

11.1 What is Earth Science?



Summarize main points from each video.

Video Title / topic _____

Video Title / topic _____

Video Title / topic _____

Topic Introduction



Summarize your understanding of each paragraph.

Earth is the mighty planet upon which we all live. Only recently have humans begun to understand the complexity of this planet. In fact, it was only a few hundred years ago that we discovered that Earth was just a tiny part of an enormous galaxy.

Earth Science deals with any and all aspects of the Earth. Our Earth has molten lava, icy mountain peaks, steep canyons and towering waterfalls. Earth scientists study the atmosphere high above us as well as the planet's core far beneath us.

Earth scientists study parts of the Earth as big as continents and as small as the tiniest atom. In all its wonder, Earth scientists seek to understand the beautiful sphere on which we thrive.

Earth scientists specialize in studying just a small aspect of our Earth. Since all of the branches are connected together, specialists work together to answer complicated questions.

Read/Summarize Text



1. Read the passage.
2. Underline key expressions in each sentence.
3. Re-write each word (or expression) you underlined.
4. Summarize the passage.

Title of Passage.

Geology is the study of the solid matter that makes up Earth. Anything that is solid, like rocks, minerals, mountains, and canyons is part of geology.

Geologists study the way that these objects formed, their composition, how they interact with one another, how they erode, and how humans can use them. Geology has so many branches that most geologists become specialists in one area. For example, a mineralogist studies the composition and structure of minerals such as halite (rock salt), quartz, calcite, and magnetite .

https://en.wikibooks.org/wiki/High_School_Earth_Science/Earth_Science_and_Its_Branches

Re-write words you underlined

Using a complete sentence, summarize or rephrase the passage

Read Text for Comprehension

Read this article for deeper understanding. No summary is required, although you may want to circle, underline, or mark key ideas and words.

Oceanography is the study of everything in the ocean environment. More than 70% of the Earth's surface is covered with water. Most of that water is found in the oceans. Recent technology has allowed us to go to the deepest parts of the ocean, yet much of the ocean remains truly unexplored.

Climatologists help us understand the climate and how it will change in the future in response to global warming. Oceanographers study the vast seas and help us to understand all that happens in the water world. As with geology, there are many branches of oceanography. Physical oceanography is the study of the processes in the ocean itself, like waves and ocean currents

Meteorologists don't study meteors — they study the atmosphere! Perhaps this branch of Earth Science is strangely named but it is very important to living creatures like humans. Meteorology includes the study of weather patterns, clouds, hurricanes, and tornadoes. Using modern technology like radars and satellites, meteorologists work to predict or forecast the weather. Because of more accurate forecasting techniques, meteorologists can help us to prepare for major storms, as well as help us know when we should go on picnics.

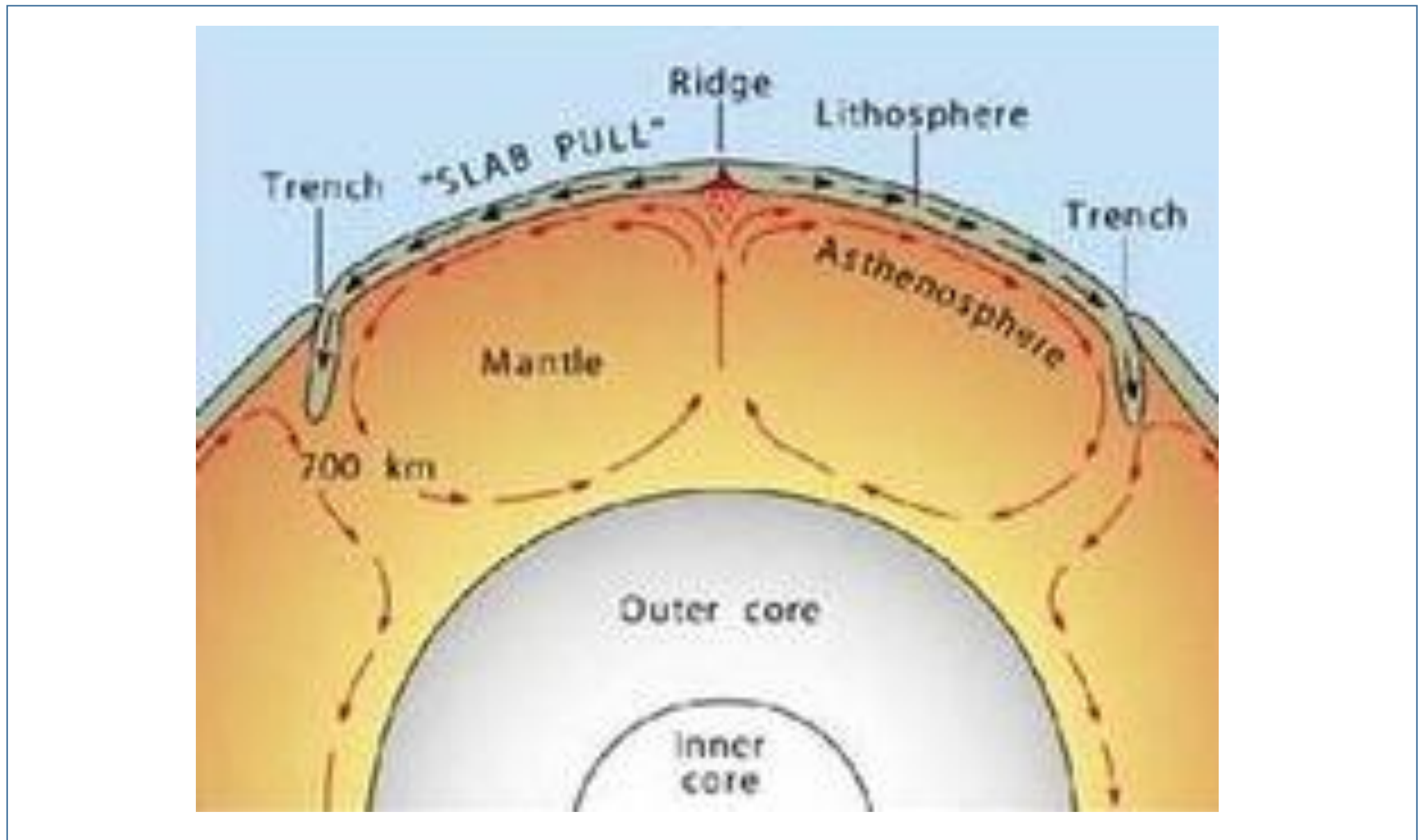
Atmospheric scientists study the whole atmosphere, which is a thin layer of gas that surrounds the Earth. Most of it is within about 10 - 11 kilometers of the Earth's surface. Earth's atmosphere is denser than Mars's thin atmosphere, where the average temperature is -63°C , and not as thick as the dense atmosphere on Venus, where carbon dioxide in the atmosphere makes it hot and sulfuric acid rains in the upper atmosphere. The atmosphere on Earth is just dense enough to even out differences in temperature from the equator to the poles, and contains enough oxygen for animals to breathe.

Astronomers have proven that our Earth and solar system are not the only set of planets in the universe. By 2007, over a hundred planets outside our solar system had been discovered. Although no one can be sure how many there are, astronomers estimate that there are billions of other planets. In addition, the universe contains black holes, other galaxies, asteroids, comets, and nebula. As big as Earth seems to us, the entire universe is vastly greater. Our Earth is an infinitesimally small part of our universe.

Draw Illustration



Copy and Label the Illustration in the Space Provided



<https://www.pinterest.com/pin/561683384748845787/>

Draw (Copy) the Illustration Here

Interpret a Graph



Write the title of the graph _____

Circle the type of chart this represents

Bar Chart Line Chart Pie Chart Other

If applicable,

What does the X-axis represent _____

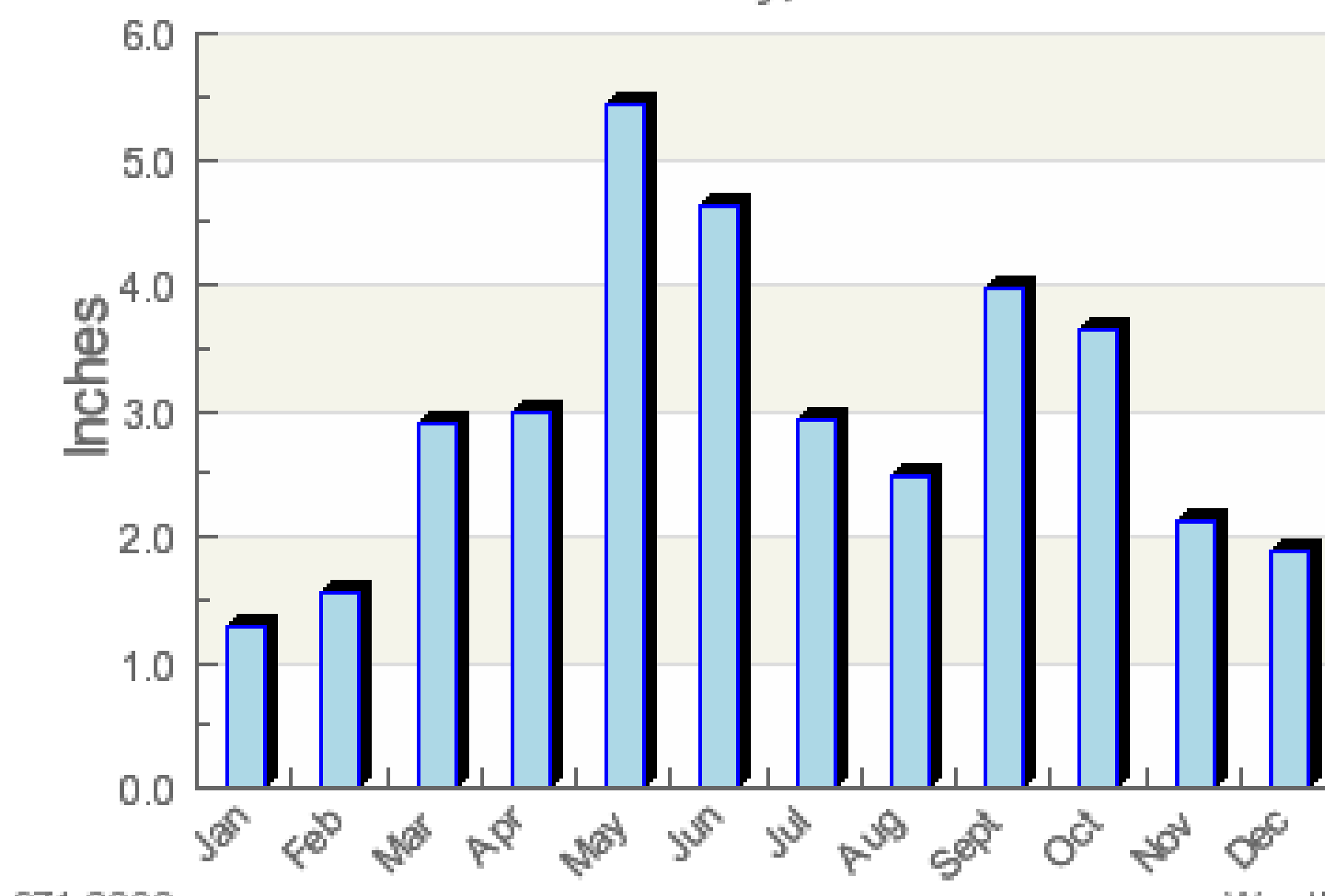
What does the Y-axis imply _____

Summarize what this graph represents or conveys

<http://www.rssweather.com>

Average Monthly Precipitation

Oklahoma City, Oklahoma



Show-Off Your Smarts!



Instructions

- Complete as an individual or small group.
- Discuss your ideas/answers/responses in a small group.
- Select one person to present your responses to the class.

Q1. How can this information be applied to a young-person's life?

Q2. How does this information apply to (or impact) communities?

Q3. When do scientists need to apply this information? How?

Q4. How would a person from 100 years ago view this information?

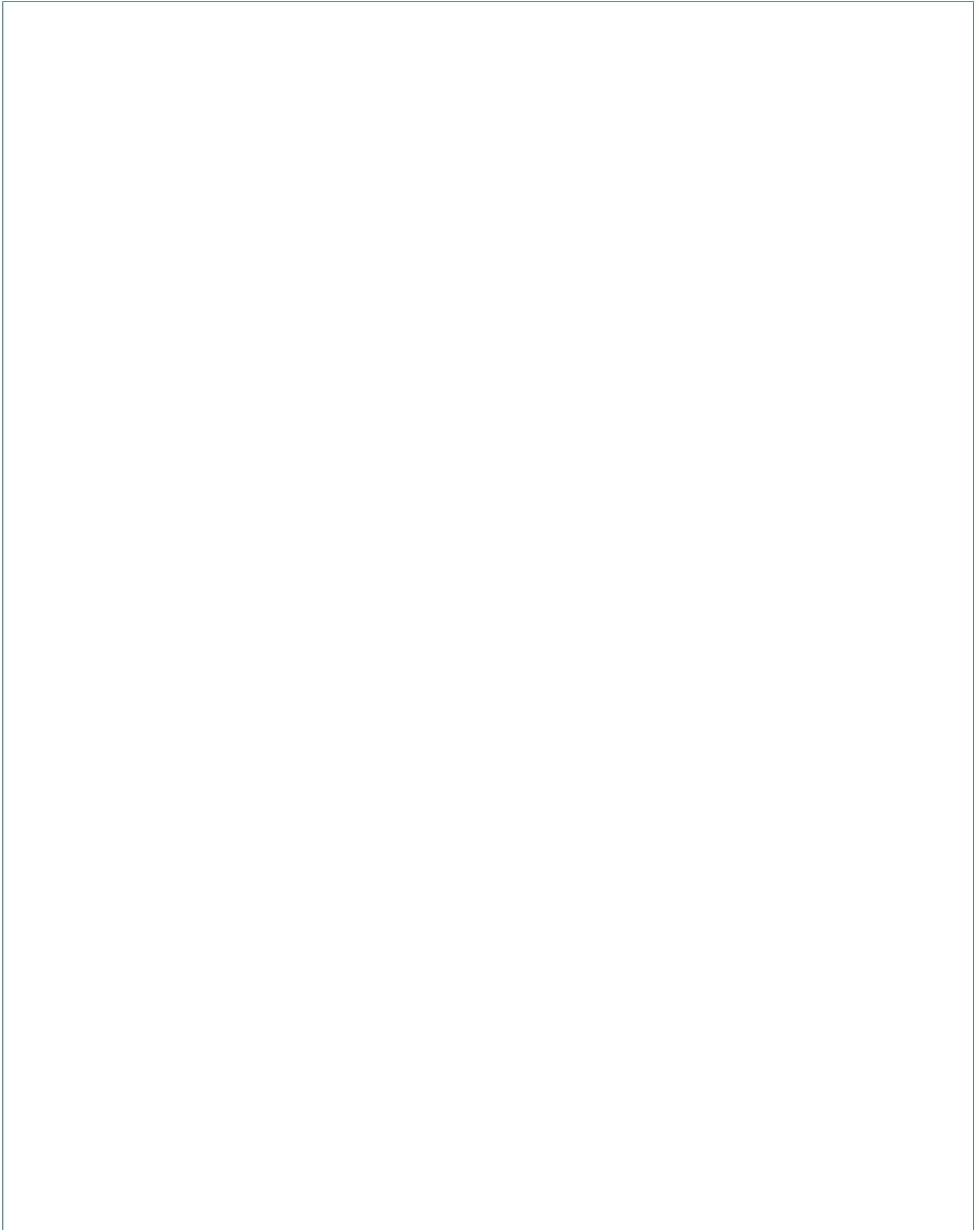
Q5. How does this topic connect to other science topics or math?

Write down at least three words introduced or covered by this topic.

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

Make a Poster

In the space provided here, create/draw a poster which conveys the concepts you have learned on this topic.

A large, empty rectangular box with a thin blue border, intended for the student to create a poster. The box occupies most of the page below the instructions.