



Explain: Teacher Guide

Motion Module

Use this guide to facilitate a conversation of the embedded discussion points within the Motion Explain.

This teacher support document can be completed in conjunction with the online Explain.

Why Explain?

The purpose of the Explain phase is to provide a clear and concise description of the skill, concept, or process covered, including pertinent vocabulary and examples. Additionally, it is during this phase that students begin connecting their prior knowledge to the concept covered. As such, opportunities should be provided for students to use their own words to communicate understanding.

In this activity, students learn about various types of motion, how motion is measured and the factors that influence motion as they watch a detailed lesson consisting of animation and real pictures and video clips. Students are also provided with the opportunity to “Show what you know!” after each segment of the Explain as they answer a question and are then given “Think about it...” questions to elicit further thought and conversation regarding the content covered.

Discussion Points: How Things Move

1. Think about how things move from one place to another. What are the different ways to describe motion?

Correct responses should indicate that you can describe the motion of an object from one place to another by a variety of means based on what they are. Objects can zig zag, slither, slide, roll, circle, turn, go straight, go sideways, or go backwards, to name a few.

Discussion Points: Measuring Motion

1. Think about how motion can be measured. What are some of the tools you can use to measure motion?

Correct responses may include a stopwatch, a ruler, a measuring tape, a pedometer, or an odometer.

2. What are some things you could do to go the same distance as someone else in a shorter time?

Correct responses should include that students can take bigger steps or walk faster than the other person.

Discussion Points: Friction

1. Think about how things move from one place to another. Why do some things move more easily than others?



Correct responses should include a description of the objects and possible reasons why some objects move more easily than others, such as it depends on how heavy an object is or on the size of an object. The surface the objects are traveling on may also be mentioned as a factor.

2. How could you slow your motion down?

Correct responses should indicate that motion can be slowed by changing the force used to create the motion or by changing the surface students are moving across or through.

Note these examples:

- *Scooting from a tile surface onto a carpeted surface would slow motion.*
- *Running with the same force in water creates a slower motion than running through air.*
- *Walking with less force than skipping would slow motion.*