

BILL NYE *SIMPLE MACHINES* VIEWING GUIDE

NAME: _____ Class: _____

1. Simple machines let us change the size and direction of forces.
2. When Bill pulled down on the rope running to the pulley, which direction did the Crate of Science go? up
3. What type of simple machine was Bill's bottle-launching catapult? lever
4. The part of a lever around which it pivots is called the fulcrum
5. When the kids pushed down on the spoon bowl, which direction did the ping pong ball go?
up
6. Bill demonstrated that a bunch of levers pivoting around one fulcrum is a wheel and axel.
7. Gears are wheels with teeth.
8. A staircase is a modified ramp, or inclined plane that allows you to easily achieve height, but you must walk a longer distance.
9. Why didn't the string break when the boy pulled the book up the ramp?
it needed less force
10. A spiral staircase is a lot like a screw.
11. A screw is a inclined plane wrapped around a rod.
12. The distance between the threads on a screw is called the pitch.
13. A prosthesis is an artificial limb.
14. A crane uses pulleys to lift heavy loads.
15. With a pulley system, as in the tree fort the children were building, you use more rope (distance) but less force/effort to lift a load.
16. A sailboat uses pulleys to raise the sails.
17. Who won the Tour de Science '93? Bill Nye
18. Name two compound machines (complex machines made up of more than one simple machine) appearing in the music video. backhoe bike bulldozer wheelbarrow