

# Using Cardinal Directions

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**Grade Level** 2  
**Duration** 2 class periods

## National Standards

### GEOGRAPHY

#### Element 1: The World in Spatial Terms

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

## AZ Standards

### ELA

#### Key Ideas and Details

2.RI.1 Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.

Craft and Structure

2.RI.4 Determine the meaning of words and phrases in a text relevant to a grade 2 topic or subject area.

#### Integration of Knowledge and Ideas

2.RI.7 Explain how specific images (e.g., a diagram showing how a machine works) contribute to and clarify a text.

### MATHEMATICS

#### Measurement and Data

2.MD.A Measure and estimate lengths in standard units.

2.MD.A.1 Measure the length of an object by selecting and using appropriate tools (e.g., ruler, meter stick, yardstick, measuring tape).

## Arizona Social Science Standards

### Geography

The use of geographic representations and tools help individuals understand their world.

2.G1.1 Use and construct maps, graphs, and other geographic representations of familiar and unfamiliar places in the world; and locate physical and human features

## SIOP Elements

### Preparation

Adapting content  
 Linking to background  
 Linking to past learning  
 Strategies used

### Scaffolding

**Modeling**  
**Guided practice**  
 Independent practice  
**Comprehensible input**

### Grouping Option

Whole class  
**Small groups**  
 Partners  
 Independent

### Integrating Processes

**Reading**  
**Writing**  
**Speaking**  
**Listening**

### Application

**Hands on**  
 Meaningful  
 Linked to objectives  
**Promotes engagement**

### Assessment

**Individual**  
**Group**  
**Written**  
**Oral**

## Arizona English Language Proficiency Standards

### Grade 2

#### Basic

#### Listening and Reading

Standard 1 By the end of each language proficiency level, an English learner can construct meaning from oral presentations and literary and informational text through grade appropriate listening, reading, and viewing.

B-1: ask and answer questions by using evidence from a text.

## Using Cardinal Directions

Standard 2 By the end of each language proficiency level, an English learner can determine the meaning of words and phrases in oral presentations and literary and informational text.  
B-1: determine the meaning of frequently occurring academic and content-specific words and phrases

### Overview

Understanding cardinal directions is an important life skill. The use of cardinal directions connects us to the world by telling us where we are in relation to others. They help us navigate in such endeavors as hiking, hunting, driving, giving directions to others, etc.

### Purpose

In this lesson, students will learn the cardinal directions and will use cardinal directions to create a map of their own and give directions to others.

### Key Vocabulary

**map**-a drawing to represent a place or to show features of an area  
**compass rose**-a symbol that shows directions on a map  
**cardinal directions**- north , south, west, east (n, s, w, e)  
**cartographer**-a person who makes a map  
**directions**-instructions for getting somewhere  
**trail**-a path to follow

### Materials

- Me on the Map by Joan Sweeney or YouTube video Me on the Map-read aloud (3:55 min)  
[https://www.youtube.com/watch?v=v\\_gUK8U9dE0](https://www.youtube.com/watch?v=v_gUK8U9dE0)
- The United States and Capitals (labeled) map  
[https://geoalliance.asu.edu/sites/default/files/maps/States\\_With\\_Capitals.pdf](https://geoalliance.asu.edu/sites/default/files/maps/States_With_Capitals.pdf)
- Vocabulary Cards
- Compass Cha-Cha to the Cupid Shuffle YouTube video (2:20 min)  
<https://www.youtube.com/watch?v=MvGD-KIYjXg>
- Sidewalk chalk
- Tape measure, Ruler, Yard Stick
- Treasure Map A and B and Answer Key

### Objectives

The student will be able to:

1. Identify cardinal directions in a real-life setting as well as on a map.
2. Measure distance.

### Procedures

#### SESSION ONE

1. Begin the lesson by reading Me on the Map by Joan Sweeney or projecting the YouTube video Me on the Map-read aloud (3:55 min)  
[https://www.youtube.com/watch?v=v\\_gUK8U9dE0](https://www.youtube.com/watch?v=v_gUK8U9dE0) Discuss how maps are made (bird's eye view). (**Scaffolding: Comprehensible input**)
2. Project The United States and Capitals (labeled) map  
[https://geoalliance.asu.edu/sites/default/files/maps/States\\_With\\_Capitals.pdf](https://geoalliance.asu.edu/sites/default/files/maps/States_With_Capitals.pdf) and facilitate a discussion regarding where we live and go to school and which state and country we live in. It is expected that discussion will ensue about which towns, states or countries students have previously lived. Point out the places named using the projected map. (**Integrating Processes: Speaking, Reading, Listening**)
3. Introduce the Vocabulary Cards by projecting them and discussing the definitions. Post the Vocabulary Cards on the Word Wall.
4. Return to the projected U.S. map and discuss which states are north, south, west, or east from one another reinforcing the vocabulary words. (**Scaffolding: Guided practice**)
5. Draw a compass rose on the board and label the cardinal directions. Ask the students what they know about this symbol that is often found on maps. Explain that the GPS system in their family's car or on their phones is using directions like east, west, north, and south. Ask if they have ever hiked on a trail or used a map or compass.
6. Explain that when cartographers make maps, they often include a compass rose so people can understand in what direction things are located.
7. Project Compass Cha-Cha to the Cupid Shuffle YouTube video (2:20 min)  
<https://www.youtube.com/watch?v=MvGD-KIYjXg> and have students participate in this movement-based activity.
8. Distribute a piece of paper and ask students to draw and label a compass rose. They may use

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the one on the Word Wall as a reference.

**(Application: Hands on, Promotes engagement)**

### SESSION TWO

*Prior to Session: Choose Treasure Map A using only cardinal directions (easier) or Treasure Map B using cardinal and intermediate directions (more advanced) depending on the ability of your students. To provide for diverse students, you could use A with some students and B with others.*

9. Review the Vocabulary Cards on the Word Wall and replay the Compass Cha-Cha to the Cupid Shuffle YouTube video (2:20 min) <https://www.youtube.com/watch?v=MvGD-KIYjXg>
10. Draw a compass rose on the board and explain that sometimes just the cardinal directions (N, S, E, W) are not enough. The midway points are called intermediate directions and are also useful. However, for today, we are using only the four cardinal directions.
11. Take the students outside carrying their paper compass roses. Show the students where north is. Show them how to hold their paper so their north is pointing north if needed. Then have them point to E, S, and W. **(Scaffolding: Guided practice)**
12. Tell the students that they will be using their compass roses, sidewalk chalk, and a measuring tool to figure out how far N, S, E, and W something is from another object. Show them a ruler, a yard stick, and a tape measure. Then point out two objects that are about 8-10 feet apart. Have the students decide which measuring tool would work the best for measuring distances as long as that. Model how to draw a line from the one object to the next with the sidewalk chalk. Have the students use their compass rose to determine the direction (N, E, S, or W). Then have them measure the chalk line. **(Scaffolding: Guided practice, Modeling; Integrating Processes: Speaking, Reading, Listening, Writing)**
13. Divide the students into small groups and give each group a piece of chalk and a measuring tool. Instruct the students to determine the direction, make the line, and measure the line. When a group has this done, they should contact you and you will verify the correct answers. **(Grouping Option: Small group)**
14. Use the Directions Observation Sheet to mark Yes or No for each group's work. Have student

continue to find directions, make their lines, and measure the distance for as many times as you need to determine student proficiency. Return to the classroom. **(Application: Hands on, Promotes engagement)**

15. Distribute Treasure Map A or B to students and explain the directions.

## Assessment

### Mathematics and Geography

Students' ability to measure distance and determine direction can be scored on the Directions Observation Sheet. Mastery will be seen as 80% of the attempts are correct. **(Assessment: Oral, Group)**

### Geography

Treasure Map A or B can be used to correctly determine directions on a map. Mastery will be considered a score of 80% or higher.

### Geography and ELA

The Vocabulary Test can measure language acquisition. Mastery will be considered a score of 80% or higher. **(Assessment: Written, Individual)**

## Extensions

- Continue to practice cardinal and intermediate directions by having students identify their location and what direction another location would be from there. (i.e. What continent is south of Australia? What state is east of Arizona? What city is north of Phoenix?)
- Have students develop a scavenger hunt using cardinal directions to lead others to a "treasure."
- Have students create treasure maps of their own. They could use a yard stick or tape measure to calculate the distance and create written directions for their classmates to follow.

## Sources

Looking at Maps and Globes ISBN 0516245430  
Me on a Map ISBN 0590107054

Permission to use treasure map was granted by Tim van de Vall on January 26, 2022 (email message)