



Rube Goldberg Machine: A System of Simple Machines

A Rube Goldberg machine is a contraption that is made to complete a simple task in a complex way. These machines typically have many moving parts. They are perfect for exploring how simple machines can work together to create a system.

the classic Mouse Trap game is an example of a complex Rube Goldberg Machine. Setting up a line of Dominoes to knock over a tiny ball is much simpler chain reaction system.

Begin by studying Rube Goldberg machines. There are literally hundreds of great videos on YouTube that can offer lots of inspiration. Preview them before showing to children, of course! After children gain a general understanding of what a Rube Goldberg machine is, invite them to design their own. Offer drawing materials for sketching plans. Encourage collaboration. Invite children to design and work together in teams or small groups. Adjust the activity to suit the age of your children.

Simple Machines

Wheel and Axle - car, bicycle, bus, wheelbarrow, wagon

Inclined Plane - slide, ramps, wheelchair accessibility ramp

Lever - scissors, tweezers, tongs

Wedge - doorstop, axe, knife

Pulley - elevator, blinds, rock climbing belay system

Screw - jar lid, screw, lightbulb

Vocabulary:

simple machines, system, observe, problem, solution, machine, cause, effect, force, motion

Open-Ended Questions

- What types of simple machines will you use in your Rube Goldberg Machine?
- How the parts work together?
- Where does the problem occur?
- What solution can your team try?
- For school age - How are cascading dominoes simple machines?