

## Assignment

Class - IV

### Chapter – 11 Force, Work and Energy

1. Which is the main source of all energy on the earth?  
Sun is the main source of all energy on the earth.
2. A moving object slows down or stop moving after some time, why?  
A moving object slows down or stop moving after some time due to the force of friction.
3. Why do people slip easily on smooth surface?  
People slip easily on smooth surface because smooth surface has less friction.
4. Which force is acting on an object even when the object is at rest?  
Force of gravity is acting on an object even when the object is at rest.
5. What happens when we throw a ball up into the air?  
When we throw a ball up into the air the ball fall down to the ground due to force of gravity.
6. What will happen if there will be no friction?  
If there will be no friction, anything that start moving will never stop.
7. Name the two types of forces that are acting in nature all the time.
  - i) Gravity
  - ii) Friction
8. Which force resists the motion of an object on the surface?  
Force of friction.
9. Which materials cause less friction?  
Materials like glass and ice which has smooth surface cause less friction.
10. Which energy can be used to generate electricity?  
Solar Energy
11. Which energy is produced by the movement of turbines?  
Electrical energy
12. What is simple machine?  
Simple machine is a tool that makes our work easier and faster, with the use of less energy.
13. Which simple machine can be used to open the lid of a container?  
Lever
14. Screw and wedges are which type of simple machines?  
Screw and wedges are inclined plane.
15. Why activities such as reading, sleeping and thinking are not considered as work in science?  
Reading, sleeping and thinking are not considered as work in science because no force is being applied in these cases and no object is being moved.

**16. What are screws? How do they help things to attach things to each other?**

A screw is actually an inclined plane wrapped around a cylinder that has sharp pointed end. Screws are turned with the help of a screwdriver. As they rotate, they also move forward. So, they help to attach things to each other.

**17. What are various forms of energy?**

Various forms of energy are-

- Chemical Energy
- Mechanical Energy
- Heat Energy
- Light Energy
- Electrical Energy
- Magnetic Energy
- Sound Energy

**18. Name some sources of energy.**

Some sources of energy are-

- Solar energy
- Wind energy
- Hydro energy.

**19. Name different types of simple machines.**

The different types of simple machines are

- Lever
- Pulley
- Wheel and Axle
- Inclined Plane
- Screw
- Wedge

**20. What are the effects of force?**

1. Force may cause an object to stop or start moving.
2. Force can change the position or direction of an object.
3. Force can increase or decrease the speed of moving object.
4. Force can change the shape of the object.

## Assignment

Class - IV

Chapter – 12

Air, water and weather

1. What is air?  
Air is a mixture of gases, water vapour and dust.
2. What do you mean by atmosphere?  
The blanket of air around the earth is known as atmosphere.
3. What are the causes of change in weather?  
Heat of the sun causes change in weather. Change in the condition of air and water around an area causes change in weather.
4. What does Rotation of earth cause?  
Rotation of earth causes day and night.
5. What does Revolution of earth cause?  
Revolution of earth causes change in seasons.
6. Which factor is responsible for land and sea breeze?  
Heat of the sun is responsible for land and sea breeze.
7. How heat is responsible for land and sea breeze?  
Heat of the sun heats up the land as well as water which gives rise to land breeze and sea breeze.
8. Which type of air is more humid hot or cold, why?  
Hot air is more humid because it contains more water vapors.
9. Explain the formation of land breeze and sea breeze.  
Sea breeze – During the day, land gets heated up. The hot air rises up from the land and the cool air from the sea flows in to take its place. This is known as sea breeze.  
Land breeze - At night, land cools down faster than the sea. The hot air rises up from the sea and the cool air from the land rushes towards the sea. This is known as land breeze.
10. What % of earth's surface is covered with water?  
More than 70 % of earth's surface is covered with water.
11. Name the different states of water with example.  
Water exists in nature in 3 states  
Solid- snow,  
Liquid- water,  
Gas- water vapour.
12. What is dew? How does it form?  
Water droplets on grass and leaves on cold winter mornings is called dew.  
Dew is formed by the condensation of water vapor in the air.
13. Draw and explain water cycle.  
Water evaporate from water bodies, condenses and falls down as rain and snow.  
This forms the water cycle. Pg-126

**14. Why should we drink only clean water?**

We should drink only clean water to protect us from various diseases.  
Unclean water can make us fall ill.

**15. How can we separate insoluble impurities from water?**

We can separate insoluble impurities from water through the process of :-

- a. **Sedimentation** :- The process by which the insoluble impurities settle down is called sedimentation.
- b. **Decantation** :- The process by which the water is gently poured out after sedimentation is called decantation.
- c. **Filtration** :- The process by which water is cleaned by passing it through a filter paper is called filtration.

**16. Which is the simplest way to purify water?**

Boiling is the simplest way to purify water.

**17. Differentiate between breeze, storms and thunderstorms.**

Breeze – A gentle wind is called breeze.

Storms – Very strong winds are called storms.

Thunderstorms – Storms that occur along with thunder and lightning are called thunderstorm

**18. What are the different ways for purification of water?**

The different ways for purification of water are:-

1. Boiling
2. Sedimentation and decantation
3. Filtration
4. Chlorination

**19. What makes the weather humid?**

When the weather is very hot, more water gets evaporated and the content of water vapour increases in the air which makes the weather humid.

**20. What is the difference between rotation and revolution?**

<b>Rotation</b>	<b>Revolution</b>
<b>1. Movement of the earth on its axis is known as rotation.</b>	<b>1. Movement of the earth around the sun is known as revolution.</b>
<b>2. Rotation causes day and night.</b>	<b>2. Revolution causes change in seasons.</b>