



What are three words you can use to describe a moving object?

What are four motions happening around you right now?



What is required in order for something to move?

What are some examples of a person providing the force needed to move an object?



What are some examples of nature providing the force needed to move an object?

Could two different sources work together to create a single force? If so, how?



Who was Isaac Newton, and what is he best known for?

How is a scientific law similar to and different from a law written by a government?



Force and Motion :::: Newton's First Law of Motion

What do Isaac Newton's laws of motion explain?

Science a-z.com

(remembering)

Force and Motion :::: Newton's First Law of Motion

How does an object at rest behave when no force acts upon it?

Science a-z.com

(understanding)



Force and Motion :::: Newton's First Law of Motion

If a bird is flying south at 30 miles per hour, what could make it fly west at 50 miles per hour?

Science a-z.com

(applying)

Force and Motion :::: Newton's First Law of Motion

Why is it sometimes hard to get out of bed in the morning?

Science a-z.com

(analyzing)



Force and Motion :::: Newton's Second Law of Motion

What two factors does an object's motion depend on?

Science a-z.com

(remembering)

Force and Motion :::: Newton's Second Law of Motion

Would it require more force to stop a falling piano or a falling basketball? Why?

Science a-z.com

(understanding)



Force and Motion :::: Newton's Second Law of Motion

If a bus has to be pushed to a gas station, should everyone get out and push? Why or why not?

Science a-z.com

(evaluating)

Force and Motion :::: Newton's Second Law of Motion

Why is it more difficult to ride a bicycle uphill than downhill?

Science a-z.com

(analyzing)



Force and Motion ::|·

Newton's Second Law of Motion

What is the difference between *speed* and *velocity*?

Science a-z.com

(understanding)

Force and Motion ::|·

Newton's Third Law of Motion

How would you demonstrate Newton's third law of motion using a ball?

Science a-z.com

(applying)



Force and Motion ::|·

Newton's Third Law of Motion

How would you draw a pair of equal and opposite forces?

Science a-z.com

(creating)

Force and Motion ::|·

Newton's Third Law of Motion

Which law of motion was Newton's most important discovery about motion? Why?

Science a-z.com

(evaluating)



Force and Motion ::|·

Types of Forces

What are three important types of forces?

Science a-z.com

(remembering)

Force and Motion ::|·

Gravity

Which two factors affect the gravitational pull between two objects?

Science a-z.com

(remembering)



Force and Motion ::|·

Gravity

Why does the Moon stay in orbit around Earth instead of being pulled into orbit around the Sun?

Science a-z.com

(creating)

Force and Motion ::|·

Gravity

How is a bird able to overcome gravity and fly?

Science a-z.com

(applying)



Force and Motion :::

Gravity

What is the difference between *mass* and *weight*?

Science a-z.com

(understanding)

Force and Motion :::

Friction

What are two ways in which the force of friction affects moving objects?

Science a-z.com

(understanding)



Force and Motion :::

Friction

What are three kinds of friction?

Science a-z.com

(remembering)

Force and Motion :::

Friction

Would you rather roller skate on an ice rink, on grass, or on a paved street? Why?

Science a-z.com

(evaluating)



Force and Motion :::

Friction

Why is it harder to drive a car that has flat tires than inflated tires?

Science a-z.com

(applying)

Force and Motion :::

Friction

How would you design a faster paper airplane, a faster skateboard, or a faster surfboard?

Science a-z.com

(creating)



Force and Motion :

Magnetism

Where is a magnet's force strongest?

Science a-z.com

(remembering)

Force and Motion :::

Magnetism

Why does a handheld magnet only pick up paper clips when it gets close to them?

Science a-z.com

(understanding)



Force and Motion ::::

Magnetism

How are magnets and electricity related?

Science a-z.com

(understanding)

Force and Motion ::::

Magnetism

How are magnetism and gravity similar, and how are they different?

Science a-z.com

(analyzing)



Force and Motion ::::

Force, Motion, and Work

If you were to push on an elephant, how would you know if you had actually done any work?

Science a-z.com

(understanding)

Force and Motion ::::

Force, Motion, and Work

What are two measurements you must know to determine how much work you've done?

Science a-z.com

(remembering)



Force and Motion ::::

Energy

How are energy and work related?

Science a-z.com

(understanding)

Force and Motion ::::

Potential and Kinetic Energy

What are two examples of potential energy in your home?

Science a-z.com

(applying)



Force and Motion :::: Potential and Kinetic Energy

What are two examples of kinetic energy you've seen today?

Science a-z.com

(applying)

Force and Motion :::: Potential and Kinetic Energy

When you place a battery in a toy, does the battery have kinetic or potential energy? Why?

Science a-z.com

(understanding)



Force and Motion :: Potential and Kinetic Energy

Why do marathon runners and bicyclists eat snacks during their races?

Science a-z.com (analyzing)

Force and Motion :: Energy Transfer

How is energy transferred in the game of bowling?

Science a-z.com (applying)



Force and Motion :: Energy Transfer

When a log burns, what is its potential energy converted into?

Science a-z.com (applying)

Force and Motion :: Energy Transfer

What is an example of electrical energy converting into sound, light, and heat energy all at once?

Science a-z.com (creating)



Force and Motion :: Conclusion

Do you think you would enjoy being a scientist who studies the motion of objects? Why or why not?

Science a-z.com (evaluating)

Force and Motion

Science a-z.com



Force and Motion

Science a-z.com

Force and Motion

Science a-z.com