

Introducing Inertia

What You Need

• Vocabulary Cards

- Plastic cup
- 3 x 5 card
- Quarter
- Six checkers

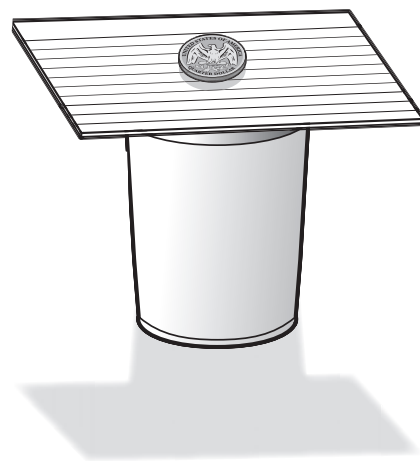
Directions

Hold up the vocabulary card with the word “inertia,” and discuss the definition. You may want to refer to the *Newton’s First Law* reproducible and the “law of inertia.” Tell students that you are going to do two activities to demonstrate inertia. These activities can be demonstrated for the whole class at once, or you can divide students into groups and let them do the activity at a science center. After completing the inertia activities, write what the class learned about inertia on the KWL Chart.

A Curious Coin

Directions

1. Set the plastic cup on a flat surface and place the index card on top.
2. Position the quarter in the center of the index card.
3. Use your fingers to flick the card so it shoots off the cup.
(Tell students to keep their eyes on the quarter!)
 - What happened to the quarter when the card slid out from underneath it?
 - How is this related to inertia?



Explain to students that the quarter dropped into the cup when the card slid out from underneath it. This is because the quarter has inertia. The index card was set in motion, but the quarter was at rest. Since there was no force acting on the quarter, it stayed at rest and dropped into the cup.

Super Stack

Directions

1. On a smooth, flat surface, make a stack with five checkers on top of each other.
2. Place the last checker a few inches away from the stack.
3. Use your fingers to give a hard flick to the single checker in the direction of the stack.
 - What happened to the single checker and the stack of checkers?
 - How is this related to inertia?

Discuss how the single checker was set in motion, and stayed in motion because of its inertia. This is why the single checker pushed the stack over. Eventually, the friction and resistance made all the checkers come to a stop.

