

42.1 Planet Earth I

Physical
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 third planet from the Sun and the only object in the Universe known to harbor life. According to radiometric dating and other sources of evidence, Earth formed over 4.5 billion years ago.

Earth's gravity interacts with other objects in space, especially the Sun and the Moon, Earth's only natural satellite. Earth revolves around the Sun in 365.26 days, a period known as an Earth year.

The gravitational interaction between the Earth and Moon causes ocean tides, stabilizes the Earth's orientation on its axis, and gradually slows its rotation. Earth is the densest planet in the Solar System and the largest of the four terrestrial planets.

Some geological evidence indicates that life may have arisen as much as 4.1 billion years ago. Since then, the combination of Earth's distance from the Sun, physical properties, and geological history have allowed life to evolve and thrive.

Read/Summarize/Define



1. Read the passage.
2. Underline key expressions.
3. Define each expression listed.

Wikipedia: Earth.

Earth's atmosphere and oceans were formed by volcanic activity and outgassing. Water vapor from these sources condensed into the oceans, augmented by water and ice from asteroids, protoplanets, and comets.

1

2

Atmosphere

3

Oceans

Outgassing

Water vapor

Condensed

Asteroids

Protoplanets

Comets

Read Text / Make Bar Charts

Read this article for deeper understanding. Complete the matrix using data from the 1st paragraph. Make a bar chart of the data.

Tectonic plates

Earth's mass is approximately 5.97×10^{24} kg. It is composed mostly of iron (32.1%), oxygen (30.1%), silicon (15.1%), magnesium (13.9%), sulfur (2.9%), nickel (1.8%), calcium (1.5%), and aluminum (1.4%), with the remaining 1.2% consisting of trace amounts of other elements.

Due to mass segregation, the core region is estimated to be primarily composed of iron (88.8%), with smaller amounts of nickel (5.8%), sulfur (4.5%), and less than 1% trace elements.

Name	Symbol	Percent
Iron	Fe	
Oxygen		30.1%
Silicon	Si	15.1%
	Mg	
Sulfur		
Nickel		
	Ca	
Aluminum		
Other	Other	1.2%

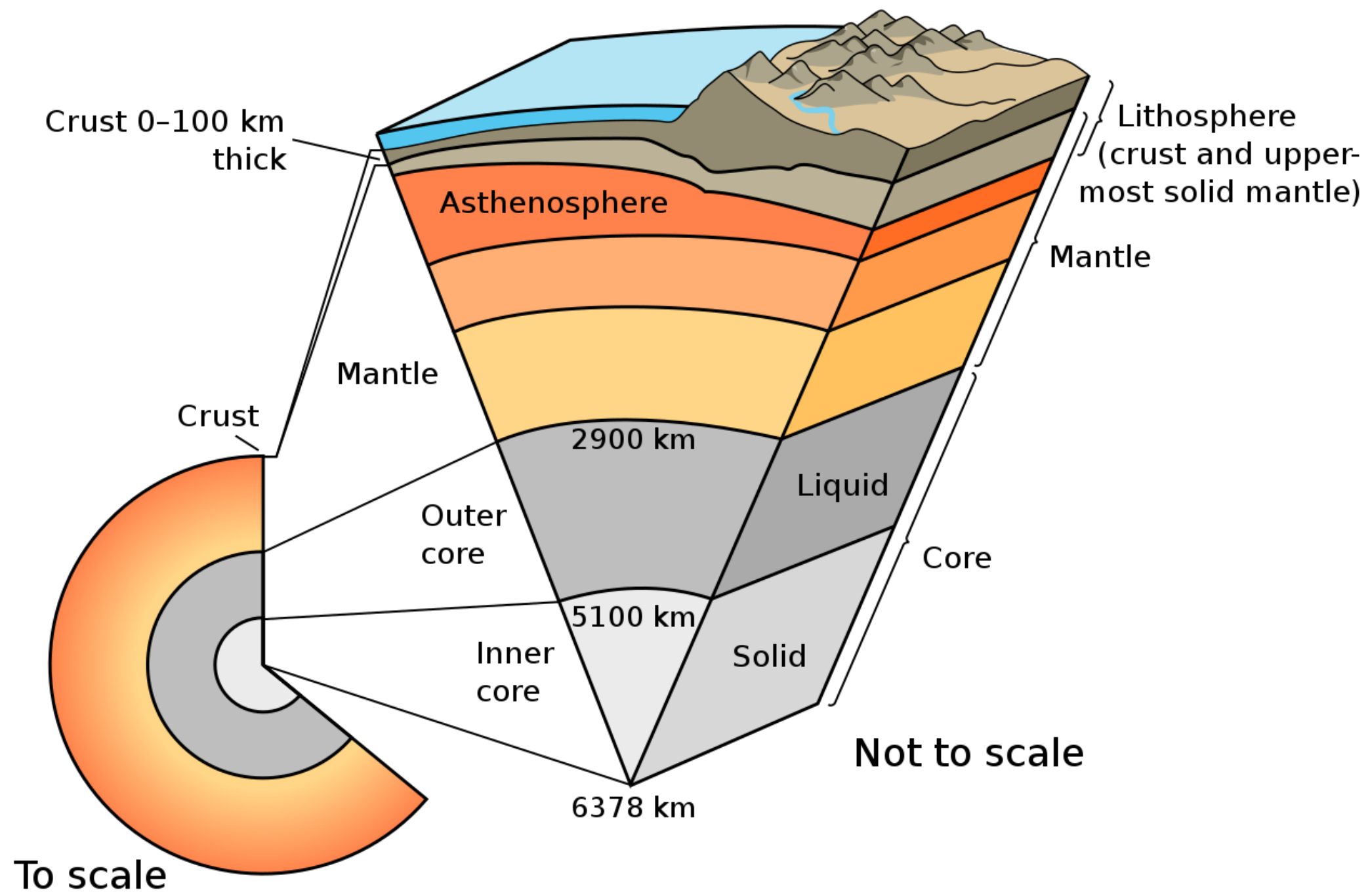
Fe O Si Mg S Ni Ca Al other

Complete this matrix *then* Make a bar chart of the data

Draw Illustration



Copy and Label the Illustration in the Space Provided

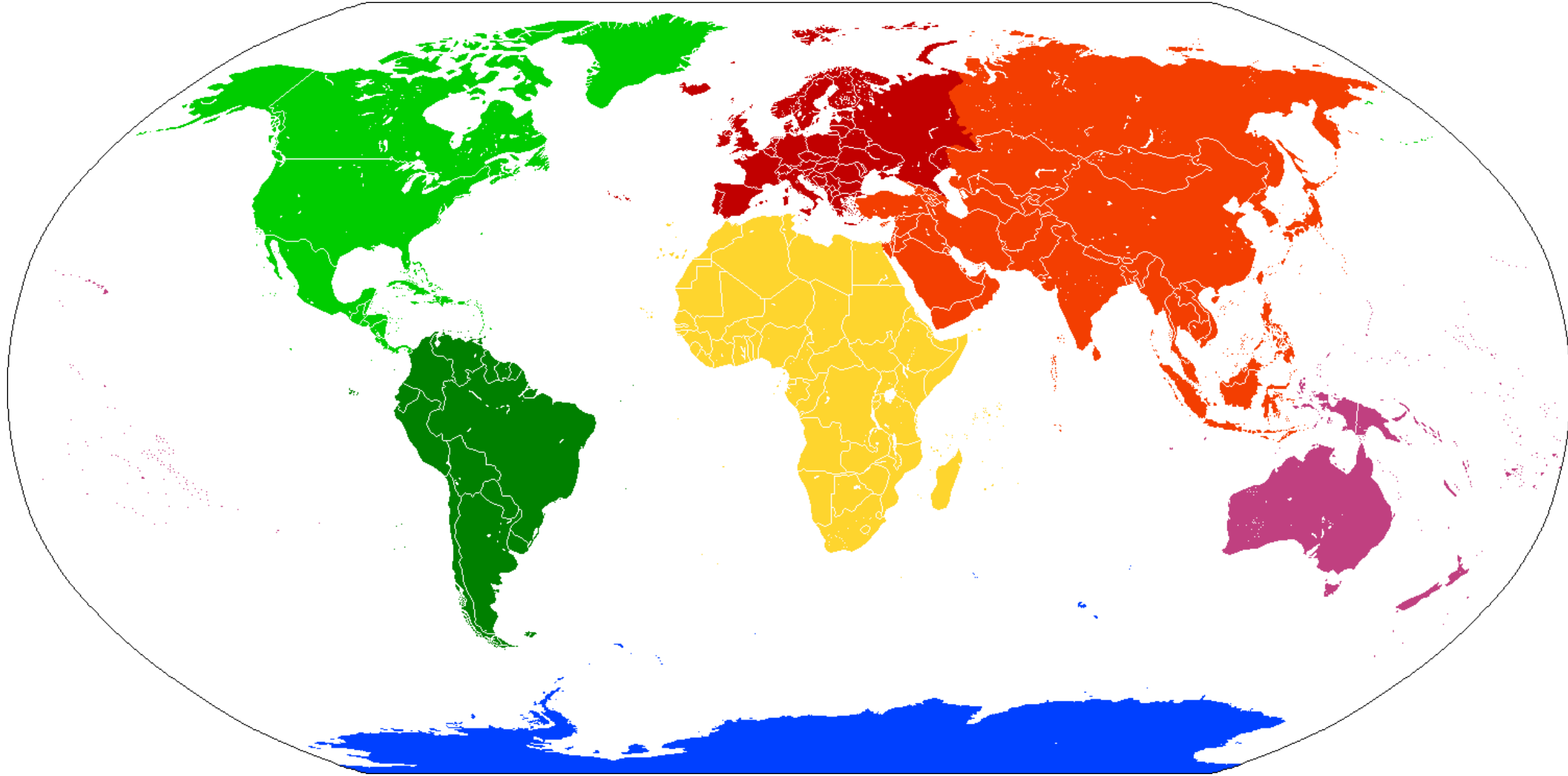


Draw (Copy) the Illustration Here

Draw Illustration



Copy and *Label* the Illustration in the Space Provided



Draw (copy) the illustration. Label each continent.

Show-Off Your Smarts!



Instructions

- Complete as an individual. Prepare to discuss in class.
- Use critical thinking skills (rational, skeptical, & unbiased).

Q1. How might an understanding of Earth's major elements be applied to a young adults life? List at least two ways.

Q2. Where are some locations in the world that might rely on information about Earth's major elements? Why?

Q3. List several ways a scientist might use their understanding of Earth's composition to improve their scientific efforts.

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

Make a Poster

In the space provided here, create/draw a poster which conveys the concepts you have learned on this topic. Use a process, pyramid, relationship diagram, and one additional sketch of any kind.

Process

Pyramid

Relationship

Sketch