MUSEUM OF EARLY TRADES & CRAFTS

Additional Program information for

Simple Machines

PROGRAM OVERVIEW

Best for 1st to 2nd grades

✔**At METC** ✔**Outreach** ✔**Live Virtual**

✔ **Digital Written Lesson Plan** ✔**Digital Video Lesson Plan**

Throughout history, people have been developing tools to save time and energy using simple machines. Explore the functions of the inclined plane, screw, lever, wedge, wheel & axle, and pulley through close-up examination of the Museum's artifacts. In cooperative learning groups, present findings to the class.

STANDARDS & SKILLS

6.1.2.HistoryCC.3: Make inferences about how past events, individuals, and innovations affect our current lives.
6.1.5.EconNM.4: Explain how creativity and innovation resulted in scientific achievement and inventions in many cultures during different historical periods.
ETS1.A: Asking questions, making observations, and gathering information are helpful in thinking about problems.
K-2-ETS1-1: Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.

Presenting Arguments & Explanations; Using critical thinking to make sense of problems and persevere in solving them

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PROGRAM OBJECTIVES

Students will:

1. Identify and define the six kinds of simple machines.

2. Examine artifacts from the past to understand how these tools represent early technology.

3. Communicate effectively while presenting information to classmates.

4. Explain how Early Americans used simple machines to solve problems without electricity or other modern technologies.

SUGGESTED PRE-PROGRAM ACTIVITY

Identifying machines in your life

1. Make a list of some the machines that can be found in your classroom or home.

2. Describe how the machines work.

3. Indicate how each machine helps you

SUGGESTED POST- PROGRAM ACTIVITY

Invent your own machine

Ask your students to think about a chore or task that takes a lot of hard work. How could they make that job easier? Have them invent a machine that will do the job for them!

You may find our **Invention Activity** to be a helpful guide for this process, just be sure the focus is on using simple machines in whatever tool, or machine, they make.

Their invention should include:

- A combination of several simple machines
- A description of what the machine will do
- A description of how the machine works
- An illustration/diagram of the machine
- The name of the machine

If you have any questions or require any additional information, please feel free to contact the METC Education Department at 973-377-2982, x12 or education@metc.org