

Unit 2 - Investigation 1

Activity 1.2 - What happens to energy when objects collide?

Part 1

You have started to develop a definition of energy. Energy is a difficult idea to define, but it useful for explaining changes. In this activity, you will investigate what happens to energy during changes.

1. What factors might affect the amount of kinetic energy an object has?

VIDEO LINK: Watch the demonstration video a few times & WRITE YOUR OBSERVATIONS in the table below:

Observations of motion before collision 1		Observations of motion after collision 1	
Marble 1	Marble 2	Marble 1	Marble 2

Observations of motion before collision 2		Observations of motion after collision 2	
Marble 1	Marble 2	Marble 1	Marble 2

Data analysis (mass):

Lighter marble = _____ flour spread out

Heavier marble = _____ flour spread out

Data analysis (speed):

Slower marble = _____ flour spread out

Faster marble = _____ flour spread out

2. Why did the heavier ball cause more flour to spread out? *Be sure to include the relationship between **amount of mass** and **amount of kinetic energy** in your explanation.*

3. Why did the ball that was moving faster cause more flour to spread out? *Be sure to include the relationship between **speed** and **amount of kinetic energy** in your explanation.*