Clouds

Literacy for Anywhere - Level 3

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How to Use Literacy for Anywhere

This is a *Literacy for Anywhere* level 3 book. This text is designed for students in year one or grade one in school. Ideally, first grade students will be reading level one texts independently by the end of the year, second grade students will be reading level two texts, and so on. Of course, we realize that every student, classroom, and school is different, so the book level may not always correspond to the class or grade level.

If your school or library uses another system for leveling books, you can use the chart below to add *Literacy for Anywhere* books into the collection. Levels are based on the following study: *Supplemental Information for Appendix A of the Common Core State Standards for English Language Arts and Literacy: New Research on Text Complexity.*

Literacy for Anywhere	U.S. Common Core Band	The Lexile Framework®	Flesch-Kincaid
Starter	Very basic books for those just starting!		
1	<2nd	<420	<1.98
2	2nd - 3rd	420 - 620	1.98 - 3.5
3	2nd - 3rd	620 - 820	3 - 5.3
4	4th - 5th	740 - 880	4.5 - 6.1
5	4th - 5th	850 - 1010	5.5 - 7.7

Clouds

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Clouds

Level 3

Look up at the sky. In many places you will see clouds. There are many different types of clouds. They are all different shapes and sizes.

Some clouds are fluffy, while others are wispy. Some are big and others are small. Some even resemble familiar shapes.

Have you ever wondered how clouds are formed? Clouds are made of evaporated water. Evaporation is when water changes from liquid to gas.

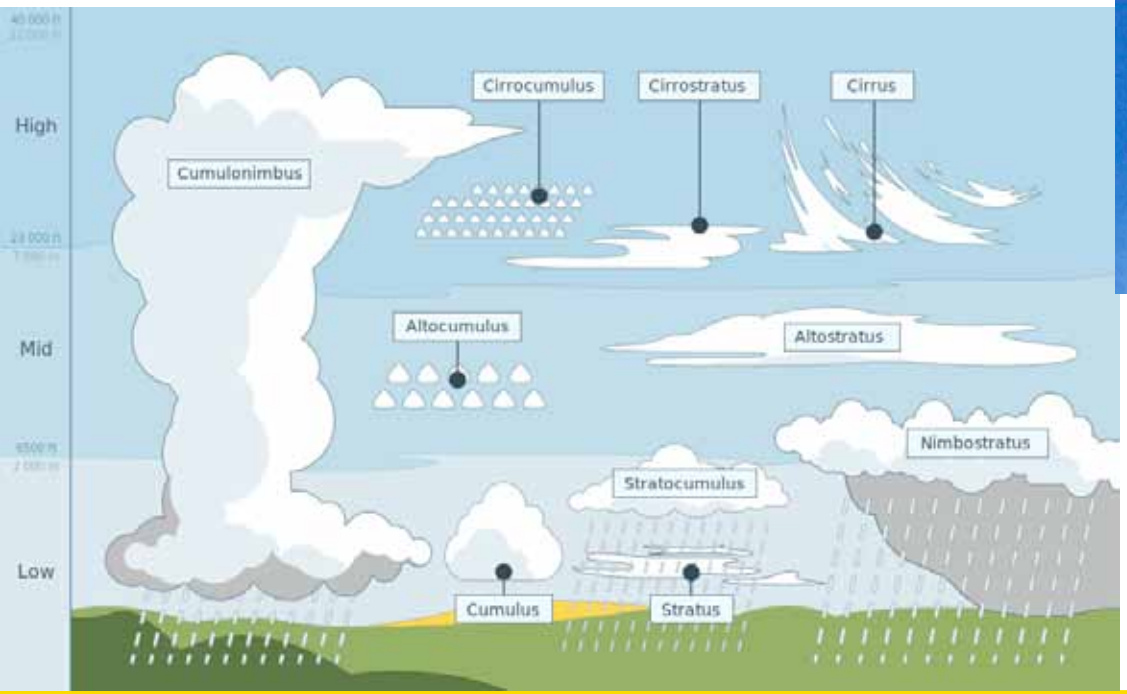
Water evaporates from different sources all around you, like lakes, rivers, and the ocean. Can you guess the main source of water for clouds?

The main source is the ocean. This is because the ocean makes up such a large part of the world. Seventy-one percent of our earth is covered by ocean.

Water evaporates and becomes gas. This gas rises and mixes with particles in the air. It rises and rises until it cools and collects in one part of the sky. This forms a cloud.

The kind of cloud that forms depends on the environment. Different clouds form at different heights. They change depending on the temperature, too.

There are three major types of clouds: cirrus clouds, stratus clouds, and cumulus clouds. Each type of cloud looks different. Some are found high in the sky; others are close to the ground.



This is a cirrus cloud. Cirrus clouds are the highest clouds in the sky. The higher elevation and winds cause them to be wispier.

These are stratus clouds. Stratus clouds are low in the sky. They are flat and near the ground. Fog is a stratus cloud.

This is a cumulus cloud. Cumulus clouds are the puffiest clouds. The bottom is often flat and they can have tall peaks at the top.

One type of cumulus cloud is the cumulonimbus cloud. You may also know these as rain clouds.

Rain, snow, hail, and sleet are all different forms water can take as it falls from the clouds. The word for water falling from the sky is precipitation.

Precipitation occurs when too much water collects in the cloud. The cloud can no longer hold all the water and it falls to the ground. Temperatures often control the type of precipitation that forms.

Snow is made when it is cold enough for the water in clouds to freeze. Freezing high in the air makes water turn into tiny crystal shapes. If they don't melt while they fall, it snows.

Hail also forms in cold temperatures. Hail looks like ice rocks. Water in clouds becomes hail because of strong winds. The wind blows the frozen water back up into the sky. It joins other ice crystals and gets bigger. This happens until it gets too heavy to be blown back up and falls to the ground.

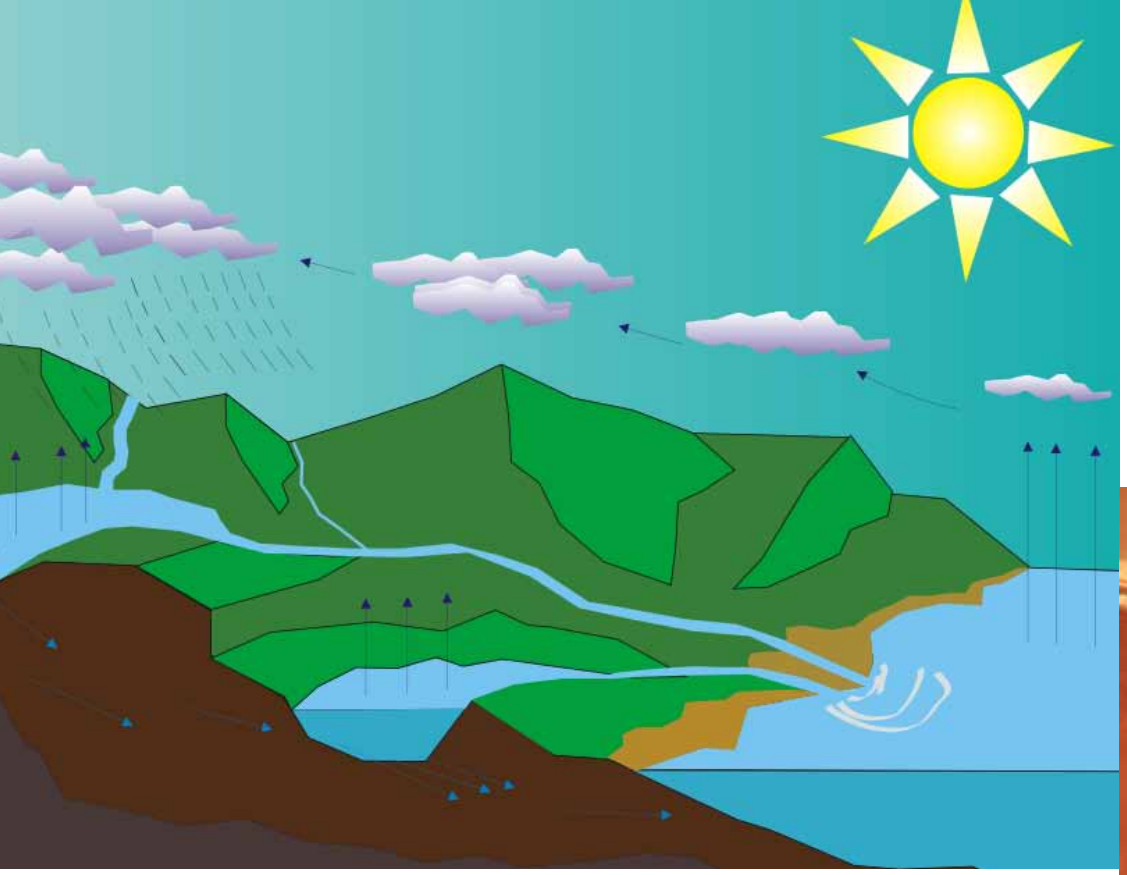
Sleet occurs when a layer of the air is warm. The water begins by falling from the cloud and freezing. It passes through a warm layer and melts. Then it freezes again as it falls.

During some storms you see flashes of lightning. Lightning is an electrical current that is made during thunderstorms.

Water droplets within the cloud move and bump into each other. As they move, electricity builds up. The cloud has a negative charge. The ground has a positive charge. Negative and positive charges attract. These two charges connect and create the flash of electricity that you see.

Thunder occurs because of lightning. Lightning creates heat in the cloud which expands the air around it. This makes a loud boom, which is thunder.

Clouds are very important. They help maintain the Earth's climate. They reflect and absorb the sun's rays. They regulate the amount of sunlight that hits the surface of the earth.



Clouds also help move water from one place to another. If there weren't any clouds, wind, and rain, water would all drain into the ocean and stay there forever. Clouds are how water travels to the top of a mountain or the start of a river. This is called the water cycle.

All the water you see used to be part of a cloud and will be part of a cloud again one day. Every time you drink, you can thank a cloud!

Clouds

Review Questions!

1. What are clouds made of?

2. What makes hail grow so big?

3. How do clouds help us?

4. What do you call a cloud that is near the ground?

5. What do you call a cloud that is very high?

6. Where does the water in clouds come from?

Clouds

Art Project!

Draw three types of clouds and one type of precipitation. In your drawing, write the names of each cloud and the precipitation as a label. Show someone your drawing and explain why each cloud is the way it is.

Clouds

Hands on!

Is it going to rain soon? Take a jar or cup and leave it outside in the rain (make sure it doesn't fall over!) When the rain is over, take a ruler and measure how many centimeters filled the cup.

Now you're a weather scientist and can measure rain!

Attributions

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