

# **Lesson 2: Getting from A to B**

by Jonathan Coldoff

## **Grade Level(s)**

Grade 5

## **Lesson Overview**

In groups of 3-4 students will determine an appropriate route from their homeport to their chosen destination.

## **Learning Objectives**

Students will evaluate oceanic tides, wind and weather patterns, distance, resources and other factors as they determine the best way for their explorer to travel from their home in Europe to their destination in the New World (South or North America).

## **Standards**

CCSS.ELA-LITERACY.RI.5.1

Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.

CCSS.ELA-LITERACY.RI.5.3

Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.

Next Generation Science Standards.3-5.Engineering Design

3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.

3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

## **Preparation**

- Maps, data, and graphs for oceanic information
- Media players for the videos
- Copies of the eye witness depictions

## Materials and Resources

- Maps of oceans (Atlantic, Pacific and Southern) that include tides, wind patterns, depth and other navigational data
- Tables and graphs for the weather in those oceans
- Videos of ocean crossings depicting a variety of surface conditions (YouTube has many!!!)
- Blank world maps

### Activity 1: Where in the World? (15 Minutes)

Students will locate their user's home and determine the port that they will use to embark. They will also determine the location(s) in the New World where they wish to travel. These decisions need to relate directly to their POV statement.

### Activity 2: Pushes and Pulls (20 Minutes)

Students will research the oceanic tides, wind, and weather patterns in the Atlantic, Pacific and Southern Oceans. They should use the provided maps and any other resources available. These could include Social Studies and Geography textbooks, classroom maps, Google Earth, and the Internet. Students will view short videos depicting the environment that their user will face on their journey. These should depict a variety of conditions including calm, choppy, and stormy seas.

### Activity 3: Which Way to Go? (15 Minutes)

Students will identify possible routes that their explorer could take to satisfy their chosen POV. These will be drawn on a blank map of the world using their signature color. Groups will need to discuss each route's viability with close attention to the tides and wind patterns in that area of the globe. Teams should decide on one route that their explorer should take.

## Troubleshooting

Once again, make sure that kids are using their signature color and that everyone is involved. Student understanding of ocean conditions will depend on the individual's

experience with the ocean. Be prepared to increase the amount of exposure and resources based on that familiarity. Deep understanding of ocean conditions is vital to designing a viable prototype.

## **Assessment**

Evaluate the route the team selected to take based on the tide and wind patterns. Have they chosen to avoid dangerous seas? Have they found port often enough? Have they chosen a safe port or is their access to their landing site improbable?