

## LESSON 3: DISC COMPASS GAME

### Grade-Level Outcomes

#### Primary Outcome

**Outdoor pursuits:** Demonstrates correct technique for a variety of skills in 1 self-selected outdoor activity. (S1.M22.7)

#### Embedded Outcomes

**Challenge:** Recognizes individual challenges and copes in a positive way, such as extending effort, asking for help or feedback and/or modifying the tasks. (S5.M3.6)

**Social interaction:** Demonstrates the importance of social interaction by helping and encouraging others, avoiding trash talk and providing support to classmates. (S5.M6.7)

### Lesson Objectives

The learner will:

- draw a detailed map for locating a time capsule.
- work with a partner to navigate through the disc compass game.

### Equipment and Materials

- Discs
- 12 labeled cones
- GPS trackers
- Time capsule (e.g., glass jar, sealable plastic container, metal box)

### Introduction

*Today, you will use your compass skills to create a map to a time capsule. It's important that your map and compass skills be spot-on because someone else will be using your map to find the time capsule. Remember what you have learned about the compass so far, and be sure to involve all of your teammates.*

## Instructional Task: Time Capsule Burial

### ■ PRACTICE TASK

Work with students to find a perfect location for a time capsule to be buried and then opened 100 to 150 years from now. Explain to students that those who eventually will open the time capsule will be using the students' compass navigations to locate it.

Draw students a detailed map and the exact steps and key points so that they will be able to locate the time capsule. Have each student create a map and key.

Future generations might not understand English, so students' maps and keys will have to be compass based, not language based.

### Extension

Challenge students to use landmarks for their maps that they think will remain for a long time.

### Student Choices/Differentiation

- Modify the activity with guidelines on how many steps or key points must be included in the directions.
- Allow students to choose how many steps they want to include. This will encourage them to choose a level of activity that's comfortable for them and allow struggling students to use fewer steps, if they want to.

## What to Look For

- Students' maps are easy to understand.
- Strangers could use the maps.
- Students understand how to use a compass to draw a map.
- The maps contain keys and a compass rose.

## Instructional Task: Disc Mapping Game

### ■ PRACTICE TASK

Number the inside of cones from 1 to 12. Use a compass to place the cones in an open field (see diagram). Cone-placement order should start off easy and increase in difficulty as students practice.

Students work in pairs for this game. Hand each pair of students a map showing 12 cones' locations, but without indicating how the cones are numbered. Pairs then set out toward the cone that they think might be number 1. One student in each pair navigates toward the selected cone using a compass. The navigator tells the partner in which direction (north, south, east or west) to throw a disc, toward the selected cone. The navigator must track the number of throws and write the number of cones reached in the correct order. Working together, students should find cones 1-12. Cones should be spread out far enough to challenge the thrower and the navigator.

If partners reach a cone out of order, they must start over.

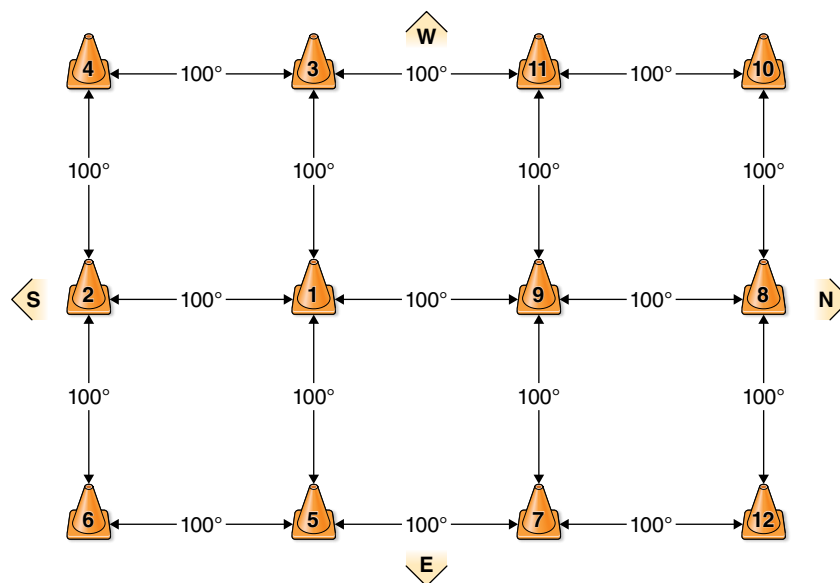
The partners who navigate the course in the fastest time and with the fewest throws wins.

### Rules

- Team members must switch roles at cone 6.
- Teams must hit a cone with the disc before they can lift the cone to find its number.
- Throwers may take no steps while holding the disc (as in ultimate).
- Reaching and lifting cones in the wrong order results in a restart, but partners should use each error to refine their search.

### Extensions

- Instruct students to use GPS coordinates to move from cone to cone. Give each pair of students the coordinates to the first cone, where they will find the coordinates to the second cone, and so on. If GPS devices are not available, use simple north, south, east, and west coordinates and number of steps for distances. (Example: Walk east 12 steps, then walk north 24 steps to the cone.)



- Students can use different throwing implements, and you can increase or decrease the spacing between cones.
- Add activities by requiring lunges, wall sits for 30 seconds, or even 10 push-ups or burpees before students can move on to the next cone.

### Guiding questions for students:

- How did your team remember which cone was which?
- What strategies did you use as you navigated through the course?

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**EMBEDDED OUTCOME: S5.M6.7.** Demonstrate the importance of social interaction by helping and encouraging others, avoiding trash talk and providing support to classmates.

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**EMBEDDED OUTCOME: S5.M3.6.** Discuss the importance of recognizing individual challenges in this activity and how to cope in a positive way, such as extending effort, asking for help or feedback, or modifying tasks.

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### Student Choices/Differentiation

You can increase or decrease the number of cones in the field to allow students to choose the level of challenge.

### What to Look For

- Partners are cooperating with each other.
  - Students are safe from errant discs as they navigate the maze.
  - Students take responsibility for their team's success and keep score accurately.
  - Are they cheating or allowing other classmates to cheat?
  - Extension activity: Are students using what they learn from each cone and inferring what their next step should be?
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### Formal and Informal Assessments

Use the student's map rubric to grade students' maps based on neatness, correctness, aesthetics, effort, and compass-reading knowledge.

### Closure

- Do you think you have learned enough about compasses to find your way if you were lost with a map and compass?
- What other skills do you think would help you be able to read a map?

*In our next class, we will take the ideas we learned with compasses and move on to geocaching.*

### Reflection

- Did the teams work together and support everyone?
- Do students understand teamwork and positive social interaction?
- Did students practice game skills and strategy in the compass game?

### Homework

Have students complete a compass map of their street or neighborhood, school, community park, church, or building of their choice.

### Resources

Internet keyword search: "compass games"

## STUDENT'S MAP RUBRIC

Fill out rubric using scale points, with 5 being the highest score and 1 being the lowest, or does not meet standard.

Student name	Correctness	Neatness	Aesthetics	Compass knowledge	Effort	Ease of interpretation	Completeness	Collaboration with team

From R.J. Doan, L.C. MacDonald, and S. Chepko, eds., 2017, *Lesson planning for middle school physical education* (Reston, VA: SHAPE America; Champaign, IL: Human Kinetics).