

# Geocache Mystery

Name: Answer Guide

Date: \_\_\_\_\_

## Vocabulary

**Compass** - a tool used to show the current directions based on Earth's magnetic field

**Geocache** - a worldwide treasure hunt game where small containers of items are hidden for others to find

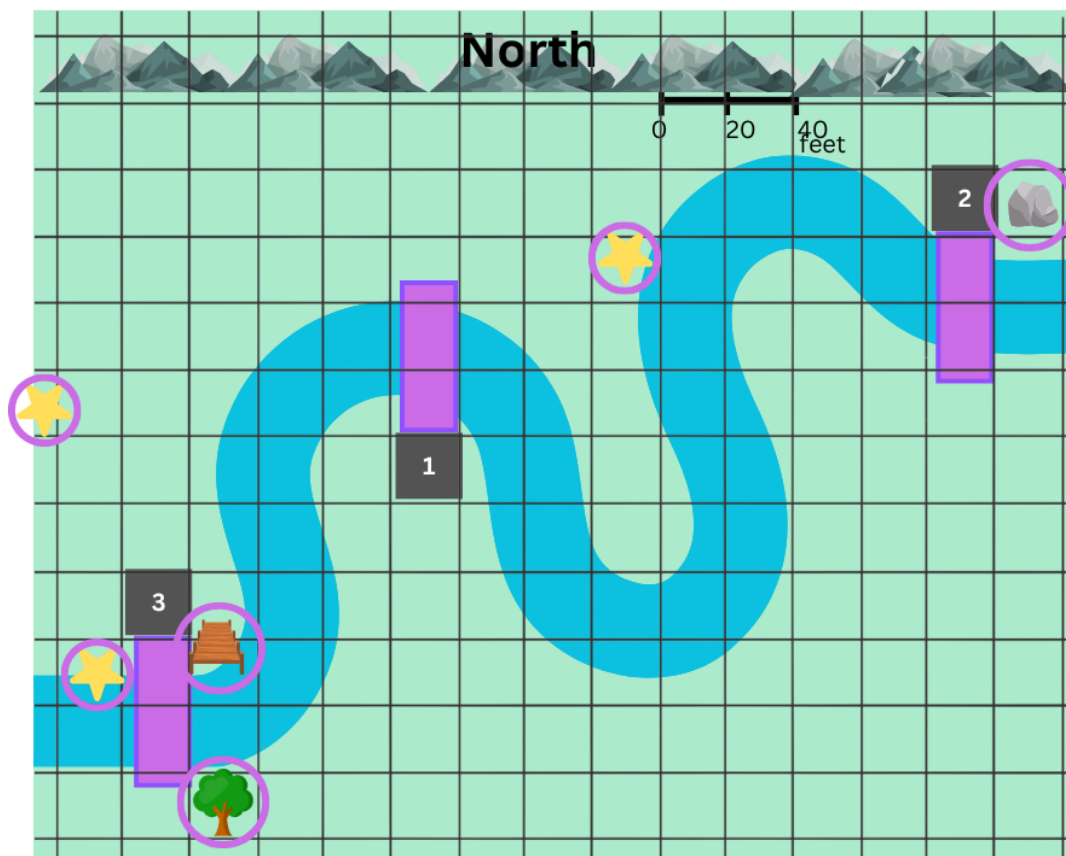
**Cardinal Directions** - the four primary reference points on a compass—North, South, East, and West.

## Introduction

### Reading a Map

Finish this map by following the directions below:

- ☒ Continue the mountain range from west to east across the northern portion of the map.
- ☒ Draw bridges that run from north to south across the river.
  - ☒ One bridge should be just south of building #3.
  - ☒ One bridge should be north of building #1.
  - ☒ One bridge should be south of building #2.



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## Activity 1

### Hide a Geocache

Follow the directions below and use the map from the introduction to hide Ari's geocache treasures in three locations.

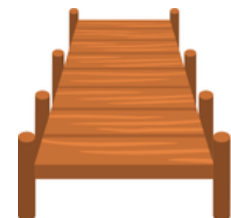
1 Ari starts at building 3. They move south 60 feet and east 20 feet. Ari finds a tree in this location and hides their geocache in the trunk of the tree. Mark a tree at the point where Ari hides their geocache.



2 Ari visits the most northwest spot on the map. They move 280 feet to the east and then south 40 feet. They find a large rock in this spot, and they hide a second geocache in a crack in the rock. Mark a rock at the point where Ari hides this geocache.



3 Ari begins 80 feet south of building 1. They travel west 80 feet and then north 30 feet, and finally east 20 feet. They find a small dock where they hide the third geocache.



4 Ari's friend tries to find their geocaches using the directions. However, their map was cut off, and they oriented their map in the complete opposite direction, with the mountain range across the southern edge of their map. Draw stars to show where Ari's friend tried to find their three geocaches.



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## Activity 2

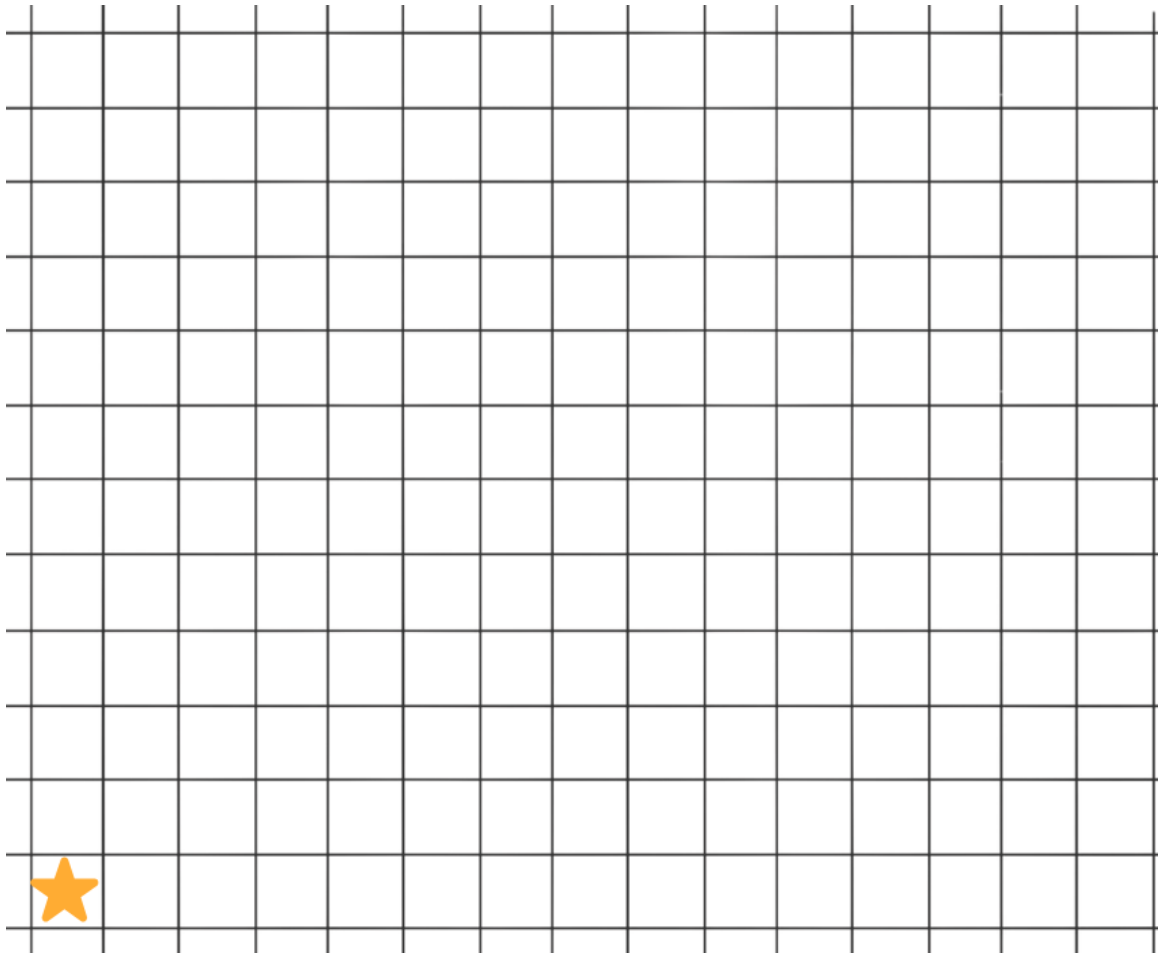
### Create Your Own Geocache Map

- 1 Create a map using the grid below. Label at least 5 features within the map, such as mountains, rivers, roads, buildings, ponds, etc.
- 2 Decide how Ari will read your map by setting one side of your grid as North.
- 3 "Hide" at least three geocaches within the map. DO NOT draw them on your map. Write the clues to find the geocaches below: **Clues should be similar to Activity 1, where reference points are given as well as distances and directions.**

Clue # 1 \_\_\_\_\_

Clue # 2 \_\_\_\_\_

Clue # 3 \_\_\_\_\_

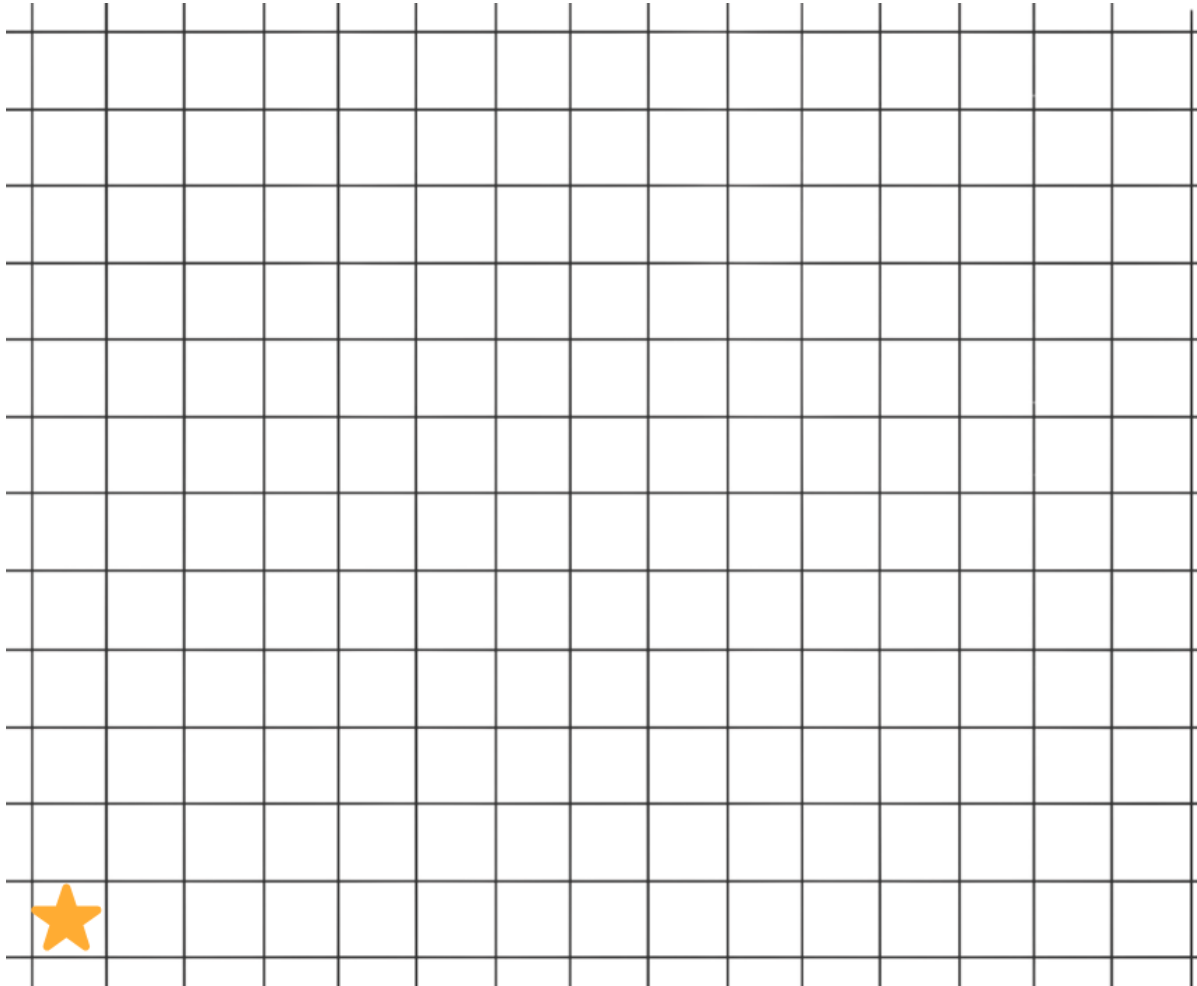


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- 4 Make note of where your geocaches are located on this “Answer Key” for your group to use to check the locations where the geocaches are hidden.



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## Exit Ticket

- 1 Use Ari to follow the three clues and mark where the geocaches are located on the grid.
- 2 Show your answers to the group that created the geocache clues and have them check your work.
- 3 Self-Evaluate - How did your group do at finding their geocaches? Explain.
- 4 Explain how setting North in a different direction changed where geocaches were found. What does this show about the importance of map orientation?



Descriptions should include which geocaches were found, which ones were not found, and explanations as to why.

On question 4, students should discuss how a different orientation for North would lead to very different locations. It shows that it is very important to orient the map correctly.