabulary words/ Historical moments

Week 5:

Aerodynamics designs

- kites in Japan
- Leonardo DaVinci
- Montgolfier brothers

- Sir George Cayley

- Otto Lillenthal

Vocabulary words/ Historical moments

Week 6:

Aerodynamics in flight

- Orville & Wilbur Wright

- Frank Whittle

- Hans von Ohain

- Supersonic commercial transport

Vocabulary words/ Historical moments

Week 7:

Power: Electricity and Magnetism

- Alessandro Volta

- Michael Faraday

- James Clerk Maxwell

- Nikola Tesla

Historical moments

Week 8:

Power: Light, Radiology, Nuclear

- Thomas Edison

- William Rontgen

- Marie Curie

- Lisa Meitner

- Enrico Fermi
 - Shuji Nakamura
- Historical moments

Week 9:

Communication

- Alexander Graham Bell
 - Heinrich Hertz
 - Guglielmo Marconi
 - Golden age of radio
- Historical moments

Week 10:

Communication Continued

- TV
 - Pagers
 - Cell phones
 - Satellites
 - GPS
- Historical impact/moments

Week 11:

Germes: Bacteria and Medicine

- Louis Pasteur
- Robert Koch
- Alexander Fleming

- Gertrude Elian

Historical moments/impact

Week 12:

Present timeline projects to take home

Class discussion and reflection:

Personally Fascinating discoveries throughout the semester

What further progression of current our new discoveries would you like to see impact
your future?