

Post Cardinal Points: A Sailor's Life for Me!

1. Lesson Plan Information

Subject/Course: Math

Grade Level: 4-6

Topic: Geometry and Spatial Sense: Cardinal Directions

Name:

Date:

Time:

Length of Period: 90 minutes

2. Expectation (s)

Expectation(s) (Directly from the Ontario Curriculum):

Overall Expectations:

- Identify and describe the location of an object, using cardinal points.

Specific Expectations:

- Locate a direction using the cardinal directions (north, south, east and west) and a coordinate system.
- Identify cardinal directions on a map (*i.e.*, *N*, *S*, *E*, *W*), and use these directions when locating selected object.

Learning Skills (Where applicable):

- Collaboration: accepts various roles and an equitable share of work in a group and works with others to resolve conflicts and build consensus to achieve group goals.
- Organization: devises and follows a plan and process for completing work and tasks and identifies, gathers, evaluates, and uses information, technology and resources to complete tasks.

What do I want the learners to know or be able to do?

- The students will rather develop with understanding of how to use a compass to write down directions, and how to read a map.

Today learners will:

- The learners will apply what they have learned from the activities they took part in at the Etobicoke Outdoor Education Centre, which included using their navigation skills with a compass.

- The learners will be Sailors, who need to use a compass to map out a path in order to save a ship that is in distress.

4. Learning Context:

The learners:

What prior experiences, knowledge and skills do the learners bring with them to this learning experience?

- The learners will have prior experience using a compass at the Etobicoke Outdoor Education Centre.
- The learners will have an understanding of how to find north on a compass and transfer the information onto a map.
- The learners will have prior experiences working with team members in order to solve problems.

Learning Environment:

- Classroom

Materials:

- Compass
- Groups of students, 4 to a group.
- 5 different maps for the students to use, you can have doubles of the maps to hand them out for the students to use. The teacher can also laminate the maps the students are using. If the teacher does this, they can use whiteboard markers for the students to use on the maps.
- Black Markers/Whiteboard Markers.

5. Teaching/Learning Strategies

Introduction:

How will I engage the learners? (e.g., motivational strategy, hook, activation of learners prior knowledge, activities, procedures, compelling problem).

Hook: 5-10 minutes

“Okay students, we have a special quest that I would like you all to meet. Just let me go fetch him”. Walk out of the classroom and put on a sailor’s hat and a sailor’s shirt. Walk into the classroom acting as if you are the sailor, you can talk in another accent, and even put on a fake mustache. Be Creative and have some fun with it! “Morning Class! My name is Captain Longbottom! How is everyone this morning?” Wait for the students to respond. “Alright, your teacher thought that all of you would be great in order to solve my problem. With the skills that you have learned, I feel that you are all fully capable of helping me out. Is everyone up for a fun challenge?” Wait for the students to respond. “I

am a Captain and I trusted some of my ships with a couple of my top sailors, but we have a problem. They are in distress and need our help. Do you think that you can help them?" Wait for the students to respond. "Alright, I am going to get your teacher and fill her in with what you need to do and they will tell you what you need to do". Leave the room to go get the "teacher".

MIDDLE:

Teaching: *How does the lesson develop?*

How we teach new concepts, processes (e.g., gradual release of responsibility - modeled, shared, and guided instruction).

The teacher walks in wearing without the costume. "Alright, Captain Longbottom has given me the information and resources we need in order to find to get to the ships that are in distress. I am going to number you off from 1 to 5 (this can vary depending on how students you have). Once everyone is numbered off, please get into your groups". Once everyone in their groups inform the students what they will be doing. Lift up a compass and ask, "Does everyone know what this is and what it is used for?" Pick three students to answer the question. "Does anyone remember the centre and from our previous lesson, how to use a compass?" Let a student show the class how to use a compass. "In order to help the ships that are in distress we will need a map, (lift up the maps) we will need a compass (lift up a compass), a black marker, a pencil and a worksheet (lift up the work sheets). Now I would like one person from each group to come up and gathered their material that they need". Once all the students have gathered their materials and have seated, go through the instructions on the worksheet with the students. "Here is one of the worksheets with a map of Nova Scotia on it. For this worksheet you will start at your starting point one, which is, Clark's Harbour. As a group you will write down the directions that you will need to follow in order to save the ship that is in distress at the end point of New Waterford. You will be using the black/whiteboard markers to map out your route on the worksheet. Once your group has completed the first map, come up to the front table and pick up a different map for your group to complete.

Give the students from about 15 to 20 minutes to complete their first path to the distress ship. When 15 minutes had gone by, "Alright everyone, you have 5 more minutes to finish up your first map and write down your directions of the path you would take to the ship that is in distress. If the students have finished the first map well before the 15 minutes, they can up to the front table and grab a new map to work on.

While the students are working on their maps as a group, the teacher will walk around the classroom to answer any questions the students have.

Consolidation and/or Recapitulation Process:

How will I bring all the important ideas from the learning experiences together for/with the students? How will I check for understanding?

After all students have finished their path and directions to guide to save the distressed ship, students then switch directions with another group. Did every group choose the same path? Why not? Have a class discussion of the strategies and paths each group. Discussion what was similar and what was different of the paths the students took to get to the distressed ship.

Application:

What will learners do to demonstrate their learning? (Moving from guided, scaffolded practice, and gradual release of responsibility.)

The learners will complete the worksheets below to in order to demonstrate their learning of what they have learned at the Etobicoke Outdoor Education Centre and from the pre lesson plan before travelling to the centre.

Find the Distress Ship!



Start: Your ship is located on the south end of Nova Scotia at Clark's Harbour.

End: The distressed ship you are rescuing is located at the Northeast end of Nova Scotia at New Waterford.

Remember: Indicate North on your Map!

Directions:

Find the Distress Ship!



Start: Your ship is located on the Northeast side of New Brunswick at Miscou Centre.

End: The distressed ship you are rescuing is located at the East end of New Brunswick at Cape Tormentine.

Directions:

Find the Distress Ship!



Start: You are located on the West end of British Columbia at Prince Rupert.

End: The ship that is in distress you are rescuing is located on the South end of British Columbia at Powell River.

Directions:

Find the Distress Ship!



Start: Your ship is located on the Southeast side of Newfoundland at Baie Verie.

End: The distressed ship you are rescuing is located at the Northwest side of the Labrador Sea.

Directions:

Find the Distress Ship!



Start: Your ship is located on the southeast end of Prince Edward Island at Murray Harbour.

End: The distressed ship you are rescuing is located at the Northwest end at Alberton.

Directions:

Find the Distress Ship!



Start: Your ship is located on the south end of Quebec at Cap-Chat.

End: The distressed ship you are rescuing is located Northwest end of Quebec at Inukjuak.

Directions:

