

Name: _____

INTERVENTION 8.2.3 ENERGY TRANSFER

1. What is the definition of friction? _____

Draw and label a colored picture of something that has A LOT of friction.

Draw and label a colored picture of something that has LITTLE friction.

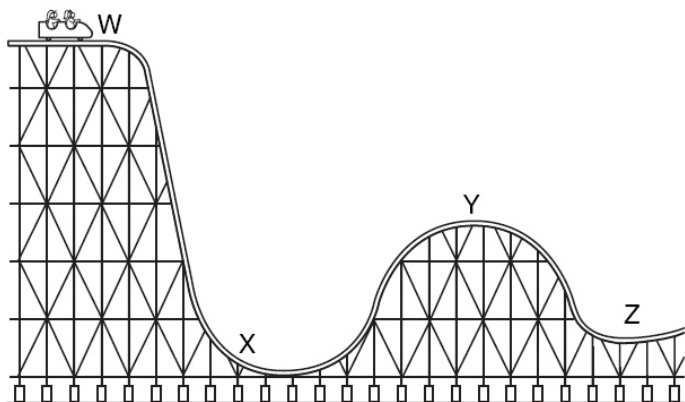
2. What is the definition of kinetic energy? _____

3. What is the definition of potential energy? _____

Draw and label a colored picture of something that has A LOT of kinetic energy.

Draw and label a colored picture of something that has LITTLE kinetic energy.

4. What is the definition of Law of Conservation of energy? _____



5. What happens to the kinetic energy of the cart from:

a. $W \rightarrow X$

b. $X \rightarrow Y$

c. $Y \rightarrow Z$

(hint: increase/decrease)

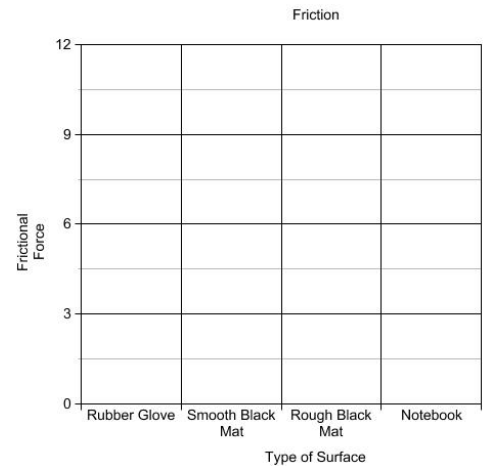
6. Using the data table below, create a bar graph of the frictional force for the different surfaces.

Then, answer the questions below.

Type of Surface	Frictional Force (N)
Rubber Glove	6.8
Smooth Black Mat	8.1
Rough Black Mat	12.2
Notebook	3.9

a. Which surface has the MOST friction?

b. Which surface has the LEAST friction?



7. Complete the table below by identifying the simple machine that matches the definition and drawing a colored picture of the simple machine.

Word bank: screw, lever, pulley, wheel & axle, wedge, inclined plane

Simple Machine	Definition	Picture
	A simple machine made up of a slanted surface	
	A simple machine made up of two inclined planes	
	A simple machine made up of an inclined plane wrapped around a post	
	A simple machine made up of a stiff bar that moves freely on a fixed point	
	A simple machine made up of two cylinders that turn on the same axis	
	A simple machine made up of a rope fitted around the rim of a fixed wheel.	

8. In this diagram of a Rube Goldberg Machine, explain THREE energy transfers from kinetic to potential or potential to kinetic.

