

# UNIT 8

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FORCES AND MOTION

# LESSON I

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WHAT ARE FORCES

## QUESTION OF THE DAY

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Which of the following will have the **greatest** change in motion?

- A. A small force is applied to an object with a large mass.
- B. A small force is applied to an object with a small mass.
- C. A large force is applied to an object with a large mass.
- D. A large force is applied to an object with a small mass.

## QUESTION OF THE DAY

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Ralph threw a ball into the air and watched it go up for a really long time. Then it started to fall back towards him. What force caused the ball to return to the ground?

- A. Friction
- B. Gravity
- C. Motion
- D. Wind

# PUSHING & PULLING

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- Forces
  - A push or a pull that can cause change in object's motion
    - Also it can speed up or slow down an object, change the direction or stop
  - Measured with a spring scale in units called newtons
  - The larger the force the greater that change it can cause to the motion of an object/small forces cause smaller changes.

## TWO COMMON FORCES

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- Gravity is a force of attraction between two objects.
  - Increases as the mass of the object increases
  - Decreases as the distance between the object increases
- Friction is the force in the opposite motion
  - Acts between two objects that are touching
  - Can also exist between air and an moving object known as air resistance