

## 8.2.1 - INTERVENTION- KINETIC ENERGY

Directions – Complete all of the following activities to help you review information about kinetic energy.

### PART 1 - KINETIC ENERGY VIDEO

Go to the following website and answer the following questions while you watch the video about kinetic energy.

<https://www.youtube.com/watch?v=zDcf7eEaPOM&t=184s>

1. What is kinetic energy?
2. Does an object that is rotating have kinetic energy?
3. What are 2 things objects need to have kinetic energy?
4. What unit is used to measure kinetic energy?

### PART 2 - FINDING KINETIC ENERGY

The formula for kinetic energy is  $KE = (\text{mass} \times \text{velocity}^2) \times 0.5$ . Use this equation to find kinetic energy for each of the following.

5. How much kinetic energy would a bowling ball have with a mass of 10 and a velocity of 2 (remember to square the velocity)? \_\_\_\_\_
6. How much kinetic energy would an eagle have with a mass of 5 and a velocity of 3? \_\_\_\_\_
7. How much kinetic energy would a truck have with a mass of 25 and a velocity of 5? \_\_\_\_\_
8. How much kinetic energy would a rabbit have with a mass of 3 and a velocity of 5? \_\_\_\_\_

### PART 3 - EXAMPLES OF KINETIC ENERGY

Go to the following website and choose 3 examples of kinetic energy. For each example, you need to include the following:

[http://www.softschools.com/examples/science/kinetic\\_energy\\_examples/4/](http://www.softschools.com/examples/science/kinetic_energy_examples/4/)

- a. A neatly colored picture of the example
- b. A basic description of how it is showing kinetic energy

Kinetic Energy Example #1

Kinetic Energy Example #2

Kinetic Energy Example #3

Description

Description

Description

## **PART 4 - KINETIC ENERGY FACTS**

Go to the following website to fill in the missing information.

[http://www.softschools.com/facts/energy/kinetic\\_energy\\_facts/394/](http://www.softschools.com/facts/energy/kinetic_energy_facts/394/)

- An \_\_\_\_\_ keeps the same amount of kinetic \_\_\_\_\_ unless it speeds \_\_\_\_\_ or slows \_\_\_\_\_.
- Kinetic energy can be \_\_\_\_\_ for any moving object as long as the objects' \_\_\_\_\_ and \_\_\_\_\_ are known.
- The \_\_\_\_\_ used when measuring kinetic energy is called a \_\_\_\_\_.
- Kinetic energy can \_\_\_\_\_ in any direction whether up and \_\_\_\_\_ or left to \_\_\_\_\_.
- When an objects' mass \_\_\_\_\_, its kinetic \_\_\_\_\_ also doubles.
- When an objects' \_\_\_\_\_ doubles, its kinetic energy \_\_\_\_\_.
- The \_\_\_\_\_ an object moves, the \_\_\_\_\_ kinetic \_\_\_\_\_ it has.
- When an object \_\_\_\_\_ with another object, it \_\_\_\_\_ its kinetic energy to the other object.
- As a car on a roller coaster goes \_\_\_\_\_ hill, it \_\_\_\_\_ kinetic \_\_\_\_\_.
- In order for an object to \_\_\_\_\_ kinetic energy, \_\_\_\_\_ has to be done to the object.
- The word kinetic comes from the \_\_\_\_\_ word kinesis which means \_\_\_\_\_.
- Although the concept of kinetic energy dates back to the days of Aristotle, Lord \_\_\_\_\_ is given the credit for first using the term around the year \_\_\_\_\_.
- Most kinetic energy begins as a \_\_\_\_\_ kind of energy and is \_\_\_\_\_.
- There are two main types of kinetic energy: \_\_\_\_\_ and \_\_\_\_\_.
- \_\_\_\_\_ kinetic energy depends on \_\_\_\_\_ through \_\_\_\_\_ and rotational kinetic energy depends on \_\_\_\_\_ centered on an \_\_\_\_\_.