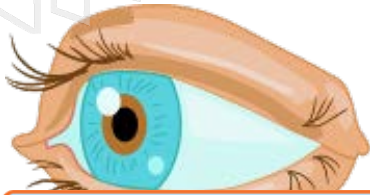


FORCES AND MOTION: HOW THINGS MOVE

Motion is the process of an object changing place or position.

Position refers to an object's location. The position of an object all depends on how a person is looking at the object and what it is being compared to, which is known as an object's relative position.



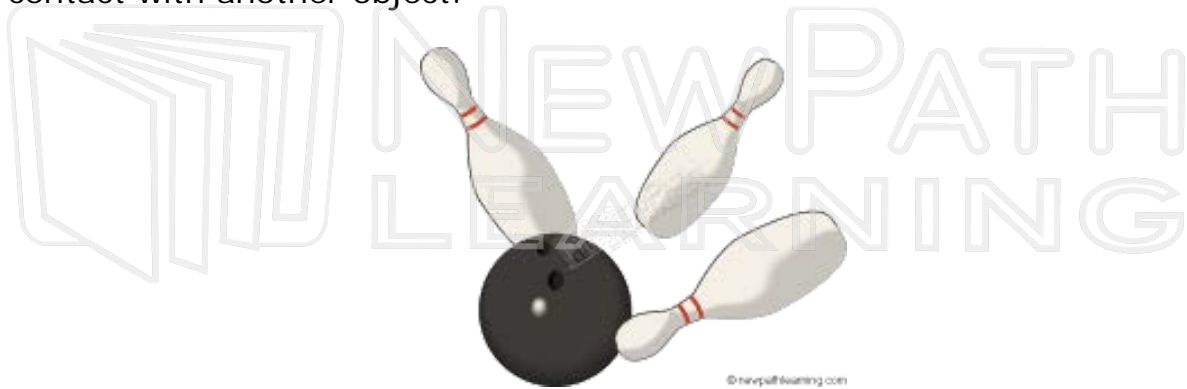
PREVIEW

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Speed is how fast an object is moving or changing its position. When an object changes its position, it always changes position at a certain rate of speed. **Speed** can be at a fast rate or it can be at a slow rate. A **constant speed** is when an object moves at the same speed the whole time it moves. An object moving at a **variable speed** means that it changes its speed as it is moving.

Lesson Checkpoint: What is speed?

A **force** is a push or pull upon an object that causes it to change speed or direction. A **force** involves two or more object interacting with each other. **Contact forces** are forces that occur when you physically touch or make contact with another object.



Lesson Checkpoint: What is a force?

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The preview box contains a row of colorful icons representing various subjects: a cube, a microscope, a protractor, a globe, a chemistry flask, a globe, a DNA helix, a pie chart, a bar graph, and a calculator. Below the icons is a row of diverse cartoon children. The word 'PREVIEW' is written in large, bold letters. Below it, the text reads: 'Please [Sign In](#) or [Sign Up](#) to download the printable version of this worksheet'.



Friction is a force that works in the opposite direction of an object that is moving. The type of surface you are pushing an object on has a lot to do with the amount a friction against the object. If you are pushing a box on grass, the grass would apply more friction than if you were pushing the box on a smooth surface.

Lesson Checkpoint: What is friction?

Forces, such as pushes, pulls, and friction, can change the motion and speed of an object.

Magnetism is a force that does not need direct contact with an object in order to make that object change its position. **Magnetism** is the property of attracting certain metals. Magnets attract metals such as iron and steel. A magnet can move a steel paper clip with its magnetic force that pulls the steel paper clip towards the magnet.



PREVIEW

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Lesson Checkpoint: What causes us to remain on the ground instead of floating away?