

Key Concept Summaries

Precipitation

What Are the Common Types of Precipitation?

Any form of water that falls from clouds and reaches Earth's surface is **precipitation**. **Common types of precipitation include rain, sleet, freezing rain, snow, and hail.** Rain is the most common. Drops of water are called rain if they are at least 0.5 millimeters in diameter. Smaller drops of water are called drizzle, and even smaller ones are called mist. An open-ended can or tube that collects rainfall is called a **rain gauge**.

There are four types of freezing precipitation: freezing rain, snow, sleet, and hail. Freezing rain is rain that

freezes when it hits a cold surface. When clouds are colder, water vapor can convert directly into ice crystals, forming snow. When raindrops fall through a layer of air colder than 0°C, they can freeze into ice particles. Ice particles smaller than 5 millimeters in diameter are called sleet. Round pellets of ice larger than 5 mm in diameter are called hailstones. Hail forms only inside cumulonimbus clouds during thunderstorms. It forms when strong updrafts repeatedly carry ice pellets through cold regions of a cloud, adding another layer of ice each time.

What Are the Causes and Effects of Floods and Droughts?

A **flood** is an overflowing of water in a normally dry area. **Small or large, many floods occur when the volume of water in a river increases so much that the river overflows its channel.** Over a brief time period, heavy rains or melting snow can cause a river to overflow, uprooting trees and even destroying bridges and buildings. People try to control floods by building dams across rivers and levees.

A long period of scarce rainfall or dry weather is known as a **drought**. Because it reduces the supplies

of groundwater and surface water, a drought can cause a shortage of water for homes and businesses. **Droughts are usually caused by dry weather systems that remain in one place for weeks or months at a time.** Long-term droughts can cause crop failure and even famine. People can prepare for droughts by conserving water when dry conditions first occur. Farmers can grow drought-resistant plants that have been bred to withstand dry conditions.

On a separate sheet of paper, compare and contrast how the four types of freezing precipitation—freezing rain, snow, sleet, and hail—form.

