

Name _____

D. Activity Guide

Note: If you see * that means do whatever the directions are and have a teacher, parent, chaperone, or explainer check and initial that you did it.**

Go to the “Can you lift 100 pounds” exhibit.

1. **Try each rope.** Which is the easiest rope to use to lift 100 lbs. ? _____
a. yellow b. red c. Blue d. Green
2. The yellow rope/pulley setup is the toughest to use. True/False. _____
3. How much force do you need to lift the red rope/pulley setup? _____
a. 80 lbs. b. 25 pounds c. 50 lbs. d. 20 tons
4. If you had a lot of pulleys, strong rope, and someone who knows how to set up the pulleys, do you think it possible that you could lift a piano? Yes/no _____

Find the “Scope on a Rope” display

1. How many times can the scope on the right magnify? _____
a. 10times b. 30 times c. 500 times
2. Can you see atoms with either of the scopes? Yes/No _____
3. Look at a piece of clothing with either scope. Describe what you see to an adult.

Go to the “Kinetic Energy machine”

1. **Push the button.** Watch the ball go up the chain. Is the ball on the way up gathering (a. potential or b. kinetic) energy ? _____
2. **Turn the red crank counter- clockwise(to the left).** What happens? A. The blue ball is shot like a bullet b. The blue ball spirals up the screw shaped wire c. The red balls bounces. _____
3. Which kind of energy is energy in motion? a. potential b. kinetic
4. Change the position of one of the levers. Do not flip them back and forth. Observe how the path of the ball changes. *** _____ Try with each of the levers.

