

## Chapter 3

### Force

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#### I. Fill in the blanks with suitable words:

(Push, force, pull, speed, gravitational force, direction, Muscular)

**Question 1.**

A \_\_\_\_\_ is needed to make a stationary object move.

**Answer:**

Force

**Question 2.**

The force applied with the help of muscle is called \_\_\_\_\_ force.

**Answer:**

muscular

**Question 3.**

\_\_\_\_\_ and \_\_\_\_\_ are known as forces.

**Answer:**

Push and pull

**Question 4.**

The reason for the fruits to fall from the tree is \_\_\_\_\_.

**Answer:**

gravitational force

**Question 5.**

Force changes the \_\_\_\_\_ and \_\_\_\_\_.

**Answer:**

speed and direction

#### II. Match the words with their pictures:



Hitting a ball

Lifting a car

Muscular force

Friction

Pulling

Mechanical force



Answer:



Hitting a ball

Lifting a car

Muscular force

Friction

Pulling

Mechanical force



### III. Answer the following Questions:

Question 1.

How do you open the door?

**Answer:**

I open the door by pushing or pulling.

**Question 2.**

Name the types of force.

**Answer:**

i) There are two types of forces.

1. Contact force
2. Non-contact force.

ii) Contact force is classified into three

1. Muscular force
2. Mechanical force
3. Frictional force

iii) Non-Contact force is classified into two.

1. Gravitational force
2. Magnetic force.

**Question 3.**

Which force is involved in collecting water from well?

**Answer:**

Muscular force is involved in collecting water from well.

**Question 4.**

What is push?

**Answer:**

When a force is applied in the direction of an object, it is called push.

**Question 5.**

What kind of force is used to make clay pot?

**Answer:**

Muscular force is used to make clay pot.

#### **IV. Sujatha places a magnet near some objects. What are the objects that will be attracted from the list given below?**

(note, pin, coin, rubber, shirt, comb, steel tumbler, nail)

**Answer:**

pin, coin, steel tumbler, nail.

#### **V. Think and Answer:**

Raja throws a ball, a stone, a paper, and a leaf up in the air? What kind of force is involved

here? What will happen to them?

**Answer:**

i) Gravitational force is involved here.

ii) So the ball, the stone, the paper, and the leaf will fall down. The earth pulls all the objects towards itself.

### Intext Activity:

Let us look at the pictures below to understand movement and action better (Text Book Page No. 114):



The player hits the ball  
with hockey stick



Boys are riding bicycle

In the above pictures.

**Question 1.**

What moves? \_\_\_\_\_, \_\_\_\_\_

**Answer:**

The ball, The cycle.

**Question 2.**

What is the action? \_\_\_\_\_, \_\_\_\_\_

**Answer:**

Hitting the ball, Riding the bicycle.

Put a tick (✓) mark for the pictures of motion (Text Book Page No. 116):



Answer:



Classify the following – Push or Pull (Text Book Page No. 116):


| S.No | Activities                   | Push / Pull |
|------|------------------------------|-------------|
| 1    | Riding the bicycle           |             |
| 2    | Moving the table towards you |             |
| 3    | Dragging the chair           |             |
| 4    | Moving a car to start        |             |
| 5    | Opening the window           |             |
| 6    | Stretching the rubber band   |             |
| 7    | Removing the shoe laces      |             |


Answer:


| S.No | Activities                   | Push / Pull |
|------|------------------------------|-------------|
| 1    | Riding the bicycle           | Push        |
| 2    | Moving the table towards you | Pull        |
| 3    | Dragging the chair           | Pull        |


|   |                            |      |
|---|----------------------------|------|
| 4 | Moving a car to start      | Push |
| 5 | Opening the window         | Push |
| 6 | Stretching the rubber band | Pull |
| 7 | Removing the shoe laces    | Pull |

Match the following (Text Book Page No. 118):










Stops the motion

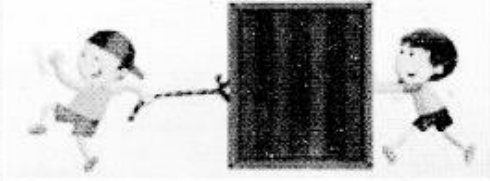
Changes the direction


Changes the shape

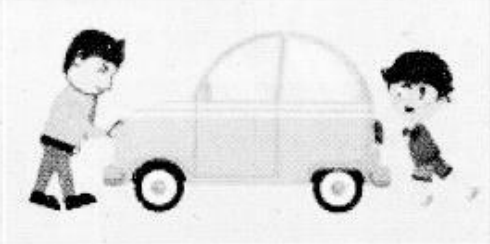
Changes the speed

Answer:









Stops the motion

Changes the direction

Changes the shape

Changes the speed



Observe the picture and write the kind of force involved here (Text Book Page No. 120):

Question 1.



Answer:  
Muscular force

Question 2.



Answer:  
Mechanical force

Question 3.



**Answer:**  
Gravitational force

**Question 4.**

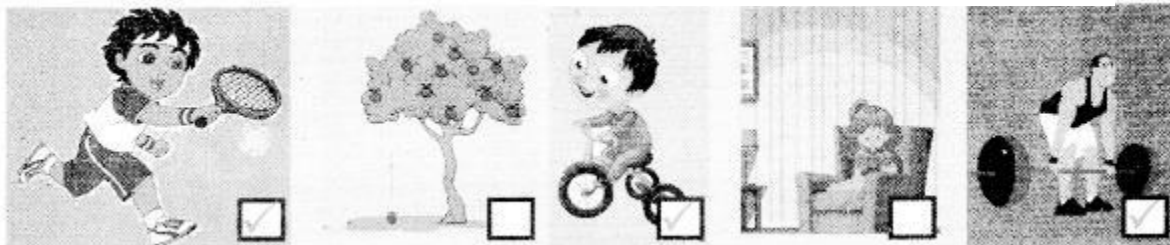


**Answer:**  
Magnetic force

**Tick (✓) the muscular force (Text Book Page No. 120):**



**Answer:**



**Think (Text Book Page No. 121):**

**Question 1.**

Why do we sprinkle the powder on the carrom board before playing carrom?



**Answer:**

We sprinkle the powder on the carrom board to make the surface of the board smooth. This reduces the friction between the surface of the carrom board, the striker, and the coins. As a result, the coins and the striker can move easily on the carrom board.

**Classify (Text Book Page No. 121):**



**Answer:**

| List out the push activities | List out the pull activity | List the frictions here |
|------------------------------|----------------------------|-------------------------|
| Swing                        | Pulling wood               | Sliding                 |
| Playing foot ball            | Pulling trolley            | Playing in sand         |
| Kids scooter, cycling        | Kiting                     | See saw                 |