



Earth Science Virtual Learning

**HS Earth Science/
Thunderstorms**

April 28, 2020



High School Earth Science
Lesson: April 28, 2020

Objective/Learning Target:

Students will understand how Thunderstorms are generated.

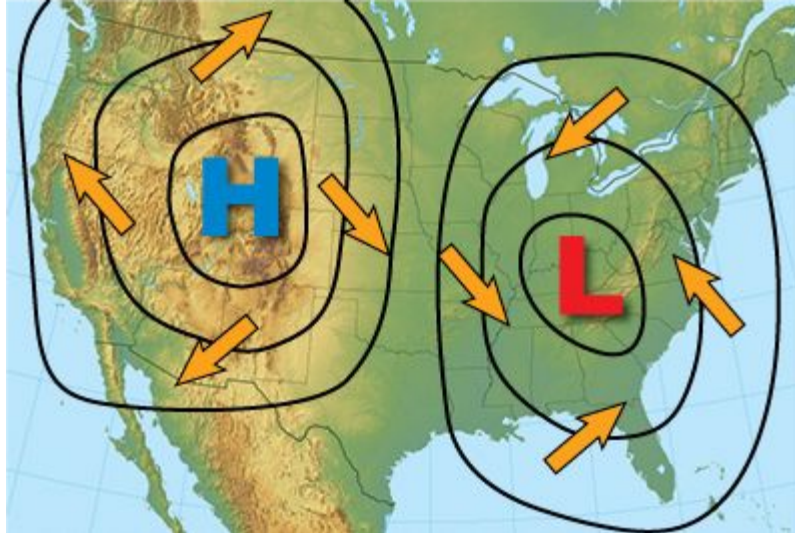
Bellwork: Answer in your notebook or sheet of paper

Bellwork 1:

What does air do in a High Pressure System?

Bellwork 2:

What does air do in a Low Pressure System?



Bellwork Questions/Answers

Bellwork 1: What does air do in a High Pressure System? -In a high pressure system, air will sink and warm. This will decrease the likelihood of precipitation. Air will also move clockwise around the pressure.

Bellwork 2: What does air do in a Low Pressure System? -In a low pressure system, air will rise and cool. This will condense to create clouds and increase the likelihood of precipitation. Air will also move counterclockwise around the pressure.



Thunderstorms!

→ Did you know that at any moment, roughly 2,000 Thunderstorms are occurring Worldwide!!

Please watch the video over basic [thunderstorms](#) and answer the questions that follow in your notebook or sheet of paper.

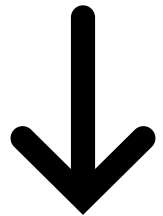


Thunderstorm Video Questions

- 1) What are Thunderstorms?
- 2) What are the 4 types of Thunderstorms?
- 3) How do all thunderstorms develop?
- 4) What kind of pressure system creates thunderstorms?
- 5) How do thunderstorms regulate the electrical balance on Earth?

Thunderstorm Video Questions/Answers

- 1) What are Thunderstorms? -Thunderstorms are rain showers with thunder and lightning.
- 2) What are the 4 types of Thunderstorms? -The 4 types of thunderstorms are 1) single cell, 2) multi-cell, 3) squall line, 4) supercell.
- 3) How do all thunderstorms develop? -Warm air will rise, called an updraft, bringing moisture from the surface of Earth upward, creating clouds. Some thunderstorms can be 10 miles high.
- 4) What kind of pressure system creates thunderstorms? -Low pressure system



5) How do thunderstorms regulate the electrical balance on Earth?

-Positive and negative charges develop in clouds where a build up of opposite charges will lead to a transfer of electrons in the form of lightning. This lightning is released fast enough it will break the sound barrier. That is what we hear (thunder).

More Thunderstorm Information

Click on this [website](#) and take notes in your notebook or piece of paper. After reading this page, please click at the bottom to move to the next slide called “Thunderstorm Types.” You will use your knowledge to answer the questions on the next slide.



More Thunderstorm Information: Questions

- 1) What is required for thunderstorms to form?
- 2) What are the 3 stages of a thunderstorm development?
- 3) How do single cell storms differ from multi-cell storms?
- 4) What is a bow echo?

More Thunderstorm Information: Questions/Answers

- 1) What is required for thunderstorms to form? -Lots of moisture, rising unstable air, a lifting mechanism
- 2) What are the 3 stages of a thunderstorm development? -Developing: a cumulus cloud is caused by rising air, very little rain occurs in this stage
-Mature stage: updraft continues, but precipitation will fall that causes downdraft. Likely to have hail, heavy rain, lightning, strong winds
- 3) How do single cell storms differ from multi-cell storms? -Single cell storms are small and brief. They have heavy rain, lightning, but last no more than 1 hour. Multi-cell storm a common but have new updrafts that form along moving storm causing it to continue to build. Whole system will last a couple of hours.



Test your knowledge

What do you know about Thunderstorms? Click [here](#) to test your knowledge!

Use these flashcards to help with [thunderstorm](#) knowledge!

How Lightning works...

As you read this [article](#), take notes in your notebook or piece of paper over how Lightning is generated during storms.

Watch this [video](#) to further discuss lightning and what occurs when it is released



Tips in how to stay safe in a Lightning Storm

Watch this video for [lightning safety!](#)

What happens when you're [struck by lightning?](#)