

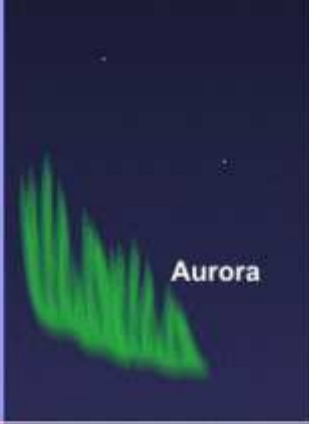


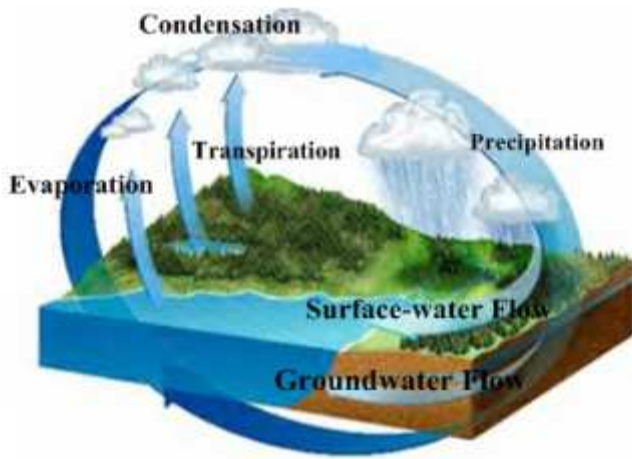


Exosphere	 <p>800 km</p>	<ul style="list-style-type: none"> -The least air pressure -Satellites -Above the exosphere is space -Colder 	<div data-bbox="797 142 1484 180">Name _____</div> <div data-bbox="797 201 1507 331"> <h2>Fast Facts #7</h2> <h3>The Atmosphere</h3> </div> <div data-bbox="797 373 1507 1087"> <p>Earth's atmosphere is the layer of gases that surrounds the planet and makes conditions on Earth suitable for living things.</p> <p>Nitrogen (78%) and oxygen (21%) are the most common gases in the atmosphere. They are found in all the layers of the atmosphere.</p> <p>Air pressure increases as you travel from the exosphere to the troposphere.</p> <p>Weather only occurs in the troposphere.</p> <p>Ozone is a form of oxygen that is found in the stratosphere. It absorbs energy from the sun and warms the air.</p> <p>Water vapor and carbon dioxide are only found in the troposphere. They are the gasses necessary for weather to occur.</p> </div> <div data-bbox="797 1108 1507 1940"> <h3>Solar Energy</h3> <p>Solar energy (the sun) is the driving energy source for heating Earth and for the circulation of the Earth's atmosphere.</p> <ul style="list-style-type: none"> ➤ Some of the Sun's energy coming through the atmosphere is reflected or absorbed by gases and/or clouds in the atmosphere. ➤ The land heats up and releases its heat fairly quickly, but water needs to absorb lots of solar energy to warm up. This property of water allows it to warm more slowly but also to release heat more slowly. It is water on Earth that helps regulate the temperature of Earth's atmosphere. ➤ Solar energy that is absorbed by Earth's land and water surfaces is changed to heat that moves/radiates back into the atmosphere (troposphere) where the heat cannot be transmitted through the atmosphere so it is trapped. This process is known as the Greenhouse Effect. </div>
Thermosphere	 <p>690 km</p> <p>Shuttle</p> <p>Aurora</p>	<ul style="list-style-type: none"> -Very hot -The space shuttle orbits here -The air is very thin -Less air pressure 	
Mesosphere	 <p>80 km</p> <p>Meteors</p>	<ul style="list-style-type: none"> -The coldest layer -Meteoroids burn up because of friction with the air -Less air pressure 	
Stratosphere	 <p>50 km</p> <p>Weather Balloon</p>	<ul style="list-style-type: none"> -Ozone is located here -Cold except in the upper part where the ozone is located -Planes fly here -Weather balloons burst -Less air pressure 	
Troposphere	 <p>18 km</p> <p>Mount Everest</p>	<ul style="list-style-type: none"> -The most air pressure -All weather occurs here -Water vapor and carbon dioxide -Colder as altitude increases 	

The Water Cycle






Evaporation/Transpiration: Water enters the atmosphere as water vapor through **evaporation** and **transpiration** (plants releasing water vapor).

Condensation: Condensation happens in the atmosphere as water vapor changes into water droplets. Condensation causes clouds to form. **Dew** forms when water vapor condenses onto a surface. **Frost** forms when water vapor changes from gas directly to ice crystals on a surface where the temperature is freezing or below.

Precipitation: Water droplets fall from the clouds which were formed through condensation. The

condensed water droplets fall as various forms of precipitation such as rain, snow, freezing rain, sleet, or hail, depending on the weather conditions. Temperatures in the clouds and atmosphere create the different forms of precipitation.

Run-off: Precipitation falling on land surfaces always attempts to move back toward sea level. If the ground is not porous and the water can't be absorbed, the water is called **surface-water flow**. **Surface-water flow** also happens when it rains too fast for the ground to absorb the water. **Groundwater flow** occurs when the surface is porous and allows the water to be absorbed into the ground. There is lots of space in the soil to hold the water.

Cumulus Clouds	Cirrus Clouds	Stratus Clouds
		
<p>Cumulus clouds are formed at medium or low elevation. They are puffy with flat bottoms. When they are white they often signal fair weather. When they are darker they may signal rain or thunderstorms.</p>	<p>Cirrus clouds form at high elevations. They are wispy clouds usually consisting of ice crystals. They signal fair weather and may also signal the approaching warm front.</p>	<p>Stratus clouds form at medium or low elevation. They spread out layer upon layer covering a large area. As stratus clouds thicken, precipitation usually occurs over that area.</p>
<p>Many clouds are combinations of the three basic shapes. Prefixes and suffixes are added to name some of these clouds. -nimbus means rain, examples are cumulonimbus or nimbostratus. A cumulonimbus cloud (a thunderhead) is often part of a thunderstorm and may accompany a cold front -alto indicates clouds that form at 2-6 kilometers up in the atmosphere, examples are alto cumulus or altostratus Alto means "found in the middle layer" -Fog is clouds that form at or near the ground.</p>		