

Name: _____ Date: _____

Force and Pressure

- Q1. 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.

- Q2. In the following situations identify the agent exerting the force and the object on which it acts. State the effect 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.

	Situation	Agent exerting the force	Object on which force acts	Effect of force
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.			

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

- Q2. In the following situations identify the agent exerting the force and the object on which it acts. State the effect of the force in each case.
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Ans.

	Situation	Agent exerting the force	Object on which force acts	Effect of force
a.	Squeezing a piece of lemon between the fingers to extract its juice	Fingers (muscular force)	Lemon	Change in shape of lemon
b.	Taking out paste from a toothpaste tube.	Fingers (muscular force)	toothpaste tube	Change in shape of toothpaste tube
c.	A load suspended from a spring while its other end is on a hook fixed to a wall.	Load	Spring	Change in shape of spring
d.	An athlete making a high jump to clear the bar at a certain height.	Muscles of Athlete	Athlete	Change of state of motion of athlete