

NAME: _____

MUST-SEES

- Newcomen Engine
- Gothic Steam Engine
- Highland Park Engine
- Spokane Water Turbine
- Tower of Power:
How many light bulbs can you light up?

GLOSSARY

TURBINE: a rotating machine part turned by the force of steam, air or water

GENERATOR: a device that converts one form of energy into another - usually water, steam or heat energy into electricity

WATT: a unit used to measure power

DRAW WHAT YOU SAW

Draw the most interesting machine or power source that you saw within the exhibit. Use the back of the page for more space!

TEAM UP & TALK

1. What types of power did people use to manufacture or produce goods before steam power?

2. Look for the light bulbs at each generator or engine, and fill out the chart below.

GENERATOR OR ENGINE NAME	HOW MANY 40-WATT BULBS CAN IT POWER?	WHAT TYPE OF POWER DOES IT USE?

3. Which machine can power 32,500 40-watt bulbs?

4. In the circles below, give examples of what each type of power was used for.

STEAM POWER

ELECTRIC POWER

WIND OR WATER POWER

CREATIVE THINKING & PROBLEM SOLVING

Imagine other sources of power (serious or silly). What might their benefits and problems be?

CHAPERONE TIP SHEET

The Henry Ford's History Hunters have been especially aligned to reinforce 21st-century skills, such as creativity and innovation, critical thinking and problem solving, and communication and collaboration. Use this tip sheet to engage students in the learning process.

Please remember that the person who does the work does the learning. Use an asking vs. telling approach.



Here are some questions to ask the students as you go through the Made In America: Power exhibit:

How would you describe the size of the engines in this exhibit? How do they compare in size to engines many people use today, like those found in modern cars?

Try the Tower of Power. How does the amount of light bulbs you can power compare to the power made by some of the engines in this exhibit?

In what ways are the more recent engines (Highland Park Engine, Spokane Water Turbine) different than the older engines (Newcomen Engine)? How are they similar?

Why do you think these engines are so important? What kinds of tasks did they help complete?

If the students are having trouble finding the Must-See items, you can guide them to these areas.

- **Newcomen Engine:** in back corner of the exhibit just past the gun display.
- **Gothic Steam Engine:** in the front of the exhibit, near the center (look for the white arches).
- **Highland Park Engine:** in the back corner of the exhibit by the two sets of green stairs.
- **Spokane Water Turbine:** off to the side of the exhibit closest to the Heroes of the Sky exhibit, below the power lines and next to the "Electrical Era" sign.
- **Tower of Power:** near the "Electrical Era" sign toward the center of the exhibit behind the Gothic Steam Engine.

Creative thinking and problem solving

Be sure to encourage creativity! Allow students to choose anything they want to be a possible source of energy. Then, help them decide what benefits and problems would arise from the new energy source.