

Simple Machines (3-5th grades) Post-Visit Activities

We hope that you enjoyed your visit to the Children's Science Explorium!

To help reinforce the concepts covered during today's field trip, we have prepared the following wrap-up activities for you to incorporate into the classroom.

Vocabulary List and Student Definitions (elementary level):

- **Wheel and Axle:** rods called axles connect wheels (circular frame or disk) so that items can be moved easily
- **Wedge:** simple machine that has at least one slanted side, often two. It can separate objects, slide under things, and hold things in place
- **Lever:** simple machine consisting of a rigid bar that rotates about a fixed point (fulcrum)
- **Pulley:** simple machine used to lift objects that consists of a grooved wheel or disk and a rope or cable threaded around the track
- **Screw:** simple machine that consists of an inclined plane wound spirally around a cylinder and is used to fasten objects
- **Inclined Plane:** a simple machine, consisting of a ramp that connects a lower surface to a higher surface
- **Simple Machine:** a device that makes doing work easier
- **Compound machine:** two or more simple machines working together

Simple Machines Wrap Up:

1. During the field trip, students spent time designing a test model of a K'nex car, made of simple machines. Have students write up a plan of how they would design a second test model.
 - a. What modification, if any, would be made?
 - b. What materials would be used?
 - c. How would this help to make a better design?
2. Have students draw out their designs and label the simple machine(s) they are made of.
3. A Rube-Goldberg machine is a deliberately over-engineered apparatus that performs a very simple task in a very indirect and convoluted fashion, usually using a chain reaction. The Mouse Trap board game is set up in this style. Set up the game and have students examine the course, identifying the simple machines that carry out each part of it.