

Why Can't Everyone Around the World See the Transit?

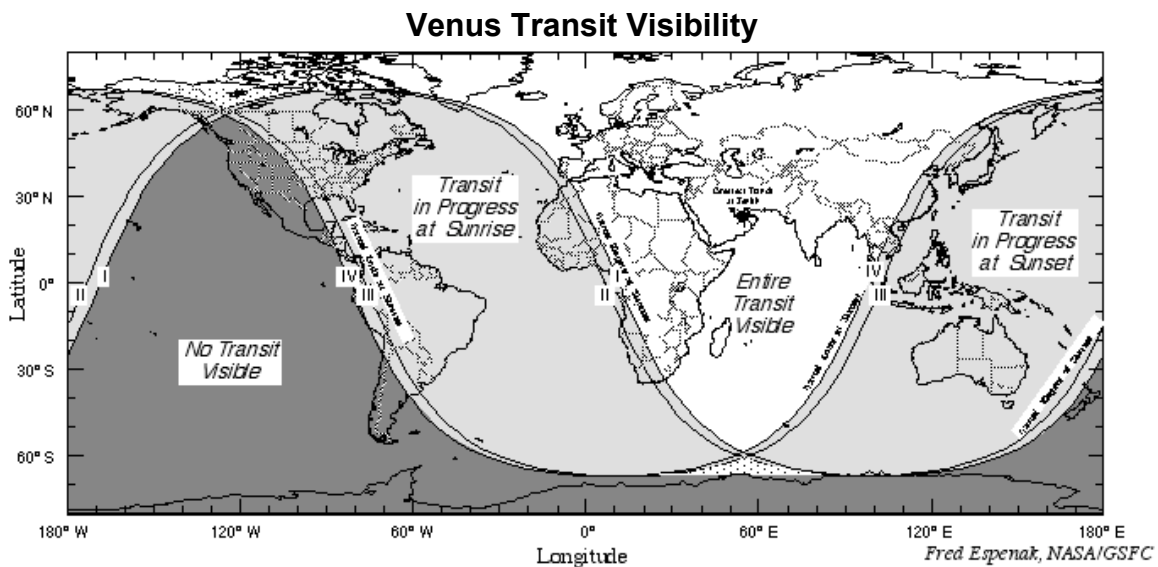
Grade levels: 5–12

Time: 45 minutes

Key concepts: Day and night, Earth rotation, sunrise and sunset, map reading

Activity

Below is a map showing the places on Earth from which the transit will be viewable. Look at the map and see what part of the transit, if any, you will be able to see from your home.



Going Further

- The transit will last just over six hours. How can you tell, by looking at this map, whether it will be day, night, sunrise, or sunset in any given place in the world during the transit?
- Why is the transit visible only in places where there is daylight?
- Why, in some places in the world, will the transit only be visible at sunrise or sunset?
- How does the rotation of the Earth affect how long you can see the transit?

Useful Web Links for This Activity

- An interactive globe where students can visualize day, night, and twilight:
<http://www.worldtime.com>
- Why does Earth have day and night? Answered by NASA's Lunar and Planetary Institute:
http://www.lpi.usra.edu/education/skytellers/day_night.shtml#about
- "What Is a Transit of Venus?" provides an in-depth explanation of how the transit works:
<http://www.exploratorium.edu/venus/question1.html>
- John Walker's "Earth and Moon Viewer" lets you see which parts of the Earth are in darkness and in sunlight in map format, with a view of Earth from the Moon or the Sun:
<http://www.fourmilab.ch/earthview/vplanet.html>

The above links are also available online:

<http://www.exploratorium.edu/venus/teacher-map.html>