

Activity: Don't Get Lost!

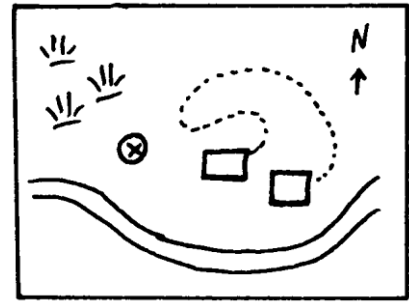
Grade Level: Grade 5

Major Emphasis: Mapping and Orienteering

Major Curriculum Area: Social Studies

Related Curriculum Areas:

Refer to Outdoor Education Curriculum Matrix 3-5:
Social Studies
Language Arts
Physical Education



Program Indicator:

The students will use a compass, cardinal directions, legends and boundary lines to locate places and natural landmarks in order to interpret and construct maps.

Student Outcomes: The student will:

1. identify the points on a compass.
2. use a compass to complete a charted course.
3. locate specific objects on a map by using landmarks.
4. construct a group map of the area using symbols.

Readiness:

1. Use K-W-L Chart to introduce mapping and orienteering concepts.
2. Introduce vocabulary:
intercardinal points (NE,SE,NW,SW) compass pacing cardinal points (N,S,E,W)
"direction of travel" degrees orienteering
3. Instruct students on techniques for using a compass. (Refer to Supplement A)
4. Discuss cardinal points and degrees. Have students draw a compass with degrees and cardinal points on top portion of Supplement B. **(DL2)**
5. Introduce the pacing method for measuring distances. (Refer to Teacher Resource: [Orienteering Course Guidebook of Activities](#).)
6. Play any of the following compass related games outside at school.
 - ! Beginner's Compass Game
 - ! Schoolyard Compass Game
 - ! Backyard Compass Game
 - ! Silver Dollar Game
 - ! Orienteering Map Symbol Relay Game

Materials:

compasses (one per student or pair of students)
brown paper or tagboard
Supplements A-D
scissors

pencils
Course Cards
glue
Silver Dollar Game

Procedures: (DL2)**Activity A: Compass Trails (Optional)**

1. Pass out student worksheets.
2. Have students measure how many of their paces equal 10 meters. Record number on worksheet. Determine the length of their paces. (Refer to Teacher Resource: Orienteering Instructor Handbook and Figure 1)

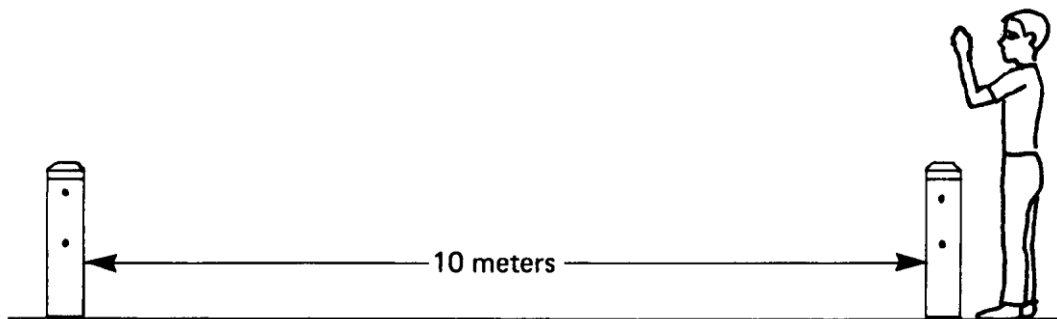


Fig. 1: Pacing Path

3. Practice pacing to determine distance.
4. Pass out compasses and review compass use to find direction and bearing in degrees. (Refer to Supplement A)
5. Practice taking degree bearings by playing the Silver Dollar Game:
 - a. Use prepared instruction cards for as many students participating. Each card should have 3 distances and 3 directions. Notice that on the same card all distances are alike and that the directions start with a degree bearing of less than 120E to which are added 120E, then another 120E.
Example:
40 steps 90E - 40 steps 210E - 40 steps 330E
50 steps 45E - 50 steps 165E - 50 steps 285E
45 steps 18E - 45 steps 138E - 45 steps 258E
 - b. Scatter the students in an open field, place a marker (nickel, plastic lid) at their feet and give each a compass and instruction card in their hand.
 - c. Upon a signal, each student takes the first bearing, walks the distance and then stops.
 - d. Repeat this twice. The students should return to their original marker or "silver dollar."

6. Complete a Course Card with the whole group. (Refer to Course Cards)
 - a. Select a Course Card. (Refer to Figure 2)
 - b. Follow each direction on the Course Card. (Refer to Teacher Resource: Orienteering Course Guidebook of Activities, pp. 5-6)
 - c. Write each letter in the space provided on the Course Card. These letters form a word.

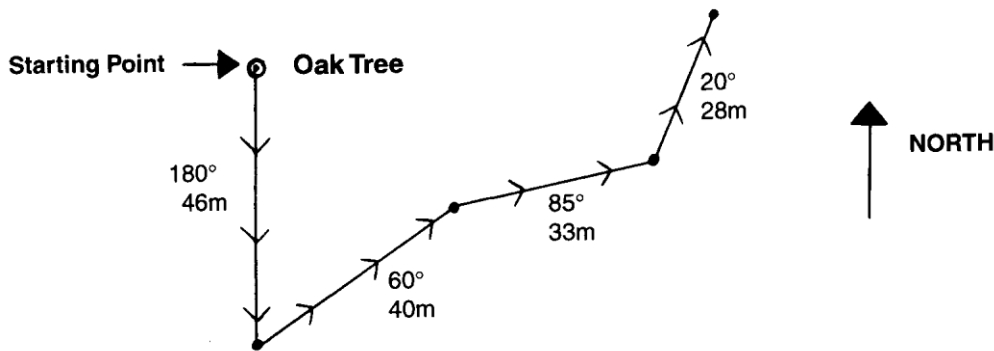


Fig. 2: Sample Compass Course

7. Divide students into groups of two or three. Distribute a Course Card to each group.
8. Have each group complete a Course Card.
9. Have groups exchange course cards and complete the other course.
10. Meet at designated area and discuss results.

Activity B: Red Jug Trail (DL4)

This activity can be done with compasses and maps or with just a map.

1. Students should meet in designated activity areas.
2. Distribute "Red Jug Trail" maps of Arlington Echo or West River, pencils and "Red Jug Student Worksheet." (Refer to Supplements C1-C5 and Figure 3)

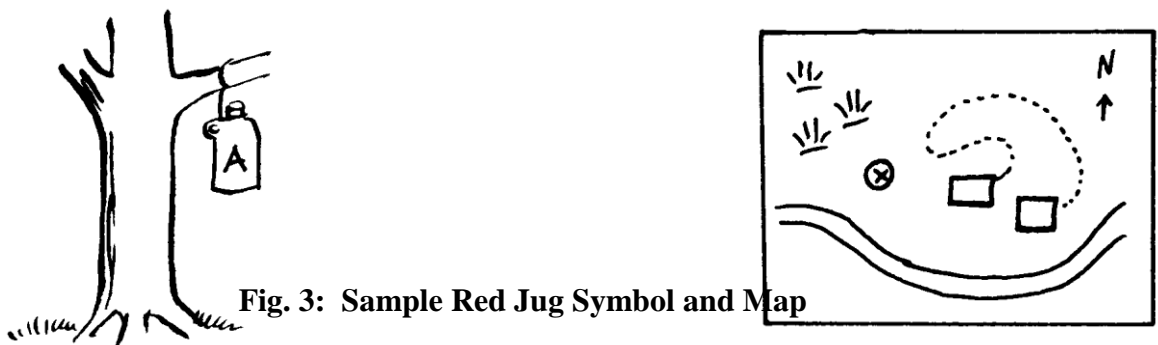


Fig. 3: Sample Red Jug Symbol and Map

Fig. 3: Sample Red Jug Symbol and Map

3. Use the map to identify various features of camp with the following as examples:
 - a. Orient the map by turning it so map details correspond with features on the ground. Mark your meeting area with a symbol.
 - b. At the top of your camp map is the beginning of a compass rose. Add the other seven compass points on the compass rose. Use a compass to orient the map to north.
 - c. How do you know what the numbers on a map represent?
 - d. How does this map show the path you would follow for a nature trail?
 - e. Identify on the map where cars will park.
 - f. If you want to go boating or canoeing, describe where you could go.
 - g. To what building would you go to get equipment (paddle or oars) for boating?
 - h. What bodies of water surround the camp?
 - i. If you could go swimming, where would you go?
 - j. At which location number could you use a bow and arrow?
 - k. Locate and circle the cabin you are staying in.
 - l. Where did the bus drop you off?
 - m. Where could you go for a campfire program at night?
 - n. What number represents a pier?
 - o. What building number would you eat your meals in?
4. Introduce the "Red Jug Course" to the students. Review the following procedures before starting:
 - a. "X's" represent locations of the red jugs.
 - b. Each marker is coded with a letter (6 of them) or a question mark (3). Students should record the letters, as they find them. Instructors will read one of the riddles at each "?" and have the students guess the answer.
 - c. Have students work in teams, pairs or small groups.
 - d. Have students plan a strategy to find all markers within a given time period.
 - e. Have students predict what building structure, trail or natural feature will be in the vicinity of each marker. Record predictions on Supplement C5.
 - f. If compasses are used, plan a course and plot the correct degree readings from point to point using the Red Jug Course map. Starting points can vary.
5. Have students complete "Red Jug Course" using maps.
 - a. After recording the letters, have students record actual landmark at each site. (Refer to Supplement C5)
 - b. Unscramble the letters to make a word. [The word is "**Orient**."]
 - c. Have the students discuss the Chesapeake Steward points that appear on the back of the outcomes card.

***Optional- Activity C: Making a Group Map (DL4&5)**

Teachers may wish make the group map on tagboard or brown paper or the attached outline maps (Supplement D1 or D2). If tagboard or brown paper is used, the teacher or students will need to sketch in the basic outline of the site.

1. Using the basic outline given (Refer to Supplement D1 or D2), students will devise and place symbols on a map of the area. Be sure to identify the symbol with appropriate landmarks. (Refer to Figure 4)
2. Allow students to walk around camp to locate areas, not referring to any other map.
3. When group map is completed, have students refer to their Red Jug map to check for accuracy.

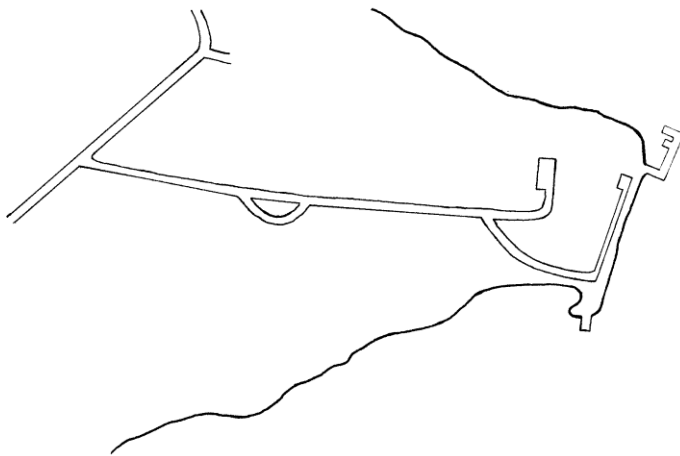


Fig. 4: Sample Section of Outline Map

Summary:

1. Complete "L" column of the K-W-L Chart done as a readiness activity.
2. Discussion Questions:
 - ! How does this activity apply to the real world? Give examples.
 - ! How do you think you might use these skills one day?

Follow Up:

1. Students can plot a compass course on the school playground.
2. Student can take compass bearings using the points on the Red Jug Trail.

Extension Activities: (classroom)

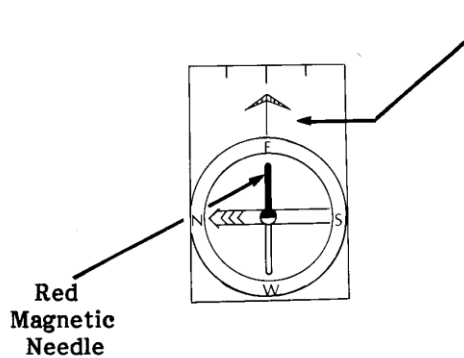
1. Students fold a large paper circle into sixteenths and label to show the 16 points of a compass.
2. Students may lay out a course that includes five or six easily recognizable landmarks. Have other students identify the landmarks and give approximate distances from each one to the next.
3. Compare and contrast features and uses of different types of maps (topographical, geographical, natural resources, road map, political map). **(DL2)**
4. Students can make a map showing how to get to school from their houses using familiar landmarks. **(DL4)**
5. Discuss with students how other cultures and early travelers kept from getting lost (i.e. stars, sextant, nautical instruments, etc.). **(MC)**

How to Use a Compass

The following four steps will direct students to "Take a Bearing" using a compass:

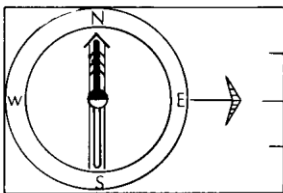


- 1. Hold** compass waist-high near your body with the *Direction of Travel Arrow* pointing away from you. Keep all metal objects away from the compass (i.e. belt buckles).



- 2. Rotate** the dial so that the desired direction, in this example E, is over the *Direction of Travel Arrow*.

- While holding the compass steady, **turn** your body until the red magnetic needle points to N (north) on dial.

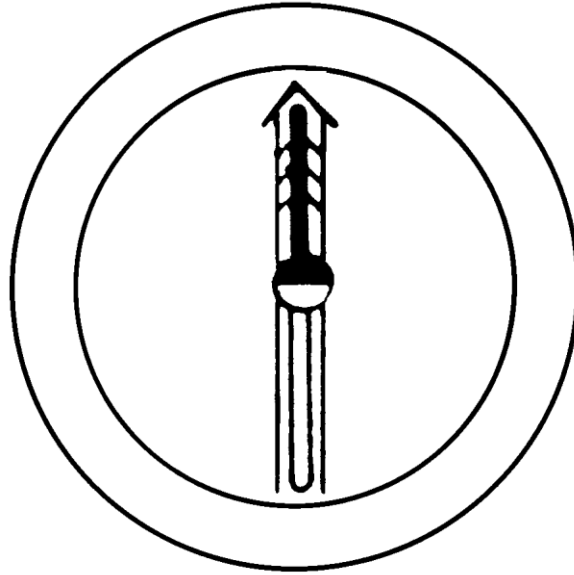


- 4. Look up and walk** in that particular direction.



Compass

Draw compass with degree readings of 0, 360, 45, 90, 135, 180, 225, 270, 315, and also letter Cardinal Points. Use circle below.



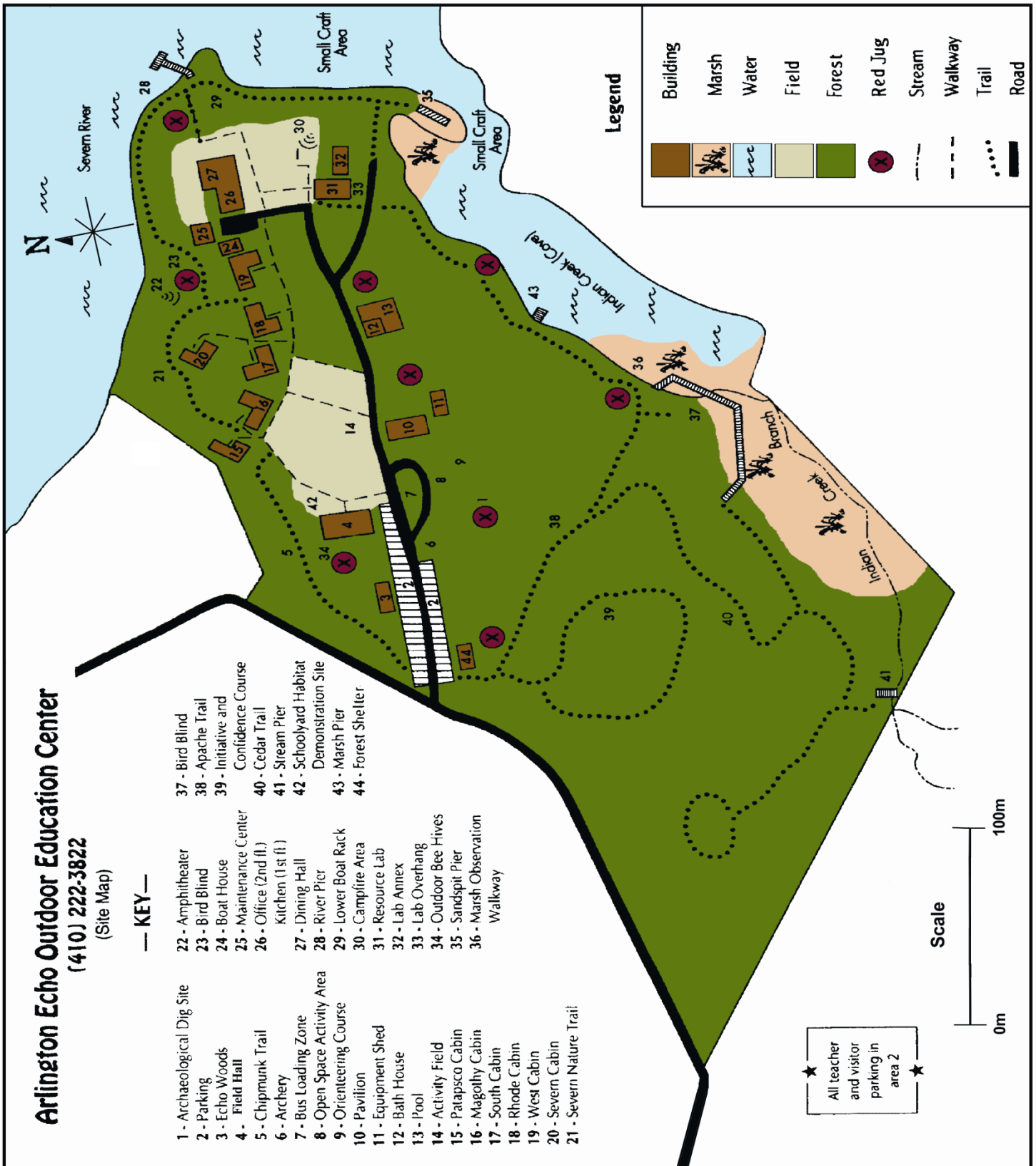
Pacing

Explain how you find your pace. What is a step? What is a pace?

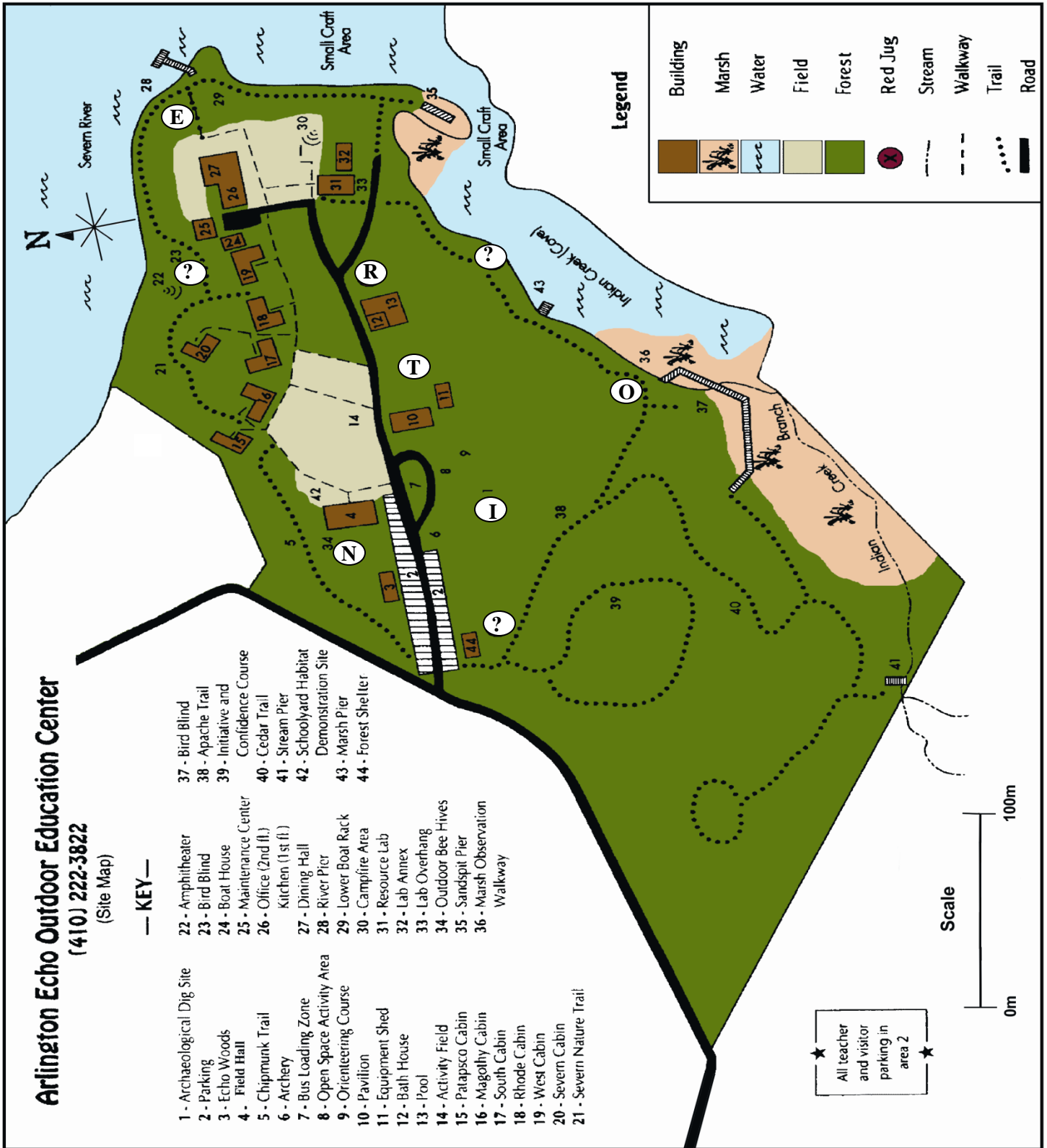
Show the mathematics used to find your pace.

Arlington Echo Red Jug Course: Orient

Student Copy



Arlington Echo Red Jug Course: Orient Teacher Copy



Red Jug Course Student Worksheet

Area Landmarks

1. Predicted landmarks	
Actual landmarks	
2. Predicted landmarks	
Actual landmarks	
3. Predicted landmarks	
Actual landmarks	
4. Predicted landmarks	
Actual landmarks	
5. Predicted landmarks	
Actual landmarks	
6. Predicted landmarks	
Actual landmarks	
7. Predicted landmarks	
Actual landmarks	
8. Predicted landmarks	
Actual landmarks	
9. Predicted landmarks	
Actual landmarks	

The marker letters are: _____

The letters spell: _____

