SNBP INTERNATIONAL& Sr. SECONDARY SCHOOL, CHIKHALI, PUNE (2024-25)

Affiliation No. 1130703

Class Notes

CLASS: VIII DIVISION: _____ SUBJECT: SCIENCE

PREPARED BY: Prathibha Hebbar LESSON: 8– FORCE AND PRESSURE

I. KEY WORDS:

1. Contact forces
2. Electrostatic forces
3. Friction
4. Gravity
5. Magnetic force
6. Muscular force
7. Pressure
8. Pull
9. Push
10. Non- contact force.

II. PRE ACTIVITY :

Make a table to show examples of push or pull

III. ANSWER THE FOLLOWING:

Q1. Give two examples each of situations in which you push or pull to change the state of motion of objects.
Ans: Hitting the ball, coming to us.
Kicking to football

Q2. Give two examples of situations in which applied force causes a change in the shape of an object.
Ans: Stretching a rubber belt.
Reshaping clay to make toys.

Q3. 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 change the shape of the piece of iron.

Q4. A rocket has been fired upwards to launch a satellite in its orbit. Name the two forces acting on the rocket immediately after leaving the launching pad.
Ans: Two forces acting on the rocket immediately after leaving the launching pad are:
Frictional force due to air.
Force of gravity pulling in downward direction.

Q5. 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:

S. No.	Agent	Object	Effect
(a)	Fingers	Lemon	Juice is extracted by force.
(b)	Fingers	Toothpaste tube	Toothpaste coming out by force.
(c)	Load	Spring	Expansion of spring.
(d)	Athlete	Athlete's body	Athlete jump over the bar.

Q6. 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: The force which is responsible for the attraction between the ball and the wall is electrostatic force. When we rub the balloon by a synthetic cloth, it gets charged. When it is taken near the wall, it will get attracted towards the uncharged wall because of the electrostatic force which is the force exerted by a charged body on another uncharged body.

Q7. Name the forces 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: The force acting on a plastic bucket are:
Gravitational force: It is acting downwards
Muscular force: It is applied by our hands to lift the bucket in upward direction.
Although these forces are acting on the bucket but no change is found in its state of motion because the two forces are balancing each other and as a result net force is zero.

Q8.Describe various types of contact and non-contact forces.
Ans: Frictional force: It is the force acting along the two surfaces in contact which opposes the motion of one body over the other.
Ex: A moving ball stops after sometime due to frictional force.
b. Muscular force: It is the force resulting due to the action of muscles. Since our body is in contact with the object, muscular force force is a contact force.
Ex: An elephant carries heavy load.

Types of non – contact forces:

a. Magnetic force: If we bring a bar magnet near iron clips without touching each other, the iron clips move from their original position towards the bar magnet under the influence of magnetic force. So, magnetic force is a non- contact force.
b. Electrostatic force: It is the force exerted by a charged body on another charged or uncharged body. Ex: A charged comb attracts small pieces of paper.
c. Gravitational force: Every object in this universe attracts every other object with a certain force. This force with which two objects attract each other is called gravitational force.

IV. Post activity:

Describing with a activity to show air exerts pressure

Subject Tr **HOD** **Co Ordinator** **Principal**