

St. Andrews Scots Senior Secondary School

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Session: 2025-26

Class: IV Subject: Science Topic: Force, Work and Energy Lesson No: 13

- **Reading of the chapter**
- **Explanation (will be done in class)**

(Textbook exercise)

- **A. Tick (✓) the right answer.**

1. (a) frictional force
2. (b) pulley
3. (b) sun
4. (c) sound energy

- **B. Fill in the blanks.**

1. Work
2. Muscular
3. change
4. gravitational

- **C. Write whether the following statements are (T) for True or (F) for false.**

1. True
2. False
3. True

4. False

- **D. Circle the odd one and justify.**

1. Screw- It is not a lever.
2. Friction- It is not a type of energy.
3. Washing machine- It is not a simple machine.
4. Electric iron- It does not uses Solar Energy.

Defines (Learn from pg-115)

(Notebook Work)

- **New Words**

1. Applied
2. Direction
3. Gravitational force
4. Muscular force
5. Frictional
6. Screwdriver
7. Wedge
8. Inclined plane
9. Hydroenergy
10. Windmills

- **Short Question Answers**

Q.1 Define work.

Ans. Work is done when force is applied on an object and the object moves in the direction of force applied.

Q.2 How does a machine help us?

Ans. Machine makes our work easier and faster.

Q.3 What is solar energy? Name two devices that work on solar energy.

Ans. Energy obtained from sun is called solar energy.

Two devices that work on solar energy are Solar cell and Solar heater.

Q.4 List the different sources of energy.

Ans. Sun, water, wind.

- **Long Question Answers**

Q.1. What is force? What are its effects?

Ans. The push or pull applied on an object is called force. Its effects are:-

- (i) It can move or stop an object.
- (ii) It can change the speed.
- (iii) It can change the direction.
- (iv) It can change the shape.

Q.2 Name the six types of simple machine.

Ans. The six type of simple machine are:-

- i) Lever
- ii) Pulley
- iii) Wheel and axle
- iv) Inclined plane
- v) Screw
- vi) Wedge

Q.3 Differentiate between gravitational force and frictional force.

Ans.

Gravitational force	Frictional force
The force by which earth pulls the object towards itself.	The force that slows or stops a moving object.

Q.4 Define energy. What are the different forms of energy?

Ans. Energy is ability to do work. Its different forms are heat, light, electrical, sound

and chemical energy.

Q.5 Why is the sun considered as the ultimate source of energy?

Ans. Sun is the ultimate source of energy because

- i) Plants use solar energy to make food for all living beings.
- ii) Sun gives energy in form of heat and light.
- iii) All forms of energy are derived from the sun.

Give Reasons

Q.1 Why do our tears fall down when we weep?

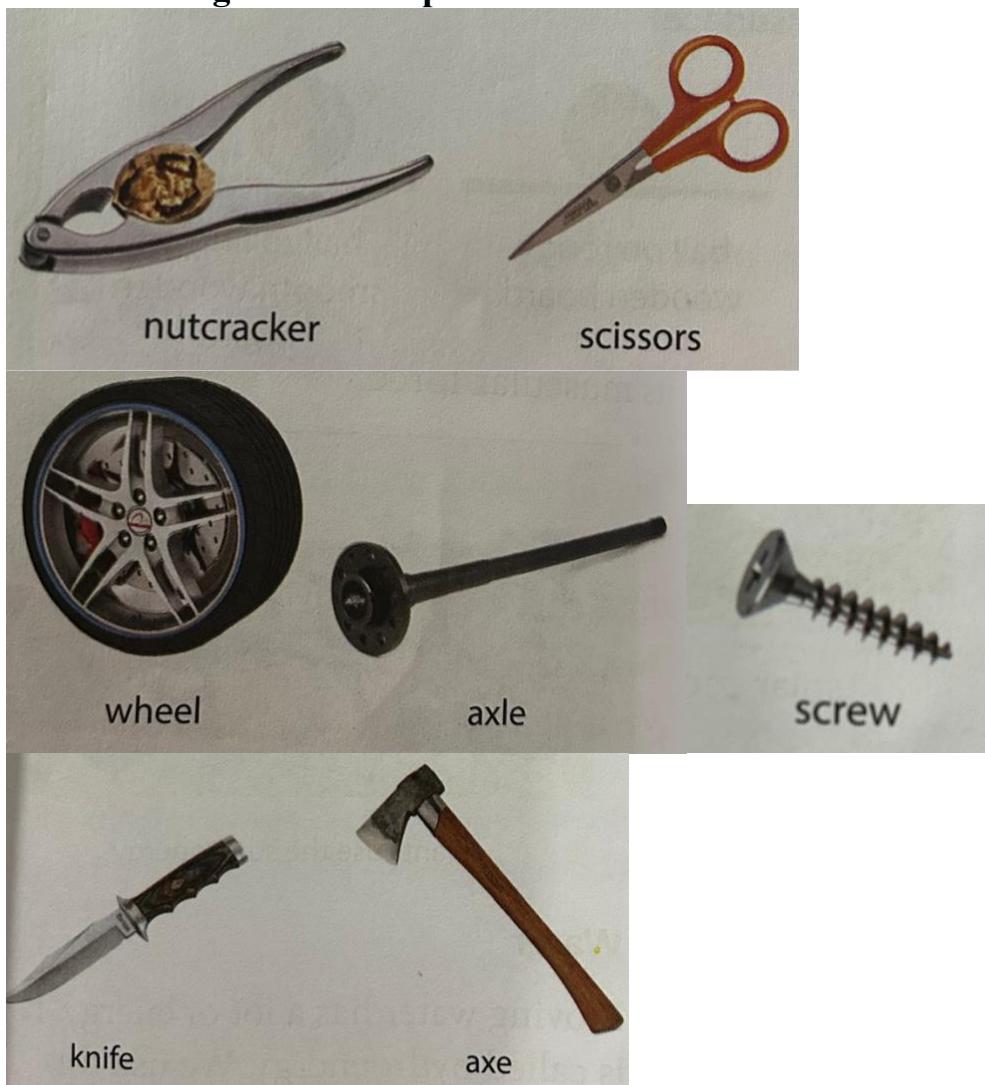
Ans. Our tears fall down when we weep due to gravitational force.

Q.2 Why can't people walk in space, they just float in air?

Ans. People can't walk in space, they just float in air because there is no gravity in space.

Diagrams

Draw the diagrams of Simple Machines.



• **Dictation**

Any 10 words

• **Activity**

Collect pictures of different simple machines that we use in our daily life and paste them in your notebook.