



CLASS VIII: Science
Chapter 8: Force and Pressure

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Q1. Give two examples of each of situation in which you push or pull to change the state of motion of an objects

Ans. (i) We push a bicycle to move it
(ii) We pull the table to change its position.

Q2. Give two examples of situations in which applied force causes a change in the shape of an object.

Ans. (i) When we press the foam, its shape is changed.
(ii) When we stretch the rubber bend, then its shape is changed.

Q3. Fill in the blanks

- (a) To draw water from a well we have to _____ at rope.
- (b) A charged body _____ an uncharged body towards it.
- (c) To move a loaded trolley we have to _____ it.
- (d) The north pole of a magnet _____ the north pole of another magnet.

Ans. (a) Pull (b) Attracts (c) Push (d) Repels

Q4. An archer stretches her bow while taking aim at the target. She then releases the arrow, which begins to move towards the target. Based on this information fill up the gaps in the following statements using the following terms :

muscular, contact, non-contact, gravity, friction, shape, attraction

- (a) To stretch the bow, the archer applies a force that causes a change in its _____.
- (b) The force applied by the archer to stretch the bow is an example of _____ force.
- (c) The type of force responsible for a change in the state of motion of the arrow is an example of a _____ force.
- (d) While the arrow moves towards its target, the forces acting on it are due to _____ and that due to _____ of air.

Ans. (a) shape (b) muscular (c) contact (d) gravity, friction

Q5. In the following situations identify the agent exerting a force and the object on which it acts. State the effects of the force in each case.

- (a) Squeezing a piece of lemon between the fingers to extract its juice.
- (b) Taking out paste from a toothpaste tube.
- (c) A load suspended from a spring while its other end is on a hook fixed to a wall.
- (d) An athlete making a high jump to clear the bar at a certain height.

Ans. (a) The fingers are the agents, lemon is the object. The effect of force is the lemon juice being expelled by squeezing.



- (b) The hand is the agent, toothpaste tube is object and the coming out of paste from toothpaste tube is the effect of force.
- (c) Suspended load is agent, spring is the object, the effect of force can be seen in the form of elongation of spring on suspension of load.
- (d) Athlete is the agent, bar is the object. The force can be seen in the form of jump.

Q6. A blacksmith hammers a hot piece of iron while making a tool. How does the force due to hammering affect the piece of iron ?

Ans. The force due to hammering causes the change in shape of iron and iron can be moulded in the shape of the required tool.

Q7. An inflated balloon was pressed against a wall after it has been rubbed with a piece of synthetic cloth. It was found that the balloon sticks to the wall. What force might be responsible for the attraction between the balloon and the wall ?

Ans. Electrostatic force.

Q8. Name the force acting on a plastic bucket containing water held above ground level in your hand. Discuss why the forces acting on the bucket do not bring a change in its state of motion.

Ans. Muscular and gravitational forces act on plastic bucket. The force acting on the bucket do not bring a change in state of motion because they are acting in opposite direction with equal magnitudes. Therefore the net force on bucket remains zero.

Q9. A rocket has been fired upward to launch a satellite in its orbit. Name the two forces acting on the rocket immediately after leaving the launching pad.

Ans. (i) Gravitational force

(ii) Force of friction.

Q10. When we press the bulb of a dropper with its nozzle kept in water, air in the dropper is seen to escape in the form of bubbles. Once we release the pressure on the bulb, water gets filled in dropper. The rise of water in the dropper is due to

(a) pressure of water

(b) gravity of the earth

(c) shape of rubber bulb

(d) atmospheric pressure

Ans. (d) atmospheric pressure.