



VIDYA BHAWAN, BALIKA VIDYAPITH
SHAKTI UTTAN ASHRAM, LAKHISARAI - 811311

STUDY NOTES

Teacher's Name: Anjani Kaushik

CLASS- VII (All Section)

DATE: 06-07-2020

SCIENCE

LESSON-07

CHAPTER: 8 Winds, Storms and Cyclones

Today's Topic: Thunderstorms and cyclones

Thunderstorms and cyclones:

A thunderstorm is a storm with lightning and thunder is produced by a type of cloud known as cumulonimbus cloud (from the word column), or thundercloud, usually producing gusty winds, heavy rain and sometimes hail. A thunderstorm occurs when there is moisture and rising warm air. Moisture is needed to form clouds and rain. In a thundercloud, the moisture is carried to great heights by the rising air.

As the moist air rises, it forms droplets of water that freeze and start falling. The up-and-down motion of the ice particles and water droplets within the cloud produces electric charge in the cloud, which causes lightning and thunder. Thunderstorms develop frequently in hot, humid tropical areas such as India.

Cyclones develop from thunderstorms over warm seas near the equator. The heat in the atmosphere causes water to vapourise. When warm air carrying water vapour rises from the seas and condenses to form clouds, massive amount of heat is released. The

heat thus released into the atmosphere warms the air. This mixture of heat and moisture often produces thunderstorms from which a tropical cyclone can develop. As warm air rises, it produces low pressure, making cool air rush in to fill the void that is left. But the constant rotation of the earth on its axis, causes the air to bend inwards and then spirals upwards with great force, thus, creating a very low-pressure system. The swirling winds rotate faster and faster, forming a huge circle of clouds, which can be up to 2,000 km wide.

As the cyclone builds up, it begins to move, sustained by a steady flow of warm, moist air over the ocean. The strongest winds and heaviest rains are found in the towering clouds, which merge into a wall about 20-30 km from the storms centre. The wind blows in a spiral direction around a relatively calm area known as the 'eye'. The eye of a cyclone is usually 30-50 km wide.

cyclone: a very low-pressure system of clouds and rain with very high-speed winds revolving around it.

...