



# ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

27, Ballygunge Circular Rd, Kolkata- 700019



**Term: Second**

**Date: 03.12.20**

**Subject: Science**

**Class: 4**

**Lesson: Air, Water and Weather**

**Topic: Air and Weather, Water**

## ANSWER WORKSHEET – 22

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**Answer the following questions in detail:-**

1. What is atmosphere?

**Ans:** The atmosphere is a thick layer of air that surrounds the earth. It is a mixture of gases such as nitrogen, oxygen and carbon dioxide. It also contains water vapour, smoke and dust. It seals the planet and protects us from the harmful rays of the sun. It also protects us from the electromagnetic radiation given off by the sun and small objects flying through space such as meteoroids. In the same way that there are layers of soil inside the earth, there are also layers of air in the atmosphere. All of the layers interact with each other as the gases circulate around the planet. The lowest layers of air interact with the surface of the earth while the highest layers of air interact with space. On our level, we may feel the atmosphere as a cool breeze. Other times we feel it as a hot or humid day that seems to push on us from all sides.

2. Write a short note on wind and storm.

**Ans: Wind:** - It is the movement of air, caused by the uneven heating of the earth by the sun and the Earth's own rotation. Winds range from light breeze to natural hazards such as hurricanes and tornadoes. We cannot see it or hold it, but can feel its force. It can dry our clothes in summer and chill us to the bone in winter. It is strong enough to carry sailing ships across the ocean and rip huge trees from the ground. The speed of the wind affects the weather of a place.

**Storm:** - Very strong winds cause storms. A storm is a violent meteorological phenomenon (weather) in which there is heavy rain and wind due to moisture in the air. Hail and lightning are also common in storms. More rarely, Tornadoes can occur in storms. Hurricanes and typhoons are often called storms, but they have special names because they are very, very strong. Storms are studied by scientists called meteorologists. People also use the word storm to describe strong winds or other forms of severe weather.

3. What is the difference between fog and dew?

**Ans:** • **Fog** forms at night and appears in the morning as a thick cloud close to or at the ground.

• **Dew** forms at night and appears in the morning as condensation on leaves, grass, twigs or metal surfaces.

• **Fog** can last the whole day in cold climates.

• **Dew** is common in calm winds and it can freeze to form frost that appears as ice crystals on earthly objects.

• **Fog** is common in light wind speeds and is closely related to mist which appears thinner and common in mountains and forests.

4. What is evaporation and condensation?

**Ans: Evaporation:** -Evaporation is the process by which water changes from a liquid to a gas or water vapour. As the temperature increases, the rate of evaporation also increases. The amount of evaporation depends on the temperature and it also depends on the amount of water there is to evaporate. Evaporation takes place every day. It occurs mostly in the seas, oceans etc. around the world because they cover a vast majority of the Earth. When we take a look at the temperatures over the seas and oceans around the globe, we can see that the rate of evaporation near the equator is greater due to the temperature increase.

**Condensation:** - Condensation is the process where water vapour becomes liquid. It is the reverse of evaporation, where water changes to water vapour. Condensation happens one of two ways: Either the air is cooled to its dew point or it becomes so saturated with water vapour that it cannot hold anymore water. For example – Condensation can also produce water droplets on the outside of soda cans or glasses of cold water. When warm air hits the cold surface, it reaches its dew point and condenses. This leaves droplets of water on the cold glass or can.

**Ms. Margaret Das**