What Is Precipitation?

When you see rain or snow fall from above, you’re watching precipitation in action! Where does precipitation come from and why does it fall in different forms?

### Liquid or Solid

Precipitation happens when water falls to Earth's surface. This water might be in a liquid or solid state.

Rain = liquid

Hail = solid

### Part of the Water Cycle

The water cycle is what moves Earth’s water around the planet to places where plants, animals, and humans can use it. Precipitation is one of four main parts of the water cycle.

- **Condensation**: Gas cools and turns to liquid water or ice
- **Evaporation**: Liquid turns to gas
- **Transpiration**: Water from plants turns to gas
- **Precipitation**: Water falls in a liquid or solid state

### Takes Many Shapes

Rain and snow are probably the most well-known types of precipitation, but there are others. The temperature of the cloud and the air between the cloud and the ground create different kinds of precipitation.

#### Atmospheric Temperature Guide (sky colors in graphics below)

<table>
<thead>
<tr>
<th>Above freezing</th>
<th>Near freezing</th>
<th>Below freezing</th>
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#### Takes Many Shapes

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- **Hail**
- **Sleet**

**Takes Many Shapes**

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**Freezing Rain**

Freezing rain falls like rain, but as soon as it touches the ground, it freezes! It starts as ice crystals. The ice crystals melt and turn into water droplets as they go through a layer of above-freezing air. If the temperature of a thin layer of air at the surface is below freezing, the water droplets freeze when they land.

**Graupel**

Graupel is a frosty kind of snow. It forms in below-freezing temperatures when snow crystals in the cloud collide with very cold water droplets. The water droplets freeze loosely onto the snow, giving graupel a slushy texture.

**Snow**

Snow falls when all the air between the cloud and Earth’s surface is below freezing. If you look at snowflakes closely, you can see their unique and beautiful shapes.