

Name Key
 Science 7

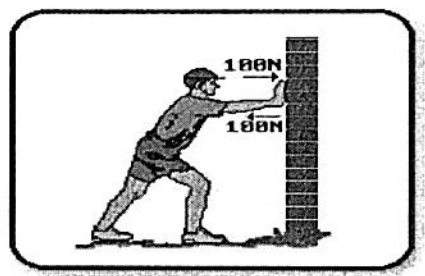
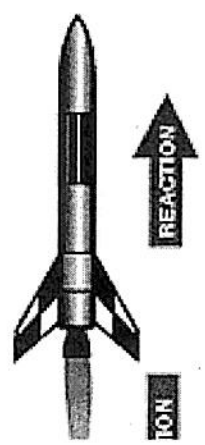
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Aim: I can analyze action and reaction forces.

Notes:

Newton's 3rd Law

- To every action, there is an equal and opposite reaction.
- When one object exerts a force on a second object, the second one exerts a force equal in size and opposite in direction.
- ex: Pogo Stick
- Describes action - reaction pairs.
- Forces always act in pairs.
- Forces are equal and opposite but act on different objects so they are not balanced and can cause a change in motion.



Which Law is It?

Scenario	Law
1. A climber pulls down on a rope causing his body to lift upward and rise up along the rope.	3
2. Two bumper cars collide into each other and each car jolts backwards.	3
3. It is much easier to carry your backpack when it is empty rather than when it's full of textbooks.	2
4. A boy is going down a slide. As he reaches the bottom, friction causes him to slow down and stop.	1
5. A basketball sits in the ball cage in the gym. It remains motionless.	1
6. When you are standing in a subway train, and the train suddenly stops, your body continues to go forward.	1

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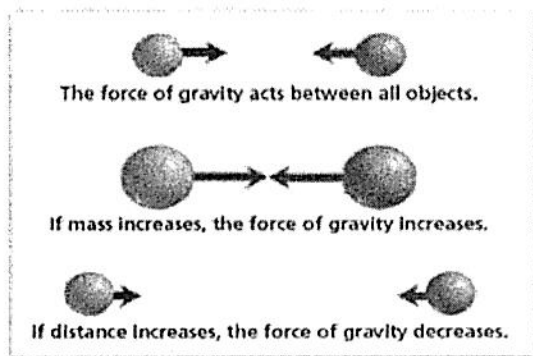
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Aim: I can explain the behavior of falling objects.

Notes:

Gravity:

- Force of attraction between two objects
- All objects exert gravitational force
- Factors that affect the gravitational attraction between objects are mass and distance.



Mass Vs. Weight

- Weight- The measure of the force of gravity on an object.
- Mass- A measurement of the amount of matter in an object.
- mass doesn't change based on location but weight does.

Falling Objects

- Near Earth's surface, gravity causes all falling objects to accelerate at 9.8 m/s^2 (Free Fall)
- This only applies to objects that are dropped.
- Objects that are thrown have a greater acceleration.

Air Resistance (Type of Fluid Friction)

- The force air exerts on a moving object.
- Force acts in the opposite direction of that of the object's motion.
- Air resistance pushes up as gravity pulls down.