

Name:

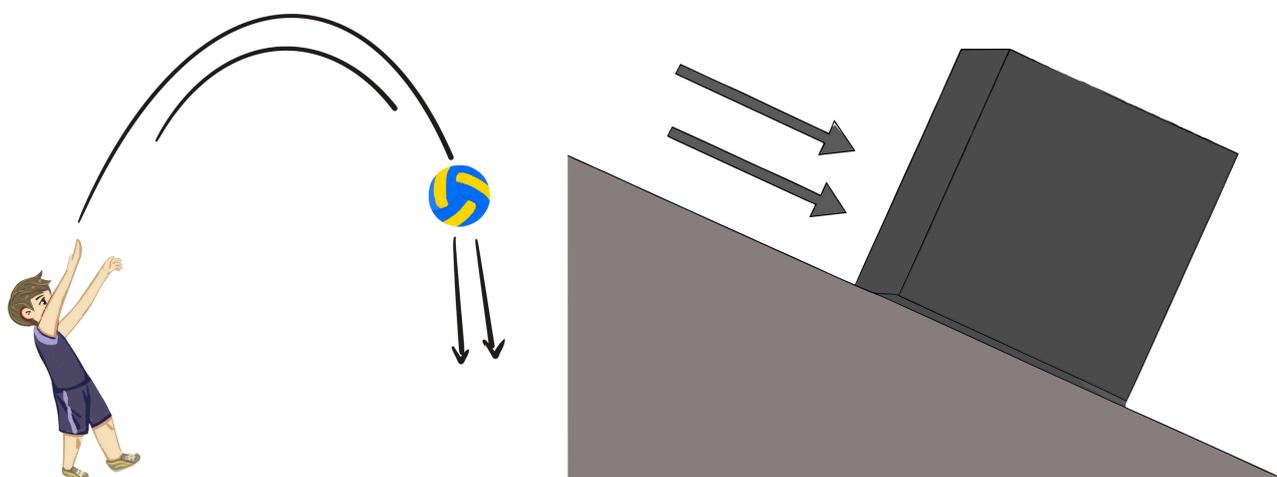
# Forces and Motion

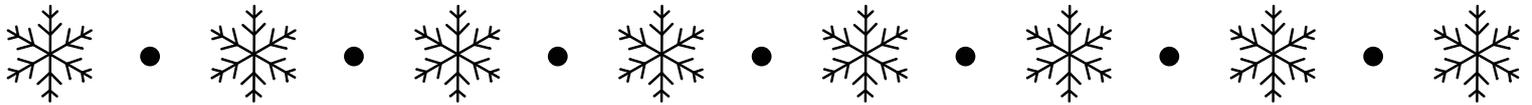
Everything in the world moves in some way, and forces are what make objects move, stop, or change direction. A force is a push or a pull that can make something start moving, stop moving, or change speed or direction. Understanding forces helps us explain why things happen the way they do in our daily lives.

There are different types of forces. A push is when you apply force to move an object away from you. For example, pushing a door to open it. A pull is when you apply force to bring an object closer to you, like pulling a rope during a game of tug-of-war. Friction is another force that slows down or stops motion when two surfaces rub against each other. Walking on a rough surface is easier than walking on ice because friction makes it harder for objects to slide. Gravity is a force that pulls objects toward the Earth. It is why things fall when you drop them and why planets stay in orbit around the Sun.

Motion is the change in an object's position over time. It can be fast or slow, straight or curved. Forces affect motion by changing the speed or direction of an object. Everyday examples of forces and motion include kicking a ball, which is a push; pulling a wagon, which is a pull; sliding a book across a table, which slows down because of friction; and dropping a pencil, which falls due to gravity.

Understanding forces and motion is important because it helps us design machines, play sports better, and stay safe in our daily activities. Scientists study forces and motion to learn how to make vehicles, buildings, and tools work more efficiently. By understanding how forces act on objects, we can predict their movement and control them in useful ways.





**Name:**

**. Multiple Choice (Choose the correct answer):**

What is a force?

- a) A type of energy
- b) A push or pull on an object
- c) A type of motion
- d) A stationary object

Which force slows down objects when surfaces rub against each other?

- a) Gravity
- b) Friction
- c) Push
- d) Pull

What does gravity do?

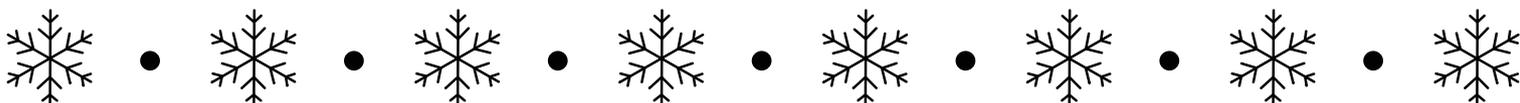
- a) Pushes objects away from Earth
- b) Pulls objects toward Earth
- c) Stops motion completely
- d) Makes objects invisible

Which of these is an example of a push force?

- a) Pulling a rope
- b) Sliding a book
- c) Kicking a ball
- d) Dropping a pencil

**B. True or False:**

- 5. Motion is the change in an object's position over time. \_\_\_\_\_
- 6. Pulling an object makes it move away from you. \_\_\_\_\_
- 7. Forces can change the speed or direction of an object. \_\_\_\_\_



**Name:**

8. Give one example of a pull force from your daily life.

→

→

9. Why does a book slide more slowly on a rough table than a smooth table?

→

→

10. What is motion?

→

→

11. How does understanding forces and motion help us in sports or games?

→

→

12. Name two forces that affect objects every day.

→

→