SCHOOL YARD MAPPING EXERCISES

Glenwood School ArtStream Project

First Class Period:

OVERVIEW
Students become familiar with the terrain, structures, plants and signs of habitats around their schoolyard by drawing a sketch map. Students can return to this map to organize spatial data regarding the location of weeds, native plants, and other elements of their schoolyard. We will be focusing on water.

GRADE LEVEL: 2-8

FOCUS: Life Science, Investigation, Experimentation, and Math

OBJECTIVES
Students will draw the major elements of their schoolyard including terrain, structures, plants, and signs of habitats.
Students will use their maps to describe to each other what they observed in their schoolyard.

SITE: Outdoors

TIME FORMAT: 1 class session

MATERIALS
Paper
Pencils
Compass
Drawing boards

ADVANCED PREPARATION
Gather necessary materials.
Walk schoolyard before lesson and scout for possible hazards.
Sketch your own map of the schoolyard.

ACTIVITY
Organize students in a circle and explain that they are going to make sketch maps of the schoolyard.
Ask Students:
- What are some of the things we should consider putting on our maps?

Teacher Help:
- Major plant areas: Trees, Lawn, Shrubs
- Terrain : Where land slopes

- Structures: Buildings, Fences, Gates
- Parking areas, paved areas, playground areas, playing field areas
- Where water runs off their schoolyard, and any resulting erosion

Explain to students that a map has a heading direction (North, South, East, West) normally noted somewhere on it. Why would it be important to include this on the maps?

Ask the students to imagine that they are flying over their schoolyard when they are making their maps. This is called a MAP VIEW.

Split the class into groups of two. Have students work together to draw a map that represents all of the things outlined in the activity. These maps can be 9" x 9" and fit on two pages of their nature journals.

Give students 20-30 minutes to work on this.

Second Class Period:

WRAP UP
Site: Classroom
Have students share their maps with everyone.
Have them explain some of the major features or things they found as they explored.
Do they notice anything about where water runs off of their school yard, and the results of unchecked runoff?

FOLLOW UP
SITE: Classroom
Have students make a written list of the following elements on their schoolyard:

- Directions
- Human made structures (building, sidewalks, playing fields)
- Water sources, water runoff
- Topography
- Traffic patterns of wildlife, people, and vehicles
- Path of sun and wind exposure
- Plant locations
- Scale

Use this list to create symbols or icons to be used on a larger map (3 x 3). This map will be used to create a relief tile image of the schoolyard.

Third Class Period

OUTDOOR EXERCISE # 2: A Closer Look at the Effects of Water on the Schoolyard

In the classroom divide the children into groups of 4. Have them combine their schoolyard maps into one larger map. For Glenwood, your map will be square and can be 12x12 for instance. Outside: Divide the schoolyard into segments and assign one group of

students to work in each segment. Students can add more detail to their schoolyard maps and use symbols created in the followup to exercise 1. We want them to pay particular attention to water issues, where water runs off , why water is running off instead of sinking into the ground, what plants or elements either slow down run off water, or speed it up. For instance, note the evidence of runoff from a grassed area, a paved area, a graveled parking lot, the play ground (note how far down the slope the rubber tire fragments have been washed), playing fields, and areas where there is no grass and the soil is packed down from heavy use.

Fourth Class Period:

FOLLOW UP
SITE: Outdoors

After the maps are completed, conduct a nature walk around the schoolyard with the entire class. As you approach different segments of the schoolyard, ask each group to report its findings to the others and discuss what they think could be changed on their schoolyard to reduce water runoff and erosion. Ask the students to think about where the runoff from their schoolyard goes (sinkhole ponds, underground, eventually into creeks in the Spring Creek Watershed)

Fifth Class Period

Have the students draw from memory their home and surroundings as a map view, considering the same elements as in their schoolyard maps.
Have students compare and contrast different environments, developed and undeveloped.

Sixth Class Period

Have students do the Schoolyard Report Card
Download and print the Schoolyard Report Card here:
http://www.nccoast.org/Curriculum/Section2/3_School.pdf

Sources: These exercises were adapted from *Mapping Your Schoolyard Habitat* by Jon Detka, and *Mapping Your Schoolyard*, from the Ecology Explorers web site: http://caplter.asu.edu/explorers/start/map.htm. Additions by Pat Hight, ArtStream artist in residence, Michelle Carlson, Glenwood School art teacher, and Wanda Byrd, Bryant Watershed Project Program Specialist. The *Schoolyard Report Card* was developed by the North Carolina Coastal Federation as part of their classroom curriculum series.

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