

Forces and Motion

Grade 3 • SCIENCE • Students identify how pushes, pulls, and friction can change an object's speed, direction, or motion. • Standards: 3-PS2-1, 3-PS2-2

Read each situation carefully. Then write your answer to show what happens to the object's motion.

1. Maya pushes a toy car forward on a smooth table. What happens to the car?
2. Ben pulls a wagon toward himself. Which direction does the wagon move?
3. A soccer ball is rolling across the grass. The grass creates friction. What will happen to the ball's speed?
4. Lisa pushes a book to the right across her desk. What direction does the book move?
5. A sled is sliding down a snowy hill. The child pushes on the sled to make it go faster. What happens to the sled's speed?
6. A marble is rolling on a wooden floor. The marble hits a thick carpet. What will happen to the marble when it reaches the carpet?
7. Carlos kicks a ball that is not moving. What two things change about the ball?
8. A soccer ball is rolling across the grass and slowing down. Lisa kicks the ball in the same direction it is rolling. What happens to the speed of the ball?
9. Two friends are pulling a box. One friend pulls north and the other pulls south with the same strength. What happens to the box?
10. A hockey puck slides across smooth ice and then onto rough concrete. Compare the friction on the ice and the concrete. How does this change the puck's motion?

Answer Key — Forces and Motion

For the teacher / parent. Do not distribute with the worksheet.

1. The car moves forward.
2. The wagon moves toward Ben.
3. The ball will slow down.
4. The book moves to the right.
5. The sled goes faster.
6. The marble will slow down.
7. The ball starts moving and it moves in the direction Carlos kicked it.
8. It speeds up (goes faster). (*Kicking the ball in the direction it is moving adds force, so it speeds up.*)
9. The box does not move or stays in place.
10. The concrete has more friction, so the puck slows down faster on the concrete.