Review of Simple Machines and Force

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Understanding Mechanical Advantage

Name: _____ Date: _____

Answer the following questions based on the lesson about simple machines and force interactions.

1. What is mechanical advantage?

- **A.** The effort needed to lift an object
- **B.** The increase in force provided by a machine
- **C.** The speed of a moving object

2. How do simple machines help reduce the required force?

3. A ___ is a simple machine that can lift heavy objects by using a rope and a wheel.

4. Lever systems can help reduce the amount of force needed to lift an object.

◯ True ◯ False

5. Which of the following is NOT a simple machine?

- **A.** Lever
- **B.** Wheel and axle
- **C.** Car

6. Where do you see simple machines in everyday life?

7. Simple machines multiply human mechanical ___ to help complete tasks more easily.

8. Two people working together is better than one according to Ecclesiastes 4:9.

◯ True ◯ False

9. How do machines change the direction of force?

- **A.** By making it easier to push
- **B.** By allowing force to be applied in a different direction
- **C.** By increasing the force needed

10. How might simple machines help people with physical limitations?

Answer Key

1. The increase in force provided by a machine 2. Simple machines allow us to use less force by changing the direction or magnitude of the force applied. This makes it easier to lift or move heavy objects. 3. pulley 4. True 5. Car 6. I see levers when I use a seesaw at the park and pulleys when I see flagpoles. These machines help make lifting easier. 7. effort 8. True 9. By allowing force

to be applied in a different direction 10. Simple machines can provide assistance to those with physical limitations by requiring less force to complete tasks, allowing them to lift or move objects more easily without straining themselves.