

WELCOME TO THE ONLINE CLASS

SESSION NO.: 14

CLASS: 5

SUBJECT: SCIENCE

CHAPTER NUMBER: 11

CHAPTER NAME: FORCE AND ENERGY

**SUB TOPIC: INTRODUCTION, FORCE, EFFECTS OF FORCE,
TYPES OF FORCE**

CHANGING YOUR TOMORROW

LEARNING OBJECTIVE

To enable the learner to:

- **recall what is force and what are the various effects of force.**
- **know different types of forces.**
- **understand the use and importance of force and its effect in real life.**

INTRODUCTION



FORCE

- A push or a pull acting on an object is a force.



PUSH



PULL



Force can stop a moving object.



Force can move an object.

EFFECTS OF FORCE



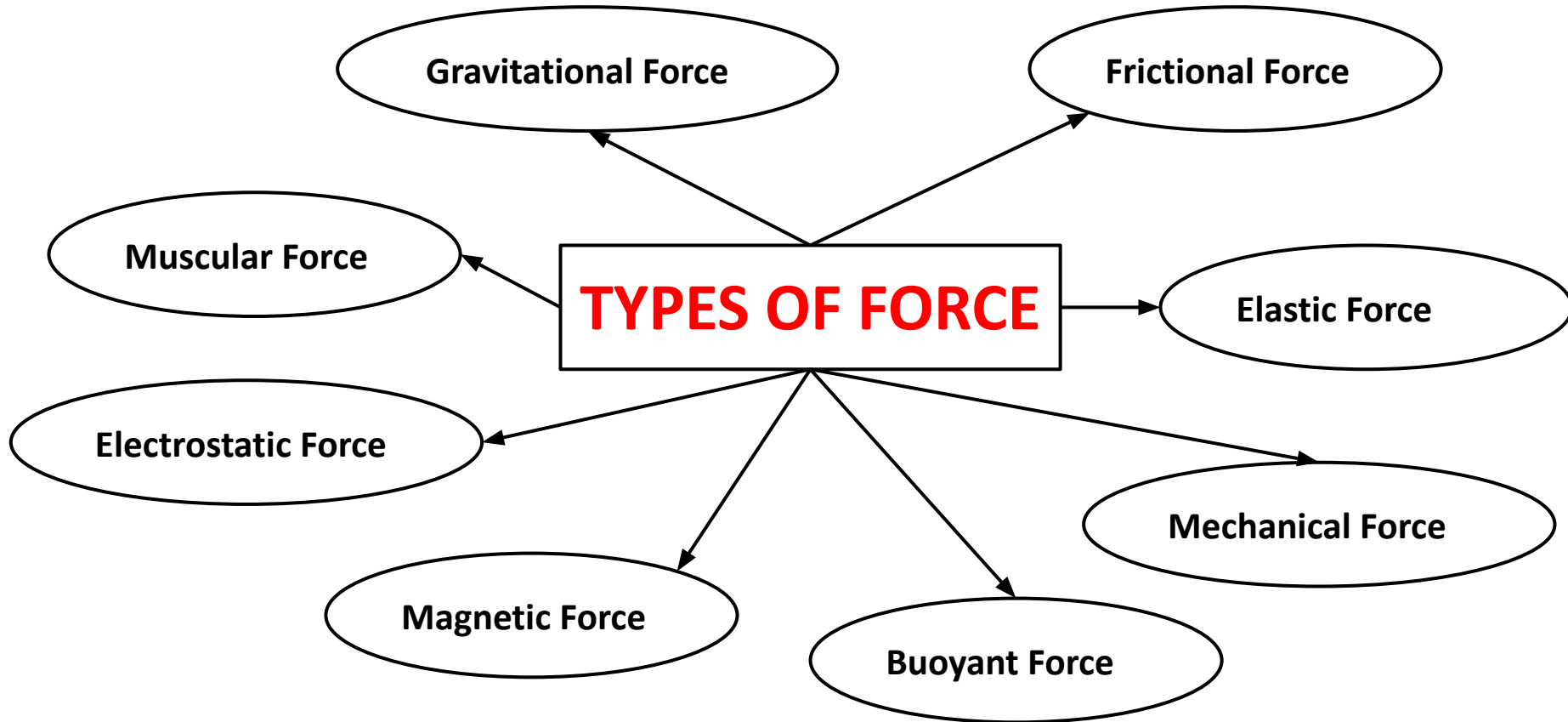
Force can change the speed of a moving object.



Force can change the shape and size of an object.



Force can change the direction of a moving object.



MUSCULAR FORCE

- The force applied by the muscles of our body is called muscular force.
- E.g.: lifting a bag, moving a box, pushing a chair, etc.



GRAVITATIONAL FORCE

- The attractive force that exist between any two objects is called gravitational force.
- For e.g.: we are able to stay on the ground because of gravitational force.



FRictional FORCE

- The force that opposes the movement of one object over the other is called the frictional force or friction.
- E.g.: Slowing down of a moving ball, writing on a paper, holding of objects, walking on the ground, etc.



ELASTIC FORCE

- The force that allows some materials to return to its original shape after being stretched or compressed is called the elastic force.
- E.g.: stretched rubber band regains its shape when the force is removed.



MECHANICAL FORCE

- A force that involves contact with another object and which produces a change in state of rest or motion is called mechanical force.
- E.g.: a pair of scissors is used to cut something.



BUOYANT FORCE

- The upward force exerted by a liquid on an object present in it, is called buoyant force or upthrust.
- E.g.: a mug or a block of wood floating on water.



SUMMARY

- **A push or a pull acting on an object is called force.**
- **Force can:**
 - **move an object.**
 - **stop a moving object.**
 - **change the speed of a moving object.**
 - **change the direction of a moving object.**
 - **change the shape and size of an object.**
- **Forces are of different types- muscular, gravitational, frictional, elastic, mechanical and buoyant.**

READY FOR A
QUIZ ?

1. Which force helps a boat to float on a river?

Ans: Buoyant force

**2. We are able to write on a piece of paper.
Which force helps us to do so?**

Ans: Frictional force

**3. A ball thrown up ultimately comes down.
Why?**

Ans: Because gravitational force of the earth pulls or attracts it downward.

HOMEWORK

Write the difficult words in your notebook.

LEARNING OUTCOME

The learner will be able to:

- **recall what is force and what are the various effects of force.**
- **know different types of forces.**
- **understand the use and importance of force and its effect in real life.**

THANKING YOU
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