

Read the poem and story “**Sir Isaac Newton’s Laws of Motion**”. After carefully reading this selection, answer the questions that follow. As you read the poem and story, you may come across words you do not know. Use the science glossary to find their meaning.

Sir Isaac Newton’s Laws of Motion

I am Sir Isaac Newton,
And I want you to know,
I discovered the Laws of Motion,
They are what make things go.

Inertia! Inertia!
Listen to what I say,
It’s not very hard,
Come along and play.

A ball will not move,
Unless a force is applied,
A push or a pull,
Will roll it on by.

The ball will keep going,
It will roll down the street,
To stop it from rolling,
Use your hands or your feet.

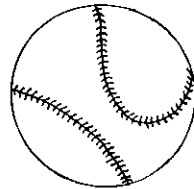
How far did the ball go?
A measuring tape will tell.
How long did it take?
A stopwatch will do well.

An object may move,
In a very straight line,
Or change its direction,
That would be fine.

Speed up or slow down,
Remain at a constant speed,
For an object’s movement to change,
A force it definitely needs.

Why are these laws,
Important you say?
You use them everyday,
In work and at play.

When you walk or run,
Or a ball you throw,
You use the Laws of Motion,
Now you know.



We use Newton’s Laws of Motion every single day. We use force to get us out of bed. We use force when we brush our teeth. We use force when we wash our hair. Every time we move, we apply one or more of Newton’s Laws of Motion.

We need to apply a push or a pull when we play ball games, skate, or ride our bikes. When we throw a ball into the air, gravity is the force that brings the ball down to the ground. Friction is the force that slows down an object or causes it to stop.



The final motion of an object depends on the sum of all the forces acting on it. Force is measured in *Newtons* (N). For example: Suppose you and your brother push a wagon up a hill. You push with a force of 40 N. Your brother pushes with a force of 25 N. The net force is 65 N. The net force is the total of all the forces acting on the wagon. When there is net force acting on an object, the force is unbalanced. An unbalanced force will change the object's motion.



Newton's First Law of Motion states why it is necessary for you to wear a seat belt when you are traveling in a car. When the car moves, so do you. According to Newton's First Law of Motion, an object will keep on moving until something stops it. As long as the car is moving, you will keep moving. When the car comes to a sudden stop, you will keep on moving unless the seat belt stops you. So every time you get in the car, remember Sir Isaac Newton's First Law of Motion and buckle up!



Seat Belt Needed!

Sir Isaac Newton's Laws of Motion

Follow Up Questions

1. Who discovered the Laws of Motion?

- (A) Plato
- (B) Galileo
- (C) Albert Einstein
- (D) Sir Isaac Newton

2. What must be applied in order to stop something from moving?

- (A) rotation
- (B) force
- (C) motion
- (D) gravity

3. Janet was in the school bus on her way home. She did not put her seat belt on. The bus came to a sudden stop. Explain what happened to Janet.

READ
INQUIRE
EXPLAIN



READ
INQUIRE
EXPLAIN

4. Think about your favorite sport that uses a ball (i.e. football, baseball). Knowing what you do about Newton's Laws of Motion, explain how you get the ball going and how you stop it.

READ
INQUIRE
EXPLAIN

5. According to the poem, what two measuring tools do you need to determine how far and how long it takes a ball to travel a certain distance?

