

Read each of the following statements and identify them as having to do with kinetic energy (KE), potential energy (PE) or both, and explain your reasoning.

KE, PE or Both	Statement:	Reasoning: What ideas do you have to support your answer?
	1. If an object is at rest, it certainly does NOT possess this form of energy.	
	2. Depends upon object mass and object height.	
	3. The energy an object possesses due to its motion.	
	4. The amount is expressed using the unit joule (abbreviated J).	
	5. The energy stored in an object due to its position (or height).	
	6. The amount depends upon the arbitrarily assigned zero level.	
	7. Depends upon object mass and object speed.	
	8. If an object is at rest on the ground (zero height), it certainly does NOT possess this form of energy.	

### Bell Ringers based on Misconceptions

Misconceptions:

- Energy is consumed/things “use up” energy (even on a roller coaster, the object will tend to slow down, but not because energy is consumed)
- An object at rest has no energy
- Definition of work (example question might be a waiter carrying a tray, but no work is done)
- Distance vs. displacement (how far an object on a track has traveled vs. vertical displacement in terms of how much kinetic or potential energy an object has)

For each of the following bell ringer questions, students should justify their answers

1. A student sets her textbook on the edge of a table. Does the book have energy?
  - a. What ideas do you have to support your answer?
2. A toy car is pushed down a ramp. Does its energy increase, decrease, or stay the same?
  - a. What ideas do you have to support your answer?
3. A waiter is carrying a of food to a table on the other side of a room. How much work is he doing on the tray?
  - a. What ideas do you have to support your answer?
4. A delivery man travels 15 miles east to make a pizza delivery. After returning to Pizza Hut, what is his displacement of travel?
  - a. What ideas do you have to support your answer?