CAVOC 7th Grade Spring Math Curriculum

(Cedric A. Vig Outdoor Classroom)

Suggested Schedule- Spring

Time/Period	ROPES	MATH	SCIENCE	HEALTH	HISTORY	ENGLISH	TECH. ED.
8:30 - 9:05	1	2	3	4	5	5	6
9:10 - 9:45	6	1	2	3	4	4	5
9:50 - 10:00	Snack Break	Snack Break	Snack Break	Snack Break	Snack Break	Snack Break	Snack Break
10:05 - 10:40	5	6	1	2	3	3	4
10:45 - 11:20	4	5	6	1	2	2	3
11:25 - 12:00	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch
12:05 - 12:40	3	4	5	6	1	1	2
12:45 - 1:20	2	3	4	5	6	6	1
1:25 - 2:00			Fear	Factor	Incentive		
2:00 - 2:15	Clean / Up	Clean / Up	Clean / Up	Clean / Up	Clean/ Up	Clean / Up	Clean / Up

Birds and Worms

(~ 35 minutes)

Objective for Unit

Students will simulate how predators use their vision to find prey

Students will describe some different ways animals use camouflage for survival.

Students will develop bar graphs to represent information found.

Students will interpret the graphs.

DPI Standards for Environmental Education

A.8.1, A.8.4, D.8.1, E.8.1, E.8.2, E.8.3, E.8.4, E.8.7, F.8.4 - Mathematics Standards

C.8.1, C.8.2, C.8.4, C.8.5, C.8.6, C.8.7, C.8.10, C.8.11, F.8.2, F.8.7, F.8.9- Science Standards

A.8.4, A.8.5, A.8.6, B.8.1, B.8.3, B.8.8- Environmental Education Standards

Materials

Poster paper
Glue
Construction paper pieces (3 – 5 colors)
Pencil
Paper
Clipboards
Graph paper

Desired Location

Shelter

Resource

Project Learning Tree

Background Information

Many animals are "color coordinated' with their surroundings. For example, snowshoe hares and the grouse-like birds naked ptarmigans (TAR-mee-guns) change from brown in summer to white in winter. A box turtle's dappled shell and a fawn's white spots mimic blotches of sunlight on the forest floor. And the two-toned appearance of many fish, dark on top and light on bottom, helps them match differing levels of light in the water. When viewed from below, a fish's light-colored belly blends in with the sky. When viewed from above, the darker top blends in with the waters underneath. Any coloration, body shape, or behavior that helps an animal hide is called camouflage.

Blending in with the environment is a great way to avoid being eaten, but it's not an adaptation limited to prey animals. Many predators are also camouflaged: the better to avoid being spotted by a potential meal. For example, a lion's tawny coat matches the grasses of the African savanna and the leopard's spots match the patchy sunlight of the African forest.

Activity

1. Assemble 60 small, colored objects consisting of equal amounts of at least three colors. Those items represent "worms" and "bugs."
2. Scatter colors that represent worms and bugs over a play area when students aren't looking.

3. Make sure to have at least one color that matches the playing surface.
4. Gather group together.
5. Introduce the concept of camouflage and ask if they've heard of it.
6. Have students give examples of how camouflage helps both predators and prey.
7. Divide the group into two to four teams with the same number of students in each team.
8. Line-up students in their groups near play area.
9. Tell students that various types of tasty animals are scattered here and that the students are hungry birds.
10. Describe to them what the worms or bugs look like.
11. Ask them to predict what color worm or bug might have the best camouflage for the environment.
12. Arrange the teams in relay race lines.
13. Explain that the object of the race is to be the first team to get every bird fed.
14. When you say, "Go" the first bird in each line should "fly" over the prescribed area and pick up the first worm or bug that he or she sees.
15. Each bird flies immediately back to the line and tags the next bird, who does the same thing.
16. When the last bird returns, everyone on the team should sit down. The first team to be seated wins.
17. When all teams have completed the relay, spread a large piece of paper (poster size) on the ground.
18. Make a chart with as many columns as there are students on each team. Each column will represent the student position in line.
19. Students should place their worm or bug in the column that corresponds with their position in line.
20. Have students record which color worms or bugs were found in each round.
21. Discuss or ask students if there was any pattern to the order in which the worms or bugs were found? Does the pattern have any significance?
22. Return to school to graph.