



BAL BHARATI PUBLIC SCHOOL, PITAMPURA, DELHI – 110034

SUBJECT: - PHYSICS

CLASS: - VIII

TOPIC: - FORCE AND PRESSURE

GUIDELINES:

Dear Students,

The lesson is divided into three sub parts. Kindly go through the sub parts and complete the assignment that follows.

SUBTOPICS:

1. Force
 - a. Force - a push or a pull
 - b. Forces are due to an interaction
2. Balanced and Unbalanced forces
3. Effects of forces

LET US EXPLORE FORCE:

FORCE

FORCE is the push or pull on an object with mass that causes it to change velocity (to accelerate).

Force represents as a vector, which means it has both magnitude and direction.



Kindly refer to the link shared below for better understanding:

<https://youtu.be/IJWEtCRWGvI>

FORCES ARE DUE TO INTERACTION

Interaction involves two objects. In interaction each object acts in such a way as to have an effect on the other object.

Interaction of one object with another object results in force between two objects. At least two objects must interact with each other for a force to come into play. If there is no interaction between two objects, no force can show its effect.



Kindly refer to the link shared below for better understanding:

<https://youtu.be/PBokuQUR2rk>

BALANCED AND UNBALANCED FORCE

BALANCED FORCE- A set of forces where two forces of equal magnitude act on a body in opposite direction and the result of the force is zero, the set is known as **balanced force**. In balanced force a body continues to be in its position i.e. it may be continuously moving with the same speed and in the same direction, or it may still be in its position.



A game of tug of war with equally matched opponents is an example of balanced force.

UNBALANCED FORCE- A force where two forces acting in opposing directions on a body, are not equal in magnitude and in size, is known as **unbalanced force**. In unbalanced force, a body changes its position i.e. we can observe a moving object changing its direction, either increasing the speed or decreasing the speed; and a body at rest starts to move or vice versa.



Ball moves from one place to another after being kicked. This is an example of unbalanced force.

Kindly refer to the link shared below for better understanding:

<https://youtu.be/YyJSIclbd-s>

EFFECTS OF FORCE

- a. Force can change the state of motion.
- b. Force can change the shape of the object.
- c. Force can change the speed of an object.
- d. Force can change the direction of the object.

Kindly refer to the link shared below for better understanding:

<https://youtu.be/L9KY43hDSzI>

NOW SOLVE THE ASSIGNMENT THAT FOLLOWS

A. MULTIPLE CHOICE QUESTIONS

1. Which of these is not changed by a force acting on an object?
 - a. Direction of motion
 - b. Shape
 - c. Weight
 - d. State of rest
2. Two forces A and B act on an object in opposite direction. A is greater than B. The net force on the object is
 - a. $A+B$ in direction of A
 - b. $A-B$ in direction of A
 - c. $A+B$ in direction of B
 - d. $A-B$ in direction of B
3. Force can make the stationary object
 - a. Move

- b. Change its position
 - c. Change the speed
 - d. Change the direction
4. When you pick up a glass of water, you change
- a. Its position of rest
 - b. Speed
 - c. Direction
 - d. No change

B. State true or false?

- a. If two forces act in the same direction, then the net force acting is the sum of two forces. _____
- b. If the resultant of all the forces acting on a body is zero then the forces are called balanced force. _____

C. VERY SHORT ANSWER:

- 1. If the force is applied to a stationary object, does it always move ? Explain.
- 2. There are two equal forces acting on an object . In which direction will the object move? Do you think this information is correct to answer the question?
- 3. How can we describe force?
- 4. Enlist the effects of force.
- 5. For a force to come into play, objects must interact with each other. Justify the statement by giving examples.
- 6. A girl is pushing a box towards west. In which direction should her friend push the box so that it moves faster in the same direction?
- 7. **Specify the action(push /pull) of forces in the following :**
 - a. Plastic scale pressed between two bricks.
 - b. Squeezing a piece of lemon.
 - c. A football player taking a penalty kick.
 - d. Moving a box placed on a table.
 - e. Opening a drawer.
- 8. List the effects of force in the following situation:
 - a. A rubber band suspended from a nail fixed on a wall.
 - b. A lump of dough on a plate.

LINK OF TEXTBOOK

http://ncertbooks.prashanthellina.com/8_Science.html

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