

CHRIST KING HR. SEC SCHOOL KOHIMA – NAGALAND

SUBJECT: SCIENCE

CLASS: 6

3RD TERM

Chapter: 15

Light, Shadow and Reflection

A. Multiple Choice Questions

I. Choose the correct answers and put a (√) mark in the box.

1. Which of the following objects have their own light?

Ans: Star (a)

2. The image formed by a plane mirror is-

Ans: Virtual and same size (c)

3. The light rays that travel in all directions after falling on a surface are called-

Ans: Divergent (c)

4. The shape of a shadow depends on-

Ans: All of the above (d)

II. State 'T' for True and 'F' for False against each statement:

1. False.

2. True.

3. False.

4. True.

5. True.

6. False.

7. False.

III. Fill in the blanks:

1. Lateral inversion.

2. Spherical.

3. Same size.

4. Luminous object.

5. Straight.

6. Translucent.

7. Opaque.

B. Short type questions-I

1. Name two natural sources of light?

Ans: The sun and the Stars are the two natural sources of light.

2. Name four man-made sources of light?

Ans: Candles, oil, glowing electric tube and bulb flashing torch are man-made sources of light.

3. Give two examples of things which emit light.

Ans: The sun and the stars.

4. What are the principles of pinhole camera?

Ans: Pinhole camera is based on the principle that light travel in straight line.

5. Give two examples of non-luminous objects.

Ans: Two non-luminous objects are the moon and the planets.

C. Short type question-II

1. What is light?

Ans: Light is the form of energy which is essential to see things around us.

2. Define luminous bodies?

Ans: Bodies which emit light are called luminous bodies.

3. What are luminous and non-luminous objects?

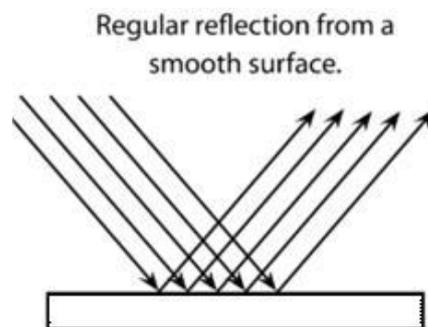
Ans: Luminous objects are those that which emits light from themselves. The objects which do not give light on their own are called non-luminous objects.

4. Explain the working of pinhole camera.

Ans: A pinhole camera works on the principle that light travels in a straight line. It is a type of camera with which pictures of static objects are taken. It consists of rectangular block wood or cardboard in which the inner surface is painted black. On one of its walls, a pinhole is made. The wall of the box in front of the hole is made of grounded glass plate instead of wood or cardboard. When an object is seen through the pinhole camera, an inverted image is formed on the ground glass plate. This is how pinhole camera works.

5. What is a regular reflection? Draw and explain with the help of a diagram.

Ans: When a ray of light falls on the surface of a mirror, the light gets reflected along particular directions. Such kind of reflection from a smooth surface is called regular reflection.



6. What are the laws of reflections?

Ans: The laws of reflections are:

1. The angle of the incidence is always equal to the angle of reflection.
2. The incident ray, the reflected ray and the normal, lies in the same plane.

7. What do you understand by umbra and penumbra?

Ans: The shadow of an object that is completely dark is called umbra. Umbra is formed generally at the centre. On the other hand, a shadow which is partial and surrounds the umbra is called the penumbra.

8. What do you understand by luminous intensity?

Ans: The brightness of a source of light is called luminous intensity.

9. How can pure water lose its transparency?

Ans: Pure water can lose its transparency when it is put in a container made of any metal, wood or bone china.

D. Long type questions:

1. Define and give one example of each of the following: a.

Transparent bodies:

Ans: The material or bodies which allow light rays to completely pass through them are called transparent bodies. Eg: Glass.

b. Translucent bodies:

Ans: The material or bodies which partially allow light to pass through them are called translucent bodies. Eg: Frosted glass.

c. Opaque bodies:

Ans: Materials which do not allow any light to pass through them are called opaque bodies. Eg: Wood.

2. Distinguish between transparent, translucent and opaque objects.

Ans: A transparent object lets the rays to completely pass through it, while a translucent object partially allows the light to pass through it. And an opaque object does not let the light to pass through them.

3. How is a pinhole camera constructed? Explain its principle.

Ans: A pinhole camera is constructed with a rectangular block wood or cardboard in which the inner surface is painted black. On one of its walls, a pinhole is made. The wall of the box in front of the hole is made of grounded glass plate instead of wood or cardboard.

The principle of the pinhole camera is to show that light travels in a straight line.

4. How is a shadow formed?

Ans: A shadow is formed when the rays of light pass through an opaque object. Or simply we can say that a shadow is formed when an opaque object is placed between a screen and the light source.

5. Explain an experiment to show that light travels in a straight line.

Ans: 1. Use three square pieces of cardboard and pierce a hole in the centre of each with a knitting needle.

2. The hole in the three cardboards should be exactly at the same level.

3. Make them stand on a table top at some distance from each other.

4. Give some support at the base.

5. Light a candle and place it on the table such that its flame and the hole in the cardboard are the same level, i.e. in a straight line.

6. The candle flame is clearly visible.

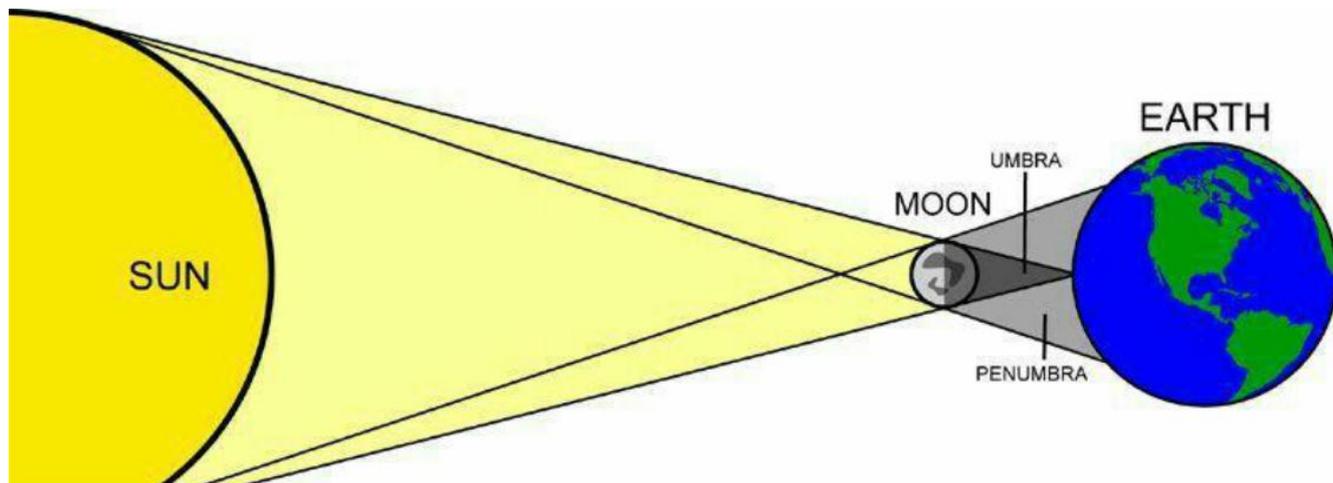
7. We will find that light travels in a straight line.

6. What is an eclipse? How does lunar and solar eclipse occur? Support your answer with diagram.

Ans: An eclipse is the darkening of a heavenly body, when the shadow of one object in space falls on another object.

A human eclipse occurs when the earth comes in between the sun and the moon, and all these three bodies are in straight line.

A solar eclipse occurs when the moon comes in between the sun and the earth, and all the three bodies, like the sun, the earth and the moon stand in a straight line. During solar eclipse, the shadow of the moon is cast on the earth.



Solar Eclipse

Chapter: 16
Air

A. Multiple Choice Questions

I. Choose the correct answers and put a (✓) mark in the box.

1. This gas is used to prepare fizzy drinks.
Ans: Carbon Dioxide (a)
2. The percentage of nitrogen in the air is
Ans: 78% (d)
3. Which of the following gas is used by the plants for photosynthesis?
Ans: Carbon Dioxide (d)
4. Liquid oxygen is used in
Ans: Rockets (b)
5. Which of the following gas is called an inert element?
Ans: Noble (b)

8. State 'T' for True and 'F' for False against each statement:

1. False.
2. False.
3. False.
4. False.

5. True.

6. False.

II. Fill in the blanks:

1. Wind

2. Inhaled.

3. Living beings.

4. 78.

5. 0.03.

B. Very short type questions:

1. What is the composition of the various constituents of air?

Ans: Air is a mixture of different gas. The composition of the various constituents of air is nitrogen (78%), dioxide (.03%), noble gas (.9%) and water vapour.

5. Name the gas used by the green plants to make their food? Ans:

The green plant uses carbon dioxide gas to make their food.

6. What is carbon dioxide gas?

Ans: Carbon dioxide gas is an important component of air. It forms about 0.03% of the composition.

4. What is wind?

Ans: The movement of air is called wind.

C. Short type question-II

1. How did oxygen originate in our atmosphere?

Ans: Oxygen originated in our atmosphere through the process of respiration. Plants produce oxygen during photosynthesis.

D. List some use of air.

Ans: Some uses of air are:

Windmill moves with the help of air.

Air helps in the movements of sailing yachts gliders, parachutes etc.

Seeds are dispersed by air.

Air helps in the transmission of sound.

E. List some use of oxygen.

1. All living organisms use oxygen for respiration

2. Animals breathe oxygen to live.

3. Oxygen is use for burning.

4. Liquid oxygen is used in rockets for combustion of fuels.

3. Define humidity?

Ans: Humidity means the presence of water vapour in the air.

5. Mountaineers carry oxygen with them why?

Ans: Mountaineers face difficulty in breathing when they go high up in the mountain due to inadequate presence of oxygen there. That's why, in order to overcome this problem of breathing, mountaineers carry oxygen cylinders with them.

D. Long type questions:

1. How is the level of oxygen and carbon dioxide maintained in the atmosphere?

Ans: All the animal breath in oxygen and release carbon dioxide is used by the plants during photosynthesis and release oxygen in return, which animals use to breath. The process continues forever and this is how the level of oxygen and carbon dioxide is maintained in the atmosphere.

5. How can you prove that oxygen is needed for burning?

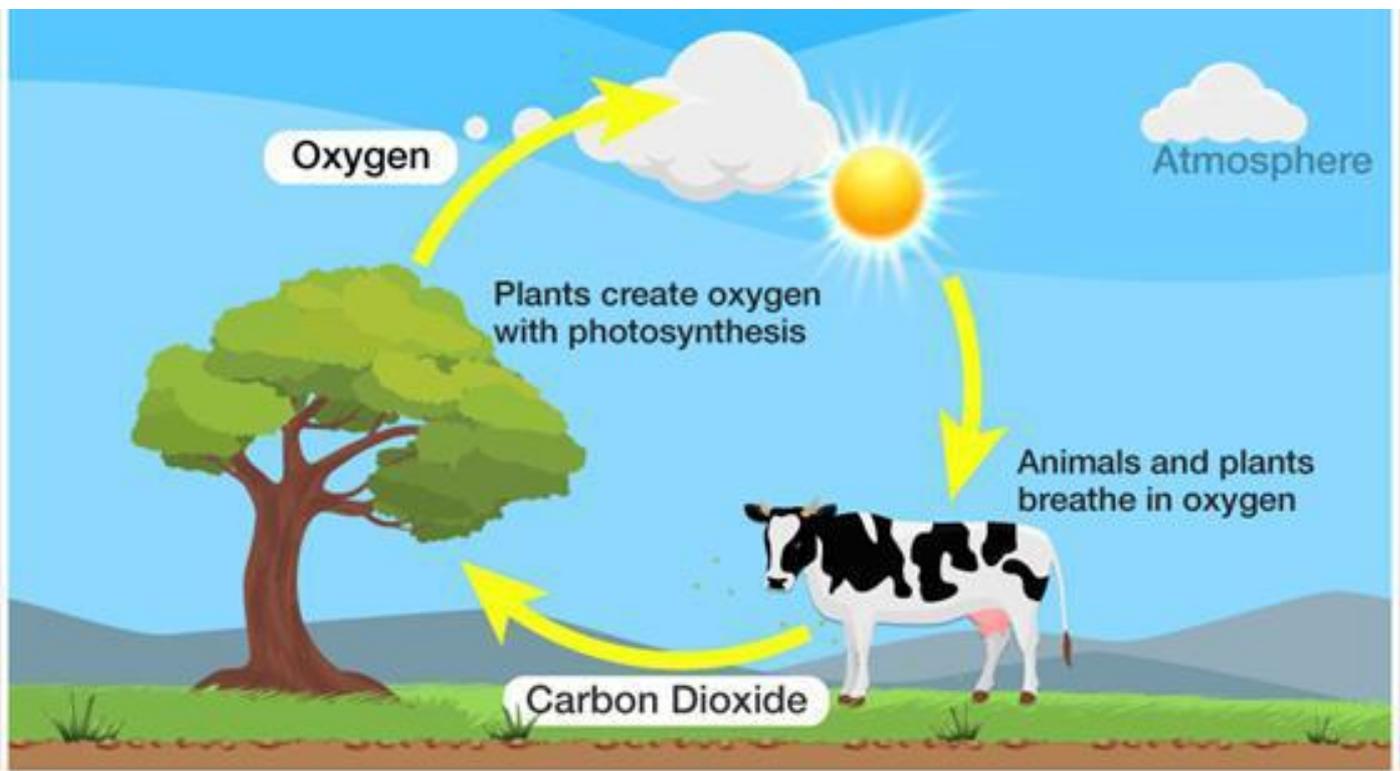
Ans: 1. Let us fill the trough with about two-third of water.

Light a candle and fix it in the centre of the porcelain dish with water.

2. Let us then cover the porcelain dish with the candle, with a bell jar. Now fix the cork. After some time the candle flame goes off. This is because when the bell jar is put above the burning candle, there is still some oxygen in the bell-jar. When this oxygen is consumed, the candle gets extinguished. The water level rises up to some extent inside the bell jar.

3. Explain oxygen cycle with diagram.

Ans: Green plants are the key to keeping the oxygen cycle going. During photosynthesis, plants use water from the soil, energy from the sun, and carbon dioxide to make simple sugar. During this process, molecules are split into their basic elements. This allows oxygen to be released in to the atmosphere. It is one of the products of photosynthesis. Oxygen is used in the process of respiration. This process releases water in to the atmosphere. The water is absorbed by the plants and the cycle can begin again.



Chapter: 17
Water, Rain and Thunder

A. Multiple Choice Questions

I. Choose the correct answers and put a (✓) mark in the box.

1. Which of the following contains maximum amount of dissolved salts?

Ans: Sea water (d)

2. The processes involved in water cycle are called

Ans: All of them (d)

3. Which of these calamities results in a famine?

Ans: Drought (b)

4. How much of the earth's surface is covered with water?

Ans: Two-third (d)

5. The purest form of water is

Ans: Rainwater (a)

Fill in the blanks:

1. Purest.
2. Water Table.
3. Changeable.
4. Renewable.
5. Transportation.

B. Very short type questions

1. Write five natural source of water.

Ans: Five natural resources of water are rivers, ponds, lake, sea and ocean.

2. What is the importance of water?

Ans: The importance of water is immense. No animals and plants can live without water. About 70% of our body comprises of water. We consume water by drinking or as constituents of food. Moreover, water is essential for cooking, bathing, washing, cleaning, etc.

3. Define transpiration.

Ans: Transpiration is the loss of water from parts of plants in stem. Flower roots and leaves.

4. Define salinity?

Ans; The presence of salt in water or the saltiness of water is known as salinity.

5. What is meant by potable water?

Ans: Water that is fit for drinking and other domestic use is called potable water.

C. Short type questions

1. What is water conservation?

Ans: The wise and judicious use of water is called water conservation.

2. When the arctic sea freezes, why do the fish not die?

Ans: The protein in fish's blood affects the water molecules in its surrounding areas that is why fish do not die and freezes in arctic sea.

3. How does water become saline?

Ans: Water becomes saline when rain water, while passing through the layers of soil and rocks, dissolves a large amount of salts in the water.

4. Why is sea water not fit for drinking?

Ans: Sea water is the most impure form of water. It contains a lot of dissolved salts and is salty to taste and thus is unfit for drinking.

5. How is water important for sustaining life on earth?

Ans: The importance of water is immense. It helps to carry nutrients and waste products in and out of the cells. Moreover, water is also needed to maintain proper body temperature.

D. Long type questions:

1. How do flood occurs? List its effects.

Ans: Flood occurs when there is excessive rainfall in a place. The water level rises in lakes, rivers and ponds thus bringing about great danger to all living beings.

2. What happens, if there is no rainfall for a very long time?

Ans: When there is no rainfall for a very long time in a place, it results to a crisis situation, called drought. The condition of famine develops and people die out of starvation.

3. What is rain water harvesting?

Ans: Rainwater harvesting is the process of storing rainwater that falls on our roof into an underground rain harvesting tank. There the water is filtered, stored and recycled for household use. It is an effective way to save water from getting wasted.

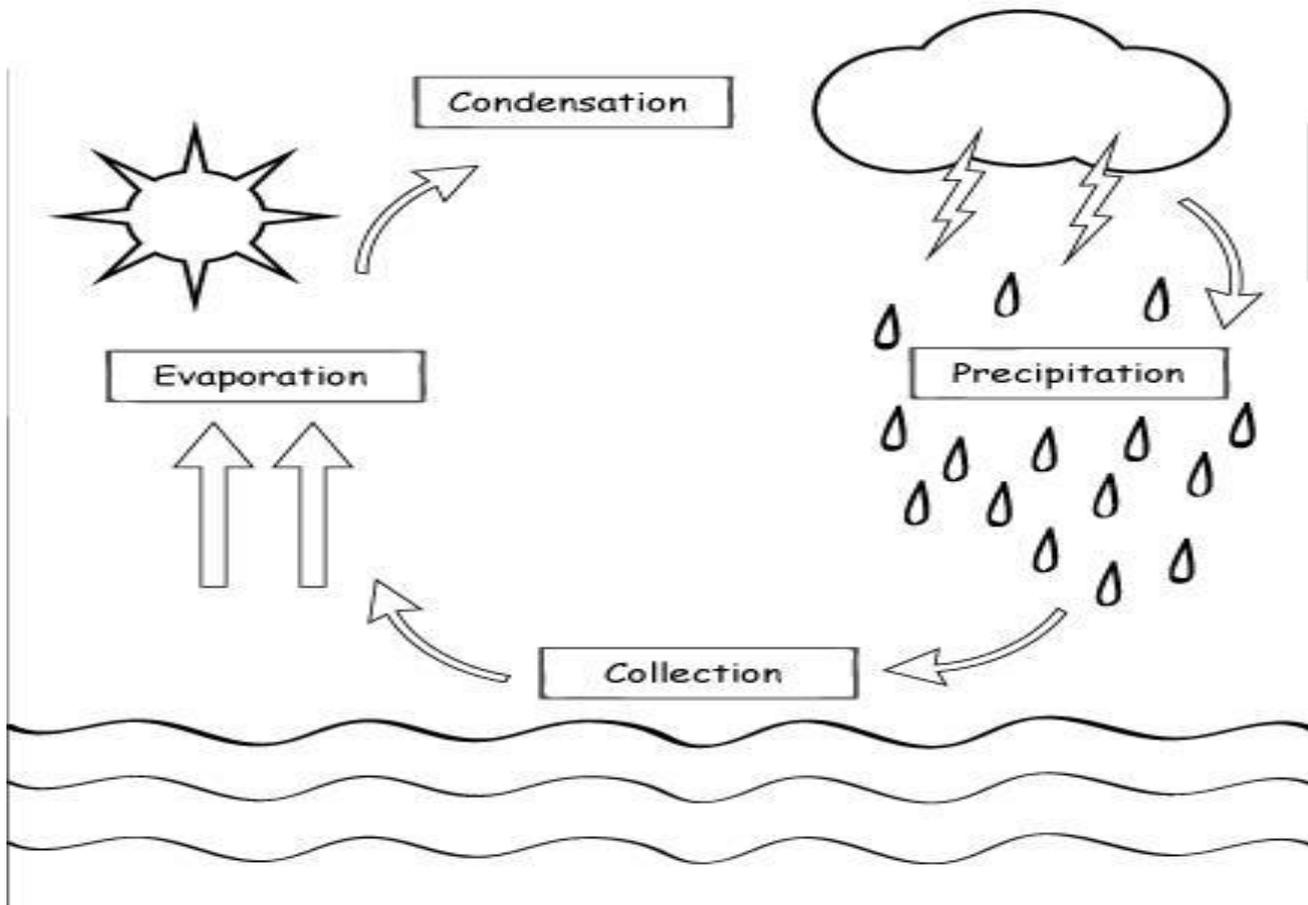
4. List ways to conserve water.

Ans: Water can be conserved in the following ways:

1. Adopting water harvesting method.
2. Avoiding misuse and waste of water.
3. Artificial recharging of groundwater.

5. What do you mean by the term 'Water cycle'? Explain with the help of a diagram.

Ans: The constant circulation of water that is taking place within the earth and its atmosphere in the form of water vapour, rain, clouds etc., called water vapour.



Chapter-18

Waste

A. Multiple Choice Questions

I. Choose the correct answers and put a (✓) mark in the box.

1. Which one, out of the following materials is biodegradable waste?

Ans: Vegetable peels (a)

2. Which one, out of the following materials is non-biodegradable waste?

Ans: All of these (d)

3. Which type of waste can be recycled?

Ans: Both biodegradable and non-biodegradable wastes (c)

4. Which of the following materials can be recycled at home?

Ans: Paper (a)

II. Fill in the blanks:

1. Air.
2. Paper board.
3. Segregation.
4. Landfill.
5. Biodegradable.

B. Tick (✓) mark for true statement and cross (x) mark for false statements:

1. True.
2. False.
3. False.
4. False.
5. False.

B. Very short type questions

1. Define waste.

Ans: Any materials that is left over or discard after use is called waste.

2. What is recycling?

Ans: The process of collecting materials that are often considered as waste and are remanufactured into new products is called recycling.

7. Write four ways by which you can contribute to a better disposal of waste. Ans:

Four ways by which we can contribute to be a better disposal of waste are:

- Segregation.
- Composting or landfills
- Drainage.
- Combusting or incineration.

7. Name the three R's that can help manage waste.

Ans: Reduce, Recycle and Reuse.

C. Short type questions

1. Why can compost not be made from non-biodegradable waste?

Ans: Because non-biodegradable waste cannot be decomposed by micro-organism.

2. What is vermicomposting?

Ans: The decomposition of organic waste by earthworms is called vermicomposting.

3. How are metal recycled?

Ans: Metal can be recycled by the process of taking used metal and turning them into new reusable product.

4. Give disadvantage of landfill.

Ans: The disadvantages of landfill are:

Landfills can pollute air, water and soil.

Dangerous chemicals from the landfill can seep into the ground water system.

The areas surrounding the landfill become heavily polluted.

It can cause illness and diseases in the communities living around the landfill.

5. Write two differences between biodegradable and non-biodegradable waste.

Ans: The two differences between biodegradable and non-biodegradable waste are:

Biodegradable Waste:

It can be decomposed by micro-organism.

It can be dumped in landfill site.

Non-biodegradable waste:

It cannot be decomposed by any micro-organism.

It should be dumped in a solitary landfill.

D. Long type questions:

1. How can you recycle paper?

Ans: Take an old newspaper and tear them in bits. Put them into the water; allow them to soak completely to break down. Then will get a thick sticky liquid i.e. pulp. Now pour the pulp into a wooden frame and keep it under the sun dry. Your new fresh paper is ready to use again

2. Why should we reduce the usage of plastics?

Ans: Plastic emits poisonous gases on burning which cause health problem. Plastic bags are often eaten by animals, which makes them sick and even causes death. Plastic bags often choke drains and sewer system which result in water spills on roads. It is due to all these factors that we should reduce the usage of plastics.

*****End*****

6. Write a brief note on the following: a.

Segregation.

Ans: Segregation is a method of separating biodegradable, non-biodegradable waste and toxic waste etc.

b. Combusting.

Ans: Combusting is a method of waste disposal, which involves burning of garbage at high temperature.