Kinetic Energy Lab

Procedure A - Properties Exploration:

Play with the balls. Examine them. Observe how they behave and how they interact with each other when they collide.

Questions:

a. What are the similarities and differences between the balls?

b. Compare how the balls behave when you drop them from a certain height?

c. What happens when the balls collide with each other? Do you see any patterns in what happens when they collide?

Procedure B - Kinetic Energy:

1) An object has kinetic energy when it is in motion. The purpose of this exercise is to explore what factors about an object can increase its kinetic energy. This can be achieved by colliding the balls together and into another object.
2) Roll each of the different balls toward an object and observe their effect on the object. The further the object moves the more kinetic energy the ball had when it hit the object.

(over)

Questions:

a. What happens if you roll balls of different masses, but at the same speed toward the object?

b. Which ball, of the balls from the previous question, has more kinetic energy? How do you know?

c. How can you get a ball of lower mass to have the same effect on the object as a ball of larger mass?

d. What happens when you collide two of the same balls at the same speed?

e. What happens when you collide two of the same balls with one going much faster than the other?

f. What happens when you collide two balls of roughly the same size but different masses at the same speed or different speeds?