

TA12B - Teach About Water and Precipitation

Use with BrishLab ES12B
Done By: Coach

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1- How is wind formed? Use the words heating and rises.

The sun heats the ground surface of the earth which then heats up the air above it. The degree of solar heating varies at different points on the earth's surface.

Hot air rises, creating low pressure. As hot air rises, it cools, moves horizontally and eventually falls down, creating high pressure at ground level.

These variations in pressure push the air at ground level to move from high pressure areas to low pressure areas.

This air movement is wind.

The Sun heats Earth's surface unevenly causing different rising air masses. Wind is the balancing of the pressures.

[Image Link](#)

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2- What is the difference between heating evaporation and condensation?

When water goes from liquid to gas, it goes to vapor or evaporates. When it goes the other way, it condenses.

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3- Name three kinds of frozen precipitation.

Types of Frozen Precipitation

Snow
Snow falls when water vapor condenses as ice crystals. The air temperature is below freezing all the way to the ground, so the ice crystals remain frozen. They fall as flakes.

Sleet
Sleet forms when snow melts as it falls through a layer of warm air and then refreezes. It turns into small, clear ice pellets as it passes through a cold layer near the ground.

Freezing Rain
Freezing rain falls as liquid water. It freezes on contact with cold surfaces near the ground. It may cover everything with a glaze of ice. If the ice is thick, its weight may break tree branches and pull down power lines.

Hail
Hail forms when strong updrafts carry rain high into the troposphere. The rain freezes into balls of ice called hailstones. This may happen over and over again until the hailstones are as big as baseballs. Hail forms only in cumulonimbus clouds.

Snow, Hail and Sleet are all frozen precipitation

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4- How are hail stones formed and how big can hail stones get?

Hail forms in thunderstorms when rain freezes into balls of ice - sometimes as large as 5".

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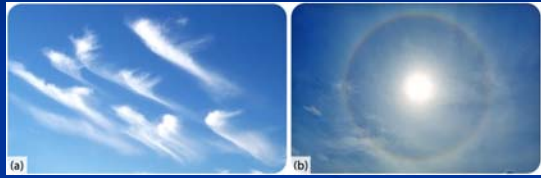
5- How can rain break power lines?

Freezing rain builds up on lines and they sometime break.

[Image Link](#)

6- Describe **cirrus** clouds and a way to remember them.

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Cirrus clouds are feathery - like feathers on a **CIRCUS** performer's hat!

[Image Link](#)

7- Describe **stratus** clouds and a way to remember them.

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Stratus comes from the word Strata, to stretch.

[Image Link](#)

8- Describe **cumulus** clouds and a way to remember them.

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Cumulus clouds are nice weather clouds. You want to **Accumulate** these!

[Image Link](#)

9- Name **three** important factors in weather.

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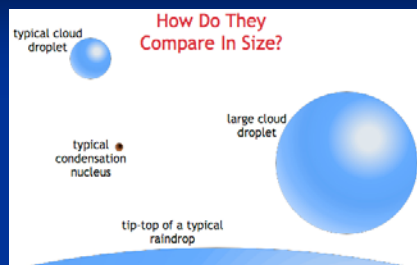


Temperature, humidity, clouds and precipitation all contribute to the weather.

[Image Link](#)

10- What is in the **center** of any precipitation?

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A tiny piece of dust (condensation nucleus) is at the center of each raindrop or snowflake.

[Image Link](#)

Wrap it up: Draw, color and label a diagram of three cloud types.



Cirrus (a), Stratus (b) and Cumulus (c) clouds

[Image Link](#)