**Wednesday October 22, 2014**

**I can explain how energy and work are related.**

**Section: What Is Energy?**

**ENERGY AND WORK: WORKING TOGETHER**

**\_\_\_\_\_\_ 1.**What is the ability to do work called?

**a.** movement **b.** energy

**c.** power **d.** force

**2.** Work is a transfer of .

**3.** How is energy transferred when one object does work on another?

**4.** What units are used to express this energy transfer?

**KINETIC ENERGY**

**\_\_\_\_\_\_ 5.** Which of the following is the energy of motion?

**a.** potential energy **b.** mechanical energy

**c.** kinetic energy **d.** gravitational energy

**\_\_\_\_\_\_ 6.** In the formula for kinetic energy, what does the *m* stand for?

**a.** more **b.** moving

**c.** mass **d.** meter

**7.** How does increasing mass affect kinetic energy?

**8.** Why are car crashes more dangerous at higher speeds than at lower speeds?

**9.** The energy an object has because of its position is called energy.

**10.** When you lift an object, energy is transferred to the object, which gives the object .

**11.** The amount of gravitational potential energy that an object has depends on its weight and .

**12.** What formula is used to calculate gravitational potential energy?

**13.** The amount of force that must be used on an object to lift it is

.

**14.** What is an object’s height a measure of?

**MECHANICAL ENERGY**

\_\_\_\_\_\_**15.** Which of the following types of energy equals the total energy of motion and position?

**a.** mechanical energy **b.** kinetic energy

**c.** potential energy **d.** moving energy

**16.** What is the formula used to find mechanical energy?

**17.** The juggler moves the pin with his hand and gives energy to the pin.

**18.** As the juggler’s pin leaves his hand, the pin’s kinetic energy begins to change to energy.

**19.** How can you tell that the kinetic energy is decreasing as the juggler’s pin rises?