



As you already know...

What is precipitation?

- Water evaporates from every water surface on Earth and from living things. This water eventually returns to the surface. **Precipitation** is any form of water that falls from **clouds** and reaches Earth's **surface**.
- Precipitation is one of the steps in the **water cycle**.
- Do you remember which step it is?

Forms of Precipitation

- Rain
- Snow
- Sleet
- Hail

Rain

- Cloud droplets are very tiny. The volume of a raindrop is about **one million times** as large as the volume of a **cloud droplet**. So cloud droplets must **grow** before they can become **precipitation**.

Snow

- Snow falls from **cold** clouds where water vapor becomes **crystals** of **ice**. Snow results if the ice crystals stay **frozen** as they fall.
- The types of snow depends on the **temperature** at which the ice particles form. The **coldest** clouds produce **light, powdery** snow with **six** sided snow flakes. Slightly **warmer** clouds produce **heavier, wetter** snow.

Sleet

- Small, **round** or lumpy particles of ice are **sleet**. Sleet forms when rain falls through a layer of atmosphere that is **above freezing** and then through a **freezing layer closer to the ground**. Sleet starts as **rain** and **freezes** into sleet as it falls through the freezing air near the ground.

Hail

- Hard, round pellets of **ice** are **hail**. Most hail is fairly small. But hailstones can reach the size of a **baseball** or even larger. This is caused by up and **downdrafts** where the pellet collects a new layer of **ice** each time it is bounced back and forth. These large **stones** can break windows and dent cars. Hail may fall during a **thunderstorm** in the spring or summer.

Fog

- Fog** may look like a form of precipitation. That is especially true when it makes everything look wet and misty. But it is **NOT**. Fog is a **cloud** that is at or near the ground.

???Quiz Time??? Snow falls from clouds when...???

- Water vapor becomes crystals of ice. Snow results if the ice crystals stay frozen as they fall.

???Quiz Time??? What is sleet?

- Small particles of ice that form when rain falls through a layer of the atmosphere that is above freezing, and then through a freezing layer closer to the ground.



???Quiz Time??? What are the forms of precipitation?

Precipitation: rain that comes in all different forms, depending on the temperature of the atmosphere. → by H.C. and G.T. ©



???Quiz Time??? What is fog?

- Fog is NOT Precipitation!!! It is a cloud that is at or near the ground.



How does temperature affect the form of precipitation?

- Cloud and atmosphere temperature** affect how precipitation will fall to the ground.
- Snow forms when **cold clouds** (below freezing) **water vapor turns into ice**.
- Hail forms when **water droplets move from above to below freezing** parts of the atmosphere multiple times.
- Sleet forms when rain falls through a layer of the atmosphere that is above freezing and then through **a layer of that atmosphere closer to the ground that is freezing**.