

# Absolute Location

**Cross-Curricular Focus: History/Social Sciences**



Where on Earth are you? Navigators use lines of **latitude** and lines of **longitude** to locate places. Lines of latitude run east and west around Earth. On a map or globe, these lines appear as running sideways or horizontally. Lines of longitude run north and south around Earth. These lines go up and down or vertically on a map or globe. These lines create an imaginary graph paper on the Earth. They make it possible to find an absolute, or exact, location on Earth. They even allow us to give an absolute location to a place out in the middle of the ocean.

Lines of latitude tell us how far north or south of the Equator we are. Sailors have used primitive navigation tools, like astrolabes, since ancient times. The astrolabe uses the sun and stars to find an approximate location. Using such tools, they have been able to approximate their distance from the equator. Although their instruments may not have been the high quality we have now, they were incredibly accurate for their time.

Lines of longitude tell us how far east or west of the prime meridian we are. Sailors constantly looked for new ways to increase their navigation skills. Still, it wasn't until the 18th century they were able to measure degrees of longitude. They would have been very envious of the technology available to us today.

When we use lines of latitude and longitude together, we can get a very precise location. If we want to identify the absolute location of a point, we look where the latitude and longitude lines cross nearest to that point. We use the coordinates for that point as its address. Many maps today include degrees of latitude and longitude.

Another tool that helps us navigate is the **magnetic compass**. The magnetic compass was developed in China. In medieval times, sailors brought it from China to Europe during their regular trade **expeditions** to Asia. This technology made worldwide travel easier and encouraged more exploration.

Name: \_\_\_\_\_

**Answer the following questions based on the reading passage. Don't forget to go back to the passage whenever necessary to find or confirm your answers.**

- 1) What is the function of lines of latitude and longitude? \_\_\_\_\_  
\_\_\_\_\_
- 2) Which imaginary lines run north and south?  
\_\_\_\_\_  
\_\_\_\_\_
- 3) Which imaginary lines are based on the Equator?  
\_\_\_\_\_  
\_\_\_\_\_
- 4) Explain what is meant by an absolute location.  
\_\_\_\_\_  
\_\_\_\_\_
- 5) In your opinion, which invention was more important: the astrolabe or the magnetic compass? Why? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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Name: Key

Answer the following questions based on the reading passage. Don't forget to go back to the passage whenever necessary to find or confirm your answers.

**Actual wording of answers may vary.**

1) What is the function of lines of latitude and longitude? to allow us to find an absolute

location of a point on Earth

2) Which imaginary lines run north and south?  
longitude

3) Which imaginary lines are based on the Equator?  
latitude

4) Explain what is meant by an absolute location.  
It is an address of longitude and latitude of a place on Earth

5) In your opinion, which invention was more important: the astrolabe or the magnetic compass? Why?  
student's choice