

# Clouds and Precipitation

By Sharon Fabian

<sup>1</sup> Clouds look very light, the way they float up there in the sky, but clouds are made up of water and ice, two rather heavy materials. Sometimes a cloud gets too heavy. Then, what happens? No, the cloud doesn't just fall right out of the sky, crashing down to earth with a giant roar. What a cloud does, when it gets too heavy, is gradually drop the extra water or ice, bit by tiny bit. These tiny bits of water and ice are what we call precipitation. Precipitation comes in several forms: rain, snow, hail, sleet, and freezing rain.



<sup>2</sup> There are different types of clouds, and once you learn to recognize them, you will have a good clue as to whether any precipitation might be on the way. The names of the clouds give you some more information. Many of the cloud names are based on Latin roots. Here are a few of the main ones, and what each one means.

cumulus - heap  
stratus - layer  
cirrus - curl  
nimbus - rain

<sup>3</sup> Clouds are sometimes grouped according to how high they are in the sky. There are high clouds, mid-level clouds, and low clouds. Another group is vertical clouds, or clouds that pile up high into the sky.

<sup>4</sup> High level clouds include cirrus clouds and cirrostratus clouds. Cirrus clouds are the thin, wispy ones. They are a sign of fair weather. Cirrostratus clouds are actually thin sheets of ice crystals. The sun can shine right through cirrostratus clouds. Sometimes you can barely see them. If you see a halo around the sun or moon, it may be cirrostratus clouds. These clouds are 20,000 feet or more above the earth.

<sup>5</sup> Mid-level clouds include altocumulus and altostratus clouds. Both of these sometimes provide light precipitation. The prefix "alto" means high, and these clouds are up there; they're just not the very highest ones. Mid-level clouds are from 6,500 to 20,000 feet above the earth.

<sup>6</sup> Low level clouds include nimbostratus and stratocumulus clouds, and also clouds that are right on the ground, called fog. Nimbostratus and stratocumulus clouds may provide precipitation, and they can also develop into vertical storm clouds. Low level clouds are below 6,500 feet.

<sup>7</sup> Vertical clouds are the heaped up ones, so their names include the root "cumulus." The big, towering storm clouds are called cumulonimbus. These clouds have lots of ice, and also build up electrical charges, which can produce lightning. Sometimes you will see a single cumulonimbus tower, and sometimes you might see a whole line of these giants. Either way, these are the ones to watch out for. Cumulonimbus clouds produce thunderstorms with heavy rain, thunder, and lightning.

<sup>8</sup> Sometimes precipitation falls as rain, and sometimes it falls as snow, sleet, hail, or frozen rain. This depends on the atmosphere that the drops fall through after they leave their cloud. If the atmosphere is warm enough, we get rain. If the atmosphere is cold enough to keep the drops frozen, we get snow or one of the other forms of frozen precipitation. Sometimes the same storm will drop snow on a mountain, and drop rain on the valley next door, just because the air over the valley is warmer.

<sup>9</sup> To find out what each of the cloud names mean, just look back at the Latin roots and combine the right ones.

Name \_\_\_\_\_

Date \_\_\_\_\_

## Clouds and Precipitation

<p>1. The word that means rain, snow, hail, sleet, and freezing rain is _____. <input type="radio"/> A Precipitation <input type="radio"/> B Cumulonimbus <input type="radio"/> C Clouds <input type="radio"/> D Prediction</p>	<p>2. The type of cloud that produces thunderstorms is _____. <input type="radio"/> A Altocumulus <input type="radio"/> B Cumulonimbus <input type="radio"/> C Cirrostratus <input type="radio"/> D Nimbostratus</p>
<p>3. Layers of curly clouds are called _____. <input type="radio"/> A Cirrostratus <input type="radio"/> B Cumulonimbus <input type="radio"/> C Nimbostratus <input type="radio"/> D Altocumulus</p>	<p>4. Layers of rain clouds are called _____. <input type="radio"/> A Cumulonimbus <input type="radio"/> B Nimbostratus <input type="radio"/> C Cirrostratus <input type="radio"/> D Altocumulus</p>
<p>5. Heaps of rain clouds are called _____. <input type="radio"/> A Altocumulus <input type="radio"/> B Nimbostratus <input type="radio"/> C Cumulonimbus <input type="radio"/> D Cirrostratus</p>	<p>6. Clouds are made of _____. <input type="radio"/> A Water <input type="radio"/> B Ice <input type="radio"/> C Oxygen <input type="radio"/> D Either (a) or (b)</p>
<p>7. The same storm can produce both rain and snow. <input type="radio"/> A True <input type="radio"/> B False</p>	<p>8. Precipitation falls when clouds get too heavy with water and ice. <input type="radio"/> A True <input type="radio"/> B False</p>

