

Checkout Questions

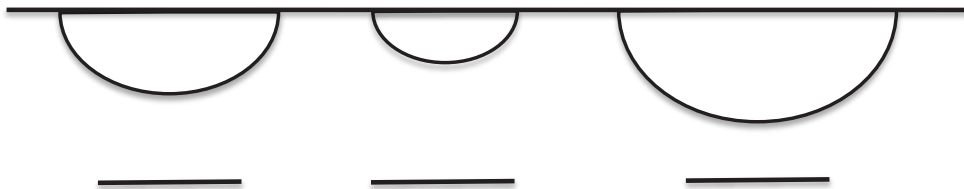
Lab 13. Kinetic Energy

How Do the Mass and Velocity of an Object Affect Its Kinetic Energy?

1. Malik is throwing rocks into a lake. He throws a 1 kg rock that travels 5 m/s immediately after it left his hand. He also throws a 0.5 kg rock that travels 8 m/s immediately after it left his hand. Which rock did Malik throw the hardest?

Explain your answer. How do you know which rock Malik threw the hardest?

2. Jerilyn dropped three spheres with masses of 0.25 kg, 0.75 kg, and 1 kg from equal height into a tub of flour. After dropping the spheres, her lab partner, Evan, put the spheres away before she recorded her data. Jerilyn and Evan are now unsure which sphere created which crater. A side view of the craters is shown below. Use what you know about mass, velocity, and kinetic energy to select which sphere created each crater.



Explain your answer. How do you know which sphere made which crater? Use examples from your investigation about kinetic energy to support your answer.

3. Thinking creatively in science will lead to work that is less scientific and valid.

- a. I agree with this statement.
- b. I disagree with this statement.

Explain your answer, using an example from your investigation about kinetic energy.

4. In science, theories and laws describe the same thing.

- a. I agree with this statement.
- b. I disagree with this statement.

Explain your answer, using an example from your investigation about kinetic energy.

