Forces and Motion

Grade 3

Name _____ Date _____

Remember: A **force** is a **push** (away from you) or a **pull** (toward you). Forces can make things **start**, **stop**, **speed up**, **slow down** or **change direction**.

Bigger force = bigger change. Heavier objects need more force to move.

Pushes and Pulls



Nothing moves on its own. To start moving, every object needs a **force**: a **push** or a **pull**.

A push moves something **away** from you, like pushing a swing or kicking a ball. A pull moves something **toward** you, like opening a drawer or pulling a sled.

Forces can change the **speed** of an object: a stronger push makes a ball go faster. They can change the **direction**: a hockey stick can make a puck turn. And forces can make moving things **stop**, like a goalie catching a ball.

The bigger the force, the bigger the change. The heavier the object, the more force you need to move it. That's why it is harder to push a full shopping cart than an empty one.

1. Check your understanding

Circle the best answer.

1. What is a force?

(a) A push or a pull (b) A kind of sound (c) A colour

2. Opening a drawer is a...

(a) push (b) pull (c) neither

3. Why is a full shopping cart harder to push?

(a) It is heavier. (b) It is lighter. (c) It has no wheels.

4. What can a force do to a moving object?

(a) Only make it faster (b) Change its speed or direction, or stop it (c) Nothing

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2. Push or pull?

Circle push or pull.

1	kicking a ball	push	pull
2	opening a door toward you	push	pull
3	pressing a doorbell	push	pull
4	tugging a rope	push	pull
5	throwing a paper airplane	push	pull
6	taking a book off a shelf	push	pull

3. Think like a scientist

Answer in a complete sentence.

1. **How could you make a toy car go farther across the floor?**

Answer Key

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1. Check your understanding

1. What is a force?

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2. Opening a drawer is a...

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3. Why is a full shopping cart harder to push?

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4. What can a force do to a moving object?

(a) Only make it faster (b) **Change its speed or direction, or stop it** (c) Nothing

2. Push or pull?

1	kicking a ball	**push**	pull
2	opening a door toward you	push	**pull**
3	pressing a doorbell	**push**	pull
4	tugging a rope	push	**pull**
5	throwing a paper airplane	**push**	pull
6	taking a book off a shelf	push	**pull**

3. Think like a scientist

Sample answer.

1. **How could you make a toy car go farther across the floor?**
   Give it a bigger push, or use a smoother floor so less friction slows it down.