

# NAVIGATING THE



# POST APOCALYPSE

## LESSON OVERVIEW

Grade Levels: 6-8 & 9-12

In the book *The Testing* by Joelle Charbonneau, Cia lives in a post-apocalyptic society, where there is no GPS (Global Positioning Systems) to guide anyone. In this activity students will learn how to navigate without GPS using the chain link method of navigation. Students will follow a set of directions in order to reach a final location.

## STANDARDS

ILS  
SS.IS.8.6-8.LC

Analyze how a problem can manifest itself and the challenges and opportunities faced by those trying to address it

## OBJECTIVES

- Students will use math skills to determine distances.
- Students will work as a team to achieve a common goal.
- Students will learn cardinal directions and use them effectively.

## MATERIALS

- Compass
- String or rope, pre-cut into 5-foot or 10-foot lengths
- Signage, prize or reward to be located

## PROCEDURE

### STEP 1: Setup:

- Create sets of directions that use cardinal directions/compass degrees and lengths to get to a final location such as: (Walk 60 feet Southwest (225°). Walk 205 feet due West (270°). Walk 220 feet due North (0°). Walk 240 feet due West (270°). Walk 135 feet due South (180°). Walk 170 feet due West (270°). Walk 120 feet due South (180°).
- Make enough different sets of directions so that each group of students is working toward a different final location.
- Place a sign, reward, or prize at each final location for each group to find.

**STEP 2:** In *The Testing* by Joelle Charbonneau, the candidates had to make their way across a post-apocalyptic landscape without the aid of GPS (Global Positioning Systems). Explain to the students that GPS use satellites to track their location on the surface of the earth through triangulation. Discuss ways someone could find their way without the use of technology.

### STEP 3: Demonstrate how to use a compass:

- Hold it flat in your palm.
- Line up the direction you want to go with the heading arrow by turning the degrees dial.
- Turn your whole body until the colored half of the needle is in the red north arrow 'shed'.
- Walk forward and you will be walking in your 'set' direction.

**STEP 4:** Explain the chain link method of navigation: one uses a known length of chain or rope and then marks out multiples of that piece of chain or rope to achieve the distance needed. For example, if the group needs to walk 60 feet and has a 10-foot piece of rope, the group would layout or walk off 6 times the length of the measuring rope.

**STEP 5:** Give each group a compass, their piece of rope and their set of directions. Give the groups a set amount of time to walk their route and find their final location.

### STEP 6: Come back together afterwards and discuss as a class:

- Was the chain link method of navigation difficult or easy?
- Were the groups able to find their final locations?
- Are there any real-life scenarios they can imagine for which it would be helpful to know a technology-free navigation method?

## RUBRIC

	Target (3)	Meets (2)	Partially Meets (1)	Does Not Meet (0)
USING A COMPASS	Does a great job showing an understanding of using a compass.	Does an okay job with showing an understanding of using a compass.	Tries but has great difficulty showing an understanding of using a compass.	Does not show an understanding of using a compass.
NAVIGATING MAP DIRECTIONS	Explanation/solution shows complete understanding of the mathematical concepts used to solve the problem(s).	Explanation/solution shows substantial understanding of the mathematical concepts used to solve the problem(s).	Explanation/solution shows some understanding of the mathematical concepts needed to solve the problem(s).	Explanation/solution shows very limited understanding of the mathematical concepts needed to solve the problem(s).
COLLABORATION	Works well with others and discusses ideas in a fair, respectful, encouraging way and is considerate of the feelings of others.	Works okay with others and discusses ideas in a fair, respectful way, but may not have been encouraging. Considers the feelings of others.	Works with others, but did not contribute a fair share of work OR was discouraging and did not consider the feelings of everyone.	Did not work well with others and/or discusses ideas in an unfair, disrespectful way.
REQUIREMENTS	Meets all of the requirements for the project.	Meets most of the requirements for the project.	Meets some of the requirements for the project.	Does not meet the requirements for the project.
DEMONSTRATION OF KNOWLEDGE OF CONTENT IN DISCUSSIONS AND ACTIVITIES	Does a great job showing an understanding of the content covered in class.	Does an okay job with showing an understanding of the content covered in class.	Tries but has a difficult time showing an understanding of the content covered in class.	Does not show an understanding of the content covered in class.
Total				/15