Activity 1

Can You Explain?

Have you ever seen a wrecking ball knocking down a building? A wrecking ball is usually a very heavy steel ball that swings on a cable. It helps construction workers knock down walls or parts of buildings. What other objects have you observed that collide or crash together?

What happens to objects when they collide with another object?

Life Skills **I can share ideas I am not yet sure about.**

Activity 2

Ask Questions Like a Scientist

Collision

Have you ever hit a ball with a bat or a stick? Imagine you are watching a cricket match. Cricket might be an unfamiliar sport to you. It is a popular game all over the world. In cricket, a player uses a wooden bat to hit a ball. The cricket player stands with a bat and moves it as the ball approaches at high **speed**. The bat makes contact with the ball.

Discuss with Your Class

Imagine that you are watching a player hit a ball with a bat. What happens to the energy from the moving bat to the moving ball? What do your senses observe? What would the player feel? What do you hear? What do you see?

After your discussion, **record** your answers.

Life Skills **I can analyze a situation.**

Activity 3

Observe Like a Scientist

Watching Objects Collide

Have you ever made toy cars crash into each other? Think about happened when they crashed. What safety equipment keeps us safe in our cars? **Read** the text, **write** three questions you have, and **share** them with the class.

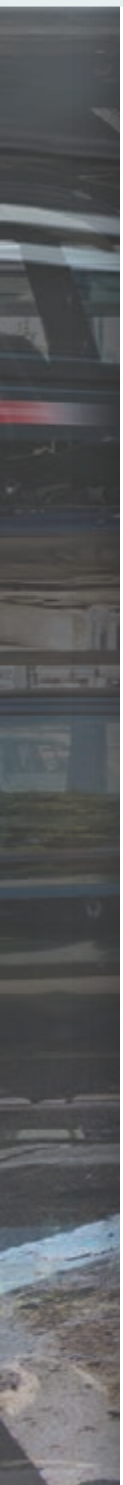
What happens to your body when you ride in a car and the car stops suddenly? Your body continues to move forward. Objects that are in motion stay in motion until something stops them. When the car stops suddenly, what keeps you in your place? Seatbelts are used in cars to keep your body from moving forward. Seatbelts have saved thousands of lives.

Airbags slow the speed of a person moving forward. An airbag is like a big pillow to land against during a crash. Airbags inflate automatically when sensors in the car detect a crash. The purpose of an airbag is to absorb the energy of the car's impact. Airbags are made of thin, nylon material folded into the steering wheel, seat, dashboard, or door. A sensor tells the airbag to inflate. The airbag fills with a gas to provide a soft cushion. An airbag has to deflate almost as fast as it inflates. Airbags have holes, or vents, to allow the bag to deflate so you can get out of the car.

Every year, there are many accidents in which a train hits a car that may be stuck on the train tracks. Trains are much larger than cars. Trains can travel at a high speed. The higher the force when objects collide, the more dangerous it is. Could airbags on the front of a train help protect people in a car?

Life Skills **I can identify problems.**

be stuck on the train tracks. Trains are much larger than cars. Trains can travel at a high speed. The higher the force when objects collide, the more dangerous it is. Could airbags on the front of a train help protect people in a car?



I wonder . . .

I wonder . . .

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