Voyage around the World

Time: 50 minutes
Grade Level: 3-8
Group Size: Individual and Crews
Vocabulary: log, longitude, latitude, plot

OVERVIEW

Students will plot a course of the Euterpe around the world. The purpose of this activity is to learn about reading a chart by using longitude and latitude and to visualize where the Euterpe sailed on her voyages.

TEACHER BACKGROUND

Officers aboard the Euterpe plotted the course around the world. They used charts similar to the one on the challenge sheet to determine the ship’s route. Each degree of latitude represents 60 nautical miles. The Euterpe averaged 5.5 nautical miles/hour. A chip log measured speed by dropping a wood chip attached to knotted string behind the ship for a specific time period. Counting the knots would give an accurate speed.

The navigator would set a course based on the wind conditions rather than the exact destination. This course or heading would be conveyed to the helmsman. A sailing ship would rarely make a straight line between ports. Frequent readings with a sextant would determine the exact location and monitor the effects of currents and speed of the ship.

KEY CONCEPTS

- Latitude and longitude
- Plotting a course

MATERIALS

- Copy of worksheet and map (next pages)
- Pencils
- Rulers

ADVANCED PREPARATION

- Make copies of the chart/worksheet (next pages)

PROCEDURE

Engage: Have the students look at the chart and become familiar with latitude and longitude.

Challenge: Give the students the positions to plot on the chart. Have them plot the course that Euterpe sailed around the world.

Discussion: Have the students discuss what it is like to plot a course and the importance of the task.

Extend: How did sailors determine how long it would take them to sail from one destination to another? What are some factors to keep in mind when charting a course?
• **INTRODUCTION**

*Star of India* (as *Euterpe*) sailed around the world 21 times! There was no way to predict the length of a voyage, as it was Mother Nature and the availability of cargo that dictated her fate. Generally, the *Euterpe* would depart from London and sail to Australia and New Zealand to drop off emigrants and pick up cargo. She would either return to England or continue on to the coast of California to sell her cargo and purchase more.

Eventually, the *Euterpe* would return to London from a voyage that would last one to three years. The Captain and the crew kept a daily log of each trip, including the date, time, weather and location. On land, we use a map to guide us in travel. At sea, sailors use a chart with longitude and latitude lines to determine location and to plot a course. The longitude lines run vertically (North and South) along the chart and the latitude lines run horizontally along the chart (East and West).

• **THE CHALLENGE**

The following are course readings of a typical voyage the *Euterpe* might have taken. Using the following latitude and longitude readings, plot the voyage from London, England around the world and back to London using the world chart.

Note: All positions are in degrees.

53 N – 8 W, London, England,
15 N – 30 W, 38 S – 22 E, 50 S – 60 E, 45 S – 105 E,
38 S – 145 E, Melbourne, Australia,
30 S – 157 E, Newcastle, Australia,
45S – 170 E, Otago, New Zealand
45 S – 105 W, 30 N – 135 W,
38 N – 122 W, San Francisco, California,
33 N – 117 W, San Diego, California
WORLD CHART