CARDINAL DIRECTIONS AND MAPS

How can you use a compass rose to describe position and movement on a map?

OVERVIEW

Students listen to a poem that uses cardinal directions. They use a compass rose to help describe locations of places on a world map.

For the complete activity with media resources, visit: http://www.nationalgeographic.org/activity/cardinal-directions-and-maps/

DIRECTIONS

1. Read aloud a poem about cardinal directions.

Engage students by reading aloud the poem “Geese on the Go” on the handout. Beforehand, ask students to listen for directional words. Ask them to raise their hands when they hear one. You can also give students a copy of the handout or project the poem. Invite the class to read aloud the last two lines of each verse in response to the question in the first two lines, which you will read.

2. Introduce the compass rose.

Write the word “rose” on the board and ask students what it is. Ask if it can be something besides a flower. Write “compass” before “rose” on the board. Explain that a compass rose is a symbol that shows directions on a map.
3. Explore the World Map.

Project the map, titled The World. Ask a volunteer to point to the compass rose and name the letters around it. Explain that the N stands for “north.” Write on the board what N represents, having students help to name the other directions for S, E, and W. You can help students remember the clockwise order of the directions on a compass rose with the phrase “Never Eat Soggy Waffles.”

Explain that this map shows the world. Earth is made up of large bodies of land and water. Ask: What is farthest south on this map? (Antarctica) Point out that Antarctica is a continent—a large body of land. Ask a volunteer to come to the board and point to and name the seven continents. Ask: Which continent is to the north of South America? (North America) Which continent is to the east of Europe? (Asia) Which continent is to the west of Australia? (Africa)

Ask: What is all the way to the west on this map? (the Pacific Ocean) Explain that an ocean is a very large body of salt water, and Earth has four of them. Have students name them. Ask: Which ocean is east of Africa? (Indian) Which ocean is north of all the continents? (Arctic)

4. Have students use the compass rose.

Give each student a copy of the Using a Compass Rose worksheet. Have them use the compass rose to determine the direction words for each blank line.

Tip
Discuss how the world map is like a globe but also different from a globe. Remind students that a globe is a small model of Earth, and a world map is a drawing of Earth.

**Modification**

For students who have not been introduced to continents, countries, states, cities, and so on, offer additional support by reading aloud *Me on the Map* by Joan Sweeney or *Mapping Penny's World* by Loreen Leedy. Help students to mark their general location on a number of maps at different scales.

**Informal Assessment**

Check students' worksheets for understanding. If students need more experience with the world map, have them create the shapes of the continents out of clay, place them on paper, and draw a compass rose. Have them write four sentences using a different cardinal direction in each sentence.

**Extending the Learning**

- Show students the true cardinal directions using a compass app on a smartphone or tablet. Replicate the directions by drawing a compass rose in chalk on the classroom floor, or alternately on the playground blacktop. Review what N, S, E, and W represent. Have students refer to the drawn compass rose to follow oral directions, such as “Walk east and pull down the shade,” or “Hop three steps south and look to the left. What do you see?” Once they get the idea, invite volunteers to give the directions and call on classmates to follow them.

- Have students create as a homework assignment their own 2-D or 3-D maps of the world using their choice of media, such as paints, clay, collage, tissue paper, or other art materials. Have them include a compass rose and label the continents and oceans.
• Find your state in the collection of State MapMaker Kits. In small groups have students assemble their state and find the compass rose. Then as a whole class they can write or call out information on the relative positioning of different features in the state based on the compass rose directions.

• Ask: *Is the direction north always at the top of a map?* Students may have the misconception that north is always at the “top.” Look for an example of an upside-down map of the world to show students. Challenge students to redraw a map of their state, their neighborhood, or the classroom including a compass rose where the south arrow points toward the top of the page.

• Show students maps that include a north arrow instead of a compass rose. Ask: *Why would a mapmaker choose to only show the direction north? How might a map reader determine the other directions?*

## OBJECTIVES

### Subjects & Disciplines

- **Geography**
  - **Cartography**
- **Social Studies**
  - **Civics**

### Learning Objectives

Students will:

• use a compass rose to describe position and movement on a map
• locate and name Earth’s continents and oceans

### Teaching Approach
Learning-for-use

Teaching Methods

- Discussions
- Modeling
- Visual instruction

Skills Summary

This activity targets the following skills:

- Geographic Skills
  - Analyzing Geographic Information

National Standards, Principles, and Practices

NATIONAL COUNCIL FOR SOCIAL STUDIES CURRICULUM STANDARDS

- Theme 3:
  People, Places, and Environments

NATIONAL GEOGRAPHY STANDARDS

- Standard 1:
  How to use maps and other geographic representations, geospatial technologies, and spatial thinking to understand and communicate information

COMMON CORE STATE STANDARDS FOR ENGLISH
LANGUAGE ARTS & LITERACY

• **Reading Standards for Informational Text K-5:**
Integration of Knowledge and Ideas, RI.1.7

THE COLLEGE, CAREER & CIVIC LIFE (C3) FRAMEWORK
FOR SOCIAL STUDIES STATE STANDARDS

• **Geographic Representations: Spatial Views of the World: D2.Geo.2.K-2:**
Use maps, graphs, photographs, and other representations to describe places and the relationships and interactions that shape them.

• **Geographic Representations: Spatial Views of the World: D2.Geo.3.K-2:**
Use maps, globes, and other simple geographic models to identify cultural and environmental characteristics of places.

PREPARATION

What You’ll Need

MATERIALS YOU PROVIDE

• Art materials, such as paints, clay, collage, tissue paper, or others (optional)
• Butcher paper (optional)
• Clay (optional)
• Compass or compass app (optional)
• Pencils
• Pens
• Globe (optional)

REQUIRED TECHNOLOGY

• Internet Access: Required
• Tech Setup: 1 computer per classroom, Mobile data device (smartphone or
PHYSICAL SPACE

- Classroom

GROUPING

- Large-group instruction

RESOURCES PROVIDED: HANDOUTS & WORKSHEETS

- Cardinal Directions Poetry
- Using a Compass Rose

RESOURCES PROVIDED: IMAGES

- The World

BACKGROUND & VOCABULARY

Background Information

An understanding of a compass rose enables students to grasp the orientation of places on maps and to use maps to navigate from one place to another.

Prior Knowledge

["cardinal directions"]

Recommended Prior Activities

- Exploring Maps and Models of Earth
- The Sun, Earth, and Cardinal Directions
## Vocabulary

<table>
<thead>
<tr>
<th>Term</th>
<th>Part of Speech</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>cardinal</td>
<td>noun</td>
<td>one of the four main points of a compass: north, east, south, west.</td>
</tr>
<tr>
<td>direction</td>
<td>noun</td>
<td></td>
</tr>
<tr>
<td>compass rose</td>
<td>noun</td>
<td>symbol indicating the cardinal directions (N, S, E, W).</td>
</tr>
<tr>
<td>continent</td>
<td>noun</td>
<td>one of the seven main land masses on Earth.</td>
</tr>
<tr>
<td>direction</td>
<td>noun</td>
<td>the way in which somebody or something goes, points, or faces.</td>
</tr>
<tr>
<td>map</td>
<td>noun</td>
<td>symbolic representation of selected characteristics of a place, usually drawn on a flat surface.</td>
</tr>
<tr>
<td>map skills</td>
<td>noun</td>
<td>skills for reading and interpreting maps, from learning basic map conventions to analyzing and comprehending maps to address higher-order goals.</td>
</tr>
<tr>
<td>symbol</td>
<td>noun</td>
<td>something used to represent something else.</td>
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</tbody>
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For Further Exploration

**Books**