

**Activity: Map Makers**

**Grade Level:** Grade 4

**Major Emphasis:** Map Skills

**Major Curriculum Area:** Social Studies/Language Arts

**Related Curriculum Areas:**

- Refer to Outdoor Education Curriculum Matrix 3-5
- Physical Education
- Science
- Art

**Program Indicator:**

The students will locate places and natural features by interpreting and constructing maps, using directions, legends and boundary lines. **(DL3)**

**Student Outcomes:** The student will:

1. develop a map given an outlined area.
2. develop a key/legend to go with his/her map.
3. differentiate between different types of maps and their uses.

**Readiness: (DL2,3,4)**

1. Look at different types of maps (ie Maryland, Japan and Kenya) and discuss their uses. **(MC)**
2. Discuss the different types and purposes of maps. For example; use a Maryland road map as a sample planimetric map and a topographic map as a sample contour map.
  - a. *A planimetric map* shows everything as if it were on the same plane or level. For example; a street map shows roads and places.
  - b. *A topographic or contour map* shows the differences in the levels or contours of the land. For example; a topographic or contour map shows hills and valleys.
3. Have students draw maps of their classroom, bedroom etc. Discuss problems encountered.
4. View "The Magic Map; Adventures in Map Skills" filmstrip.
5. Introduce vocabulary:
 

map	habitat	planimetric map
key	marsh	topographic (contour) map
legend	symbol	
orient	environment	

**Materials:**

- |                 |                                       |                 |
|-----------------|---------------------------------------|-----------------|
| large group map | clipboards                            | pencils/crayons |
| easel           | compasses                             |                 |
| magic markers   | student maps-Outdoor Education Center |                 |

**Procedures: (DL2,3,4)**

1. Discuss with the students that as we walk, we probably notice only those things which are necessary to get us to our destination. We may not see a soaring hawk, although we may be looking at the sky. We may leave the trail to see a tree better and not see the wildflower we trample on the way.
2. Students start by sitting back to back. Have one student describe what his/her partner is wearing (colors, details, etc.). Lead students in a discussion of what kinds of things they noticed about their partner and what they didn't notice. Let them come up with reasons why they think this happened.
3. Now that the students are able to see the difference between casual and detailed observations they are ready to apply their newfound skill of "seeing" to this mapping activity.
4. Distribute the Outdoor Education Center maps to the students.
5. Using the large laminated map, have the students locate strategic landmarks such as roads, trails, buildings, etc. Review basic map reading skills. Use a compass to orient the map to north.
6. Point to the circles in each area of the map. Explain that each circle represents a distinct ecological area in the camp; i.e. water, woods, marsh, field, buildings. Use the following directions to complete the map reading activity.
  - a. Before beginning the exercise, decide as a group the most logical route to follow to reach all of the selected areas.
  - b. The students will locate these selected areas using the information on their own maps.
  - c. After arriving at the area, the student will spend 3-5 minutes quietly observing his surroundings.
  - d. The student will draw the most prominent missing feature in the circle area on the map. (Refer to Figure 1)
  - e. Record the feature on the map key.
  - f. The student will follow the same procedure for each of the areas located.

**Figure 1**

7. Using their own maps, the students will then discuss what they have observed in each of the areas. Ask these questions about each area.
  - a. What did you find in the first area?
  - b. What type of living things did you see? Describe them.
  - c. What do you think might be there that you didn't see?
  - d. What living things do you think you would find there at night?
  - e. Would they be different from what you found during the day?
  - f. Why would you expect to find these things in this particular area?
  - g. How did the key/legend help you?
  - h. Could you improve your map? How?

8. Refer to the large laminated map. Discuss the many different ideas for symbols that the students used to represent Area 1 on their maps. (Refer to Figure 2)

**Figure 2**

9. Have the students agree as a group on the best symbol to represent Area 1 in the box on the large map and ask one of the students to draw the symbol chosen in the box on the large map.
10. Repeat this procedure for the remaining areas.
11. Discuss how others using this map will know what the symbol represents. *Example: If a fish was used to represent Area 1, would someone think it meant a fish store?* Develop the idea that a key is needed to interpret a map correctly.
12. Direct the students in creating a simple legend on the large laminated map defining all the labels used. (Refer to Figure 3)
13. Direct the students to complete their map key.

**Figure 3**

**Summary: (DL2&4)**

Ask the students what kind of map did you complete, topographical or planimetric? How do you know? What information does it show? How will this map making activity be useful for your outdoor experience?

### **Follow-Up:**

1. Plan and create a mural of camp.
  - a. Cover a large wall space with paper.
  - b. Sponge a paint background - green grass, blue water, brown trails.
  - c. Assign small groups to illustrate one of the outdoor activities.
  - d. Have them cut out the figures, equipment, etc. and using your map, place them in the appropriate spot on the mural.
2. Research international symbols for topographical maps (U.S. Geological Survey).
3. Develop a key for product maps of Japan or Maryland. **(MC)**
4. Make an environmental map of the school property showing buildings, paths, wooded areas, etc.

### **Extension Activities:**

1. Have students compile a poetry booklet. Working in small groups or individually, write haikus about the distinct ecological areas observed. **(MC)**
2. Have students use a map to plan the most scenic and/or time efficient trip to a location of their choice. Students could plan the trip financially and logically. **(DL5)**

### **Teacher Resources:**

#### Books:

- < \*Be an Expert with the Map and Compass, Kjellstrom, 796.5.
- < \*Cowstails and Cobras, Rohnke, 796, p 221.
- < \*Map, Compass and Campfire, Ratliff, 796.54.
- < \*Mapping Small Places, Wentworth, 796.5.
- < \*Wilderness Route Finder, Rutstrum, 796.5.

#### Filmstrip:

- < \*"The Magic Map: Adventures in Mapping Skills," MAP, 912.

#### Supplementary Material:

- < \*Orienteering Instructor Handbook.