

Activity: Environmental Discovery Walk

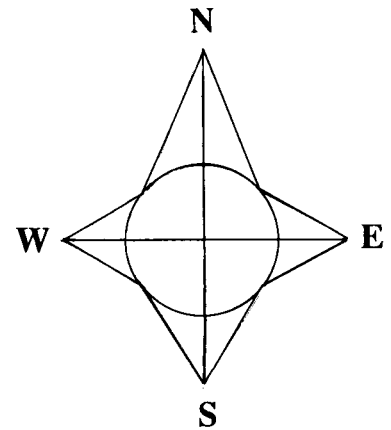
Grade Level: Grade 2

Major Emphasis: Map, Compass and Ecology

Major Curriculum Area: Science/Social Studies

Related Curriculum Areas:

- Refer to Outdoor Education Curriculum Matrix K-2
- Career Education
- Language Arts
- Mathematics
- Physical Education
- Art



Program Indicator:

The student will demonstrate his/her ability to interpret and explain information by locating features of the community using maps, cardinal directions and symbols.

Student Outcomes: The student will:

1. use a compass to locate cardinal directions on a map.
2. use the map and compass to locate landmarks on a trail.
3. observe, answer questions and/or complete an activity at each location.

Readiness:

1. Review the cardinal directions and how to use the compass. Refer to Figure 1 or Supplement A. *Remind students to put the red arrow in the blue silhouette or put "red in its blue bed."*
2. Introduce vocabulary:

cardinal directions	habitat	nursery
compass rose	examine	symbol
key (legend)	humus	
3. Construct a map of your classroom. Include a title, legend and compass rose.
4. Complete a cut-and-paste activity that matches the landmark symbols, used at the outdoor education center, to the written words. Refer to Supplement B.

Materials:

- | | | |
|----------------------------------|-------------------------|---|
| Outdoor Education Center map | compass (1 per student) | One tote tray per group with: |
| Supplements A-E (Arlington Echo) | litter bag | (several hand lenses, 2-3 trowels, |
| Supplements A,B,F-H (West River) | easel | clipboard/paper/pencil) |
| Supplements A,B,I-K (Woodlands) | chart paper | Response Cards (1 each per student- |
| landmark symbols on trail | marker | forest picture card/field picture card) |

Procedures: (DL2)

1. Using the map and the compass, students follow cardinal directions to locate landmarks. At each landmark, a student (or parent volunteer) draws the landmark symbol on the map.
2. At the landmark site, the student will observe and/or complete an activity.
3. Landmarks at the outdoor education centers include the following (*map of the trail with landmarks is available at each outdoor education center.*):

campfire	marsh	slope	dead log
cluster of trees	eroded bank	field	flagpole
forked tree	large rock	water area	building
parking area			

Activities for Each Landmark:

1. *Campfire (reviews sound unit):*

For two minutes, the students are to sit around the campfire and listen for natural and man-made sounds. the students dictate to activity leader all the sounds heard as instructor records the answers on chart paper under correct headings: natural or man-made. Discuss. *Variation: Tape recorder can tape sounds at the same time students are listening. Complete chart first; then play back tape to compare.*
2. *Building (reviews plants, math shapes):*

Students look at the building and name materials that came from nature (source). An example is wood from trees. Next students look for shapes included in the building. An example is windows are rectangles or roof is a cone or triangular shape.
3. *Open Field (environment):*

To stimulate thinking about the environment, students show response cards to answer the following open-ended questions. There are no incorrect answers. *Variation: Students can state reasons why they showed their card. An example is, "I think temperature is hotter on the field because there are no trees for shade."*

 - a. Where would more plants grow? Show me the card.
 - b. Where would an animal get more food? Show me the card.
 - c. Where is the temperature hotter? Show me the card.
 - d. Where would there be more erosion? Show me the card.
 - e. Where would an animal that needed camouflage go? Show me the card.
 - f. Where would insects find a home? Show me the card.
 - g. Where would you hear more natural sounds? Show me the card.
4. *Flag Pole Area (environmental ethics):*

Explain that the flag represents the United States and that we have rules that help keep us safe in the USA. What rules can students think of to keep the plants and animals safe at this outdoor education center? Examples are: Throw trash in proper can and do not pick leaves and flowers from plants.
5. *Water (reviews pollution):*

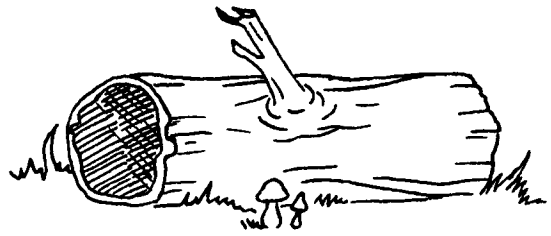
Let's look at the water area and imagine that a big boat just came by and spilled oil from its engine. Tell me what would happen to the animals living on/in the water? Examples are fish, duck and shrimp. Tell me what would happen to the plants living in/near the water?

6. *Cluster of Trees (animal review):*

Some animals make their home there. Point to a tree part and name an animal that would make its home there.

7. *Dead Log (animal review):*

Many living things are dependent upon dead trees for food, shelter and/or nesting sites. Find the nearby dead log and try to find at least one creature from each of these areas: on top of the log; under the bark; underneath the log; and on the ground nearby. *Please be careful not to destroy the home. This log is the home of the creatures you find.*



8. *Forked Tree (plant review):*

How many trunks does this tree have? Why do you think the tree grew like this? Using the trowel, dig under the leaves that have fallen off this tree. How does the humus smell? Do dry leaves smell the same?

9. *Marsh Area (animal growth review):*

Look around you. What kind of plants are growing in this area? The marsh makes a good nursery for many animals. Why do you think this is so? Dictate one sentence about the marsh. Example: Tall grass makes a safe home for animals.

10. *Parking Area (pollution):*

How does this parking area differ from other areas of the camp? Why don't many trees and plants grow here? Look around for land pollution. Find one piece of litter and put it in the garbage bag.

11. *Eroded Bank or Slope (Earth's surface review):*

Explain why erosion has occurred here. Name two things that cause erosion (rain, waves). Dictate a sentence that explains how erosion can be stopped.

12. *Rock (Earth's surface):*

Examine the rock closely using your hand lens. Touch the rock. Describe the rock using as many adjectives as possible (adult records answers). If we could lift the rock, what would we see?

Summary: (DL4)

Identify who would need to know how to use a compass. Explain why.

Follow-Up: (DL3&4)

Use a predetermined map of the school playground area. Give the map a title. Using a compass, label the cardinal directions on the map. Create your own legend.

Extension Activities:

1. Play "Hunt the Penny"
 - a. Place pennies on a course in an open area.
 - b. Give student a compass at the starting point.
 - c. Tell student to walk east, west, north or south and count their steps in that direction until they find a penny (1 step = heel to toe, heel to toe).
 - d. Record on a work sheet how many steps it took in their particular direction to find a penny.
2. Play "Landmark Hunt"
 - a. Go to a high point or open area at camp or on school grounds (with map in hand).
 - b. Student looks N (north) and draws a landmark for that direction.
 - c. Follow the same for other cardinal points.
3. Play "Shape Construction"
 - a. Give each team of students a compass and colored flags.
 - b. Instructor will give the following directions and students will place flags accordingly:

Square Construction

- ! place flag
- ! 10 steps east
- ! place flag
- ! 10 steps south
- ! place flag
- ! 10 steps west
- ! place flag
- ! 10 steps north

Rectangle Construction

- ! place flag
- ! 10 steps north
- ! place flag
- ! 5 steps east
- ! place flag
- ! 10 steps south
- ! place flag
- ! 5 steps west

4. Pass out two maps of different regions. Compare and contrast the two maps using the "Both" Graphic Organizer.

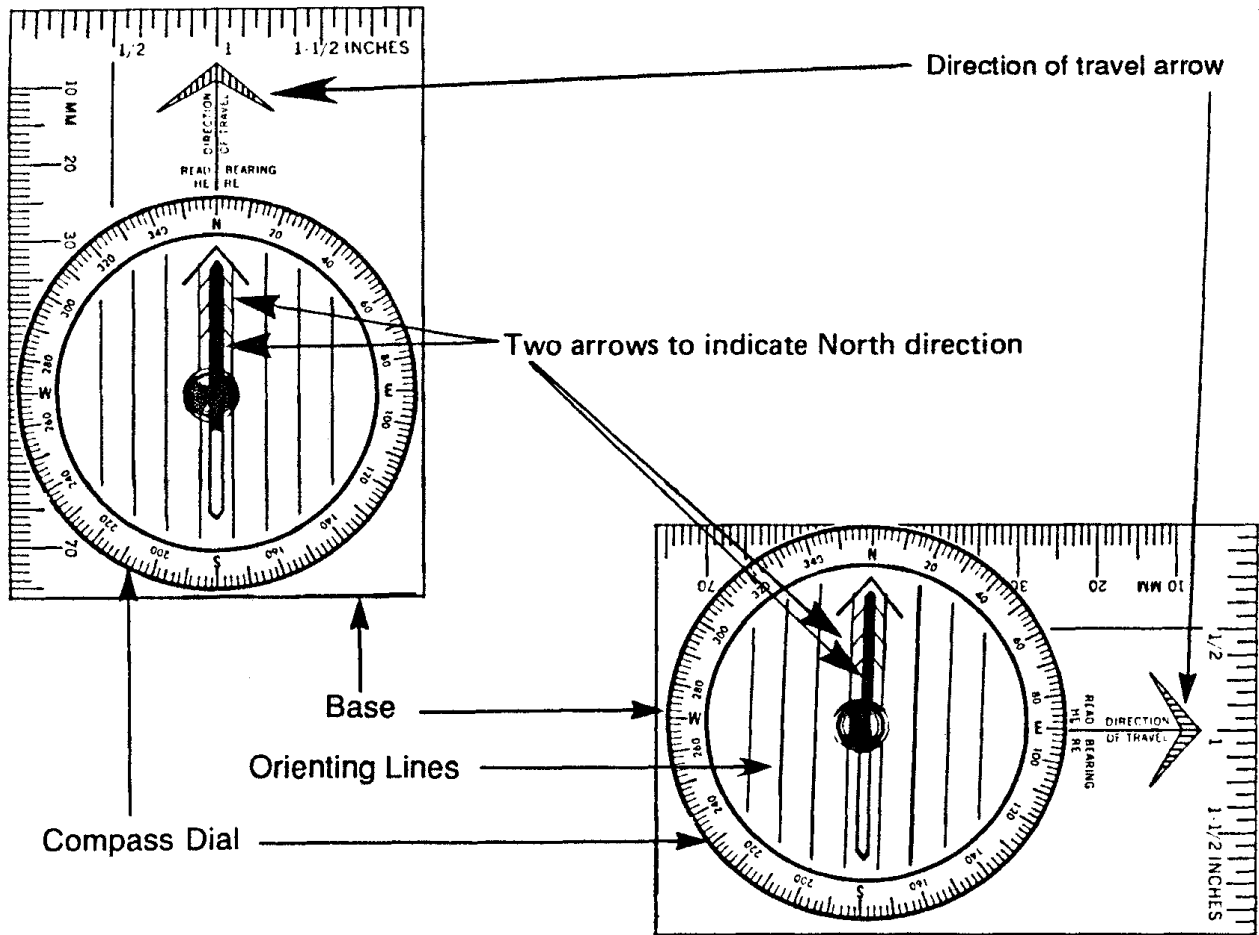


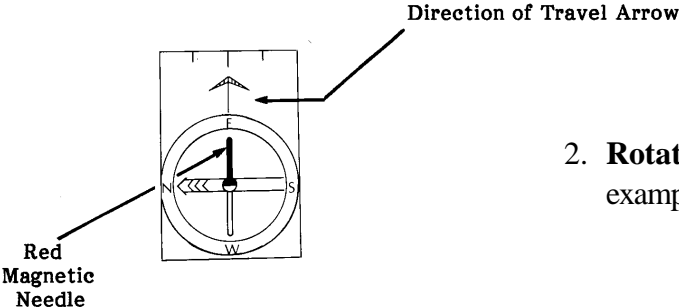
Figure 1: Parts of a Compass

How to Use a Compass

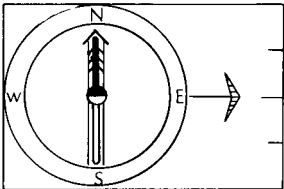
The following four steps will direct student to "take a bearing" using a compass:



- 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 is E, is over the **Direction of Travel Arrow**.



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

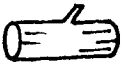





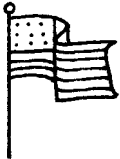




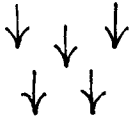
- 4. Look up and **walk** in that particular direction.



Landmark Symbols

Pavilion	Campfire	Cluster of Trees
Forked Tree	Parking Area	Flagpole
Marsh	Rock	Slope
Water Area	Dead Log	Field


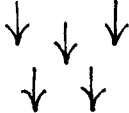

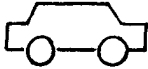




Use these symbols on the chart above.

**Arlington Echo Environmental Discovery Walk
Student Copy**

Location	Go	To	Symbol
Forked Tree	W	Dead Log	
Dead Log	S	Field	
Field	W	Cluster of Trees	
Cluster of Trees	S	Parking Area	
Parking Area	E	Pavilion	
Pavilion	S	Slope	
Slope	S	Marsh	
Marsh	N	Forked Tree	

Arlington Echo Environmental Discovery Walk Teacher Copy

Location	Go	To	Symbol
Forked Tree	W	Dead Log	
Dead Log	S	Field	
Field	W	Cluster of Trees	
Cluster of Trees	S	Parking Area	
Parking Area	E	Pavilion	
Pavilion	S	Slope	
Slope	S	Marsh	
Marsh	N	Forked Tree	

Environmental Discovery Walk

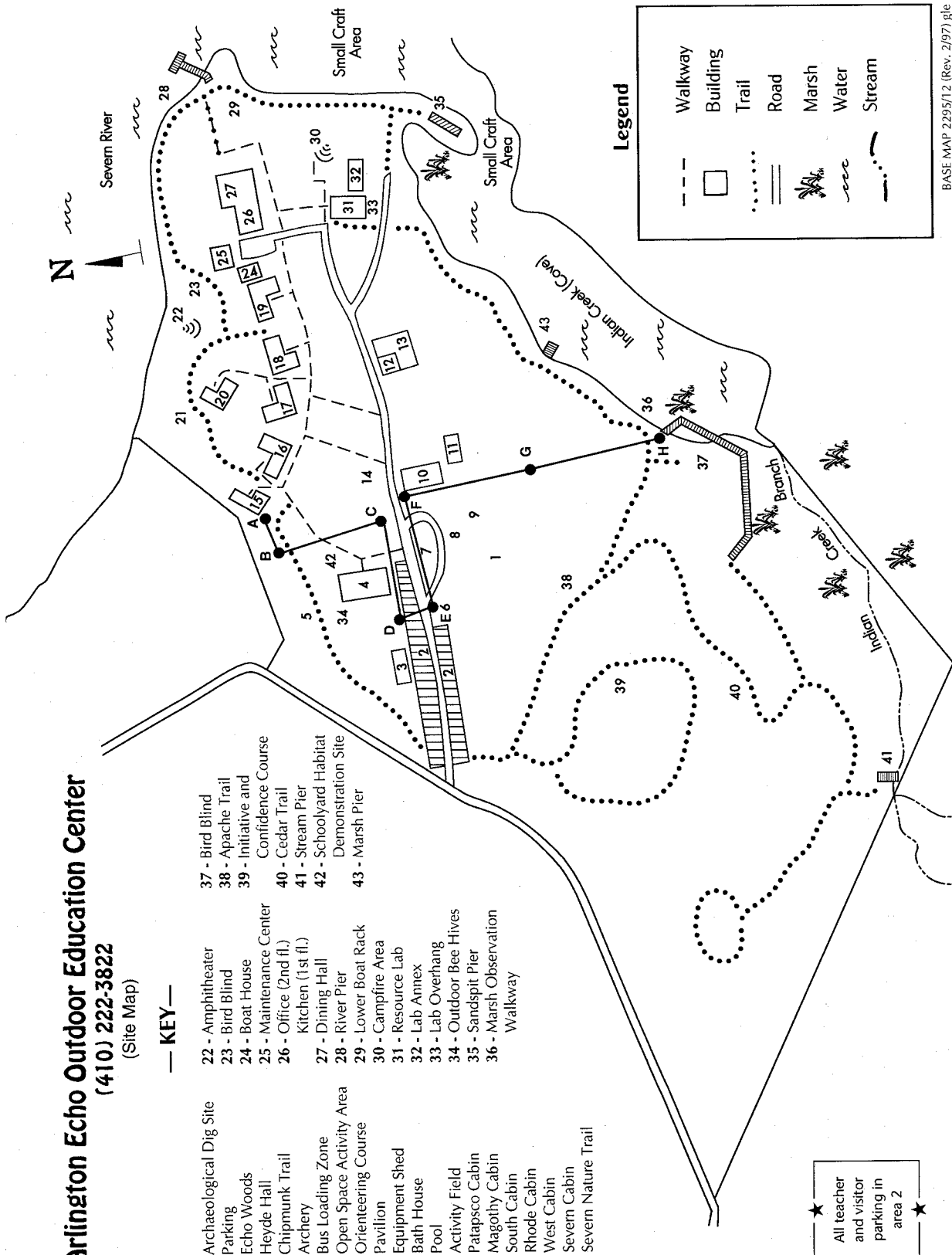
Arlington Echo Outdoor Education Center

(410) 222-3822

(Site Map)

— KEY —

- | | |
|--------------------------------|--|
| 1 - Archaeological Dig Site | 37 - Bird Blind |
| 2 - Parking | 38 - Apache Trail |
| 3 - Echo Woods | 39 - Initiative and Confidence Course |
| 4 - Heyde Hall | 40 - Cedar Trail |
| 5 - Chipmunk Trail | 41 - Stream Pier |
| 6 - Archery | 42 - Schoolyard Habitat Demonstration Site |
| 7 - Bus Loading Zone | 43 - Marsh Pier |
| 8 - Open Space Activity Area | |
| 9 - Orienteering Course | |
| 10 - Pavilion | |
| 11 - Equipment Shed | |
| 12 - Bath House | |
| 13 - Pool | |
| 14 - Activity Field | |
| 15 - Patasco Cabin | |
| 16 - Magothy Cabin | |
| 17 - South Cabin | |
| 18 - Rhode Cabin | |
| 19 - West Cabin | |
| 20 - Severn Cabin | |
| 21 - Severn Nature Trail | |
| 22 - Amphitheater | |
| 23 - Bird Blind | |
| 24 - Boat House | |
| 25 - Maintenance Center | |
| 26 - Office (2nd fl.) | |
| 27 - Dining Hall | |
| 28 - River Pier | |
| 29 - Lower Boat Rack | |
| 30 - Campfire Area | |
| 31 - Resource Lab | |
| 32 - Lab Annex | |
| 33 - Lab Overhang | |
| 34 - Outdoor Bee Hives | |
| 35 - Sandspit Pier | |
| 36 - Marsh Observation Walkway | |



Legend

- Walkway
- Building
- Trail
- == Road
- Marsh
- Water
- Stream


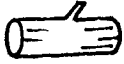

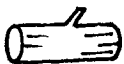

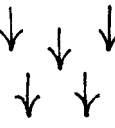

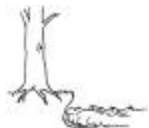

★ All teacher and visitor parking in area 2 ★

BASE MAP 2295/12 (Rev. 2/97) gle
(2nd grade Environmental Discovery Walk)

West River Environmental Discovery Walk Student Copy

Location	Go	To	Symbol
Flagpole Area	W	Building	
Building	S	Dead Log	
Dead Log	W	Cluster of Trees	
Cluster of Trees	N	Dead Log	
Dead Log	W	Building	
Building	N	Open Field	
Open Field	W	Marsh	
Marsh	N	Eroded Area	
Eroded Area	E	Waterfront	

West River Environmental Discovery Walk Teacher Copy

Location	Go	To	Symbol
Flagpole Area	W	Building	
Building	S	Dead Log	
Dead Log	W	Cluster of Trees	
Cluster of Trees	N	Dead Log	
Dead Log	W	Building	
Building	N	Open Field	
Open Field	W	Marsh	
Marsh	N	Eroded Area	
Eroded Area	E	Waterfront	

Environmental Discovery Walk

West River Camp

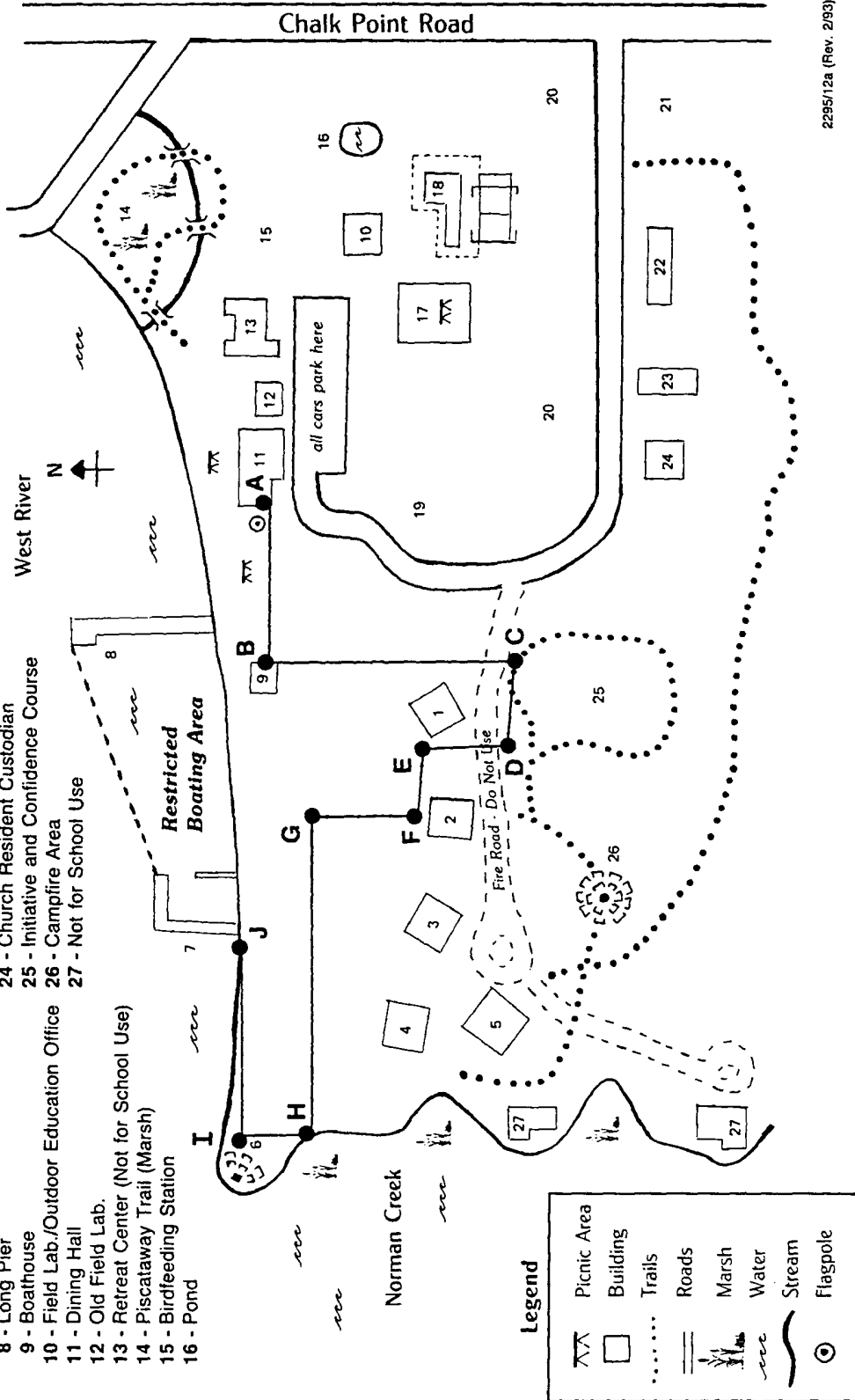
(Site Map)

(410) 222-1688

For more information contact
Arlington Echo Outdoor Education Center
975 Indian Landing Road □ Millersville, Maryland 21108
(410) 222-3822

- Key -



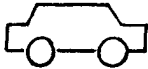

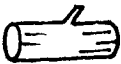


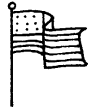
- 1 - Cabin 1
- 2 - Cabin 2
- 3 - Cabin 3
- 4 - Cabin 4
- 5 - Cabin 5
- 6 - Campfire Overlook
- 7 - L-Pier
- 8 - Long Pier
- 9 - Boathouse
- 10 - Field Lab./Outdoor Education Office
- 11 - Dining Hall
- 12 - Old Field Lab.
- 13 - Retreat Center (Not for School Use)
- 14 - Piscataway Trail (Marsh)
- 15 - Birdfeeding Station
- 16 - Pond
- 17 - Pavilion
- 18 - Pool
- 19 - Compass Trails
- 20 - Open Field
- 21 - Algonquin Trail (Forest)
- 22 - Church Resident Manager
- 23 - Church Maintenance Shed
- 24 - Church Resident Custodian
- 25 - Initiative and Confidence Course
- 26 - Campfire Area
- 27 - Not for School Use



Woodlands Environmental Discovery Walk Student Copy

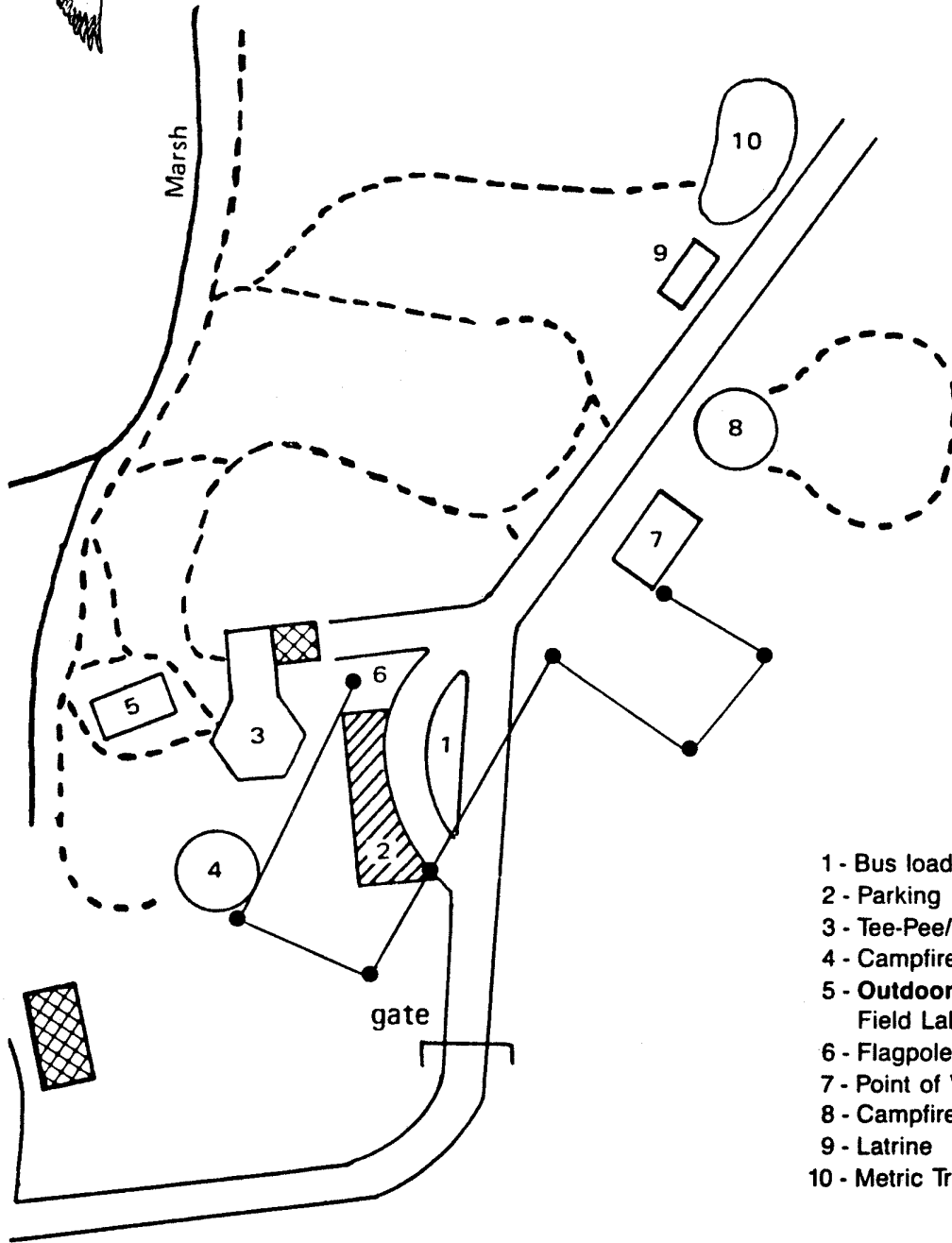
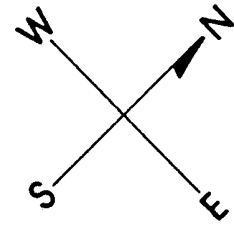
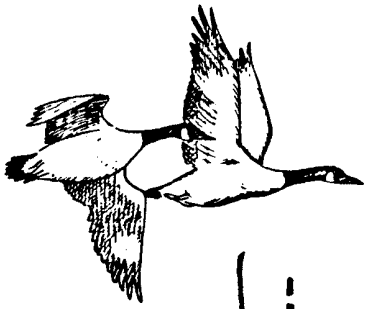
Location	Go	To	Symbol
Flagpole	S	Campfire	
Campfire	E	Slope	
Slope	N	Parking Area	
Parking Area	N	Forked Tree	
Forked Tree	E	Dead Log	
Dead Log	N	Cluster of Trees	
Cluster of Trees	W	Building	
Building	S	Flagpole	

Woodlands Environmental Discovery Walk Teacher Copy

Location	Go	To	Symbol
Flagpole	S	Campfire	
Campfire	E	Slope	
Slope	N	Parking Area	
Parking Area	N	Forked Tree	
Forked Tree	E	Dead Log	
Dead Log	N	Cluster of Trees	
Cluster of Trees	W	Building	
Building	S	Flagpole	

Environmental Discovery Walk

Camp Woodlands Outdoor Education Center



- Key -

- 1 - Bus loading zone
- 2 - Parking
- 3 - Tee-Pee/Dining
- 4 - Campfire Circle
- 5 - **Outdoor Education Office - Field Lab.**
- 6 - Flagpole
- 7 - Point of View Lodge
- 8 - Campfire Circle
- 9 - Latrine
- 10 - Metric Trail/Merrimen Area