



Teacher's Corner Lesson Plans

*Helping Teachers and Students Make the Most of
their Outdoor Classroom*

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Where's my Lunch? Using The Colours of the Seasons to Find Your Dinner*†

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Grade level: Grade 2.

Provincial curriculum links: Ontario.

Subject: Science and Technology - Life Systems, The Arts - Visual Arts.

Keywords: Colours.

Description

Students examine their schoolyard habitat or garden area throughout the year on a seasonal basis, searching for colours which predominate and colours which are camouflaged. Students will graph their findings and create a piece of visual art using either the dominant colours or camouflage colours for each season.

Curriculum Framework

Topic: Growth and Change in Plants

Strand: Life Systems 2s11, 2s17, 2s19

Specific Lesson Goals:

- Describe ways in which animals respond and adapt to their environment.
- Communicate the procedures and results of investigations for specific purposes using drawings, demonstrations, and oral and written descriptions.

*This exercise is adapted from Lott, Steven *Patterns, Plants and Playgrounds, Educational Activities for School Grounds, Intermediate Grades 4 to 7*. Evergreen, 2000.

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Topic: The Arts

Strand: Visual Arts 2a40

Specific Lesson Goals:

- Produce two- and three-dimensional works of art that communicate their thoughts and feelings on familiar topics.

Topic: Mathematics

Strand: Data Management and Probability 2m108

Specific Lesson Goals:

- Construct and label simple concrete graphs, bar graphs and pictographs using one-to-one correspondence.

Preparation

Preparation time: 30 minutes

Length of lesson:

- 20 minutes - outdoor experience
- 30 minutes - graphing activity
- 30 minutes - visual arts activity

Resources required:

- one ball of several colours of yarn to represent the spectrum, plus black, white, and gray
- graph paper or chart paper
- drawing paper or prepared quilt pattern or design
- crayons
- paint
- pencil crayons

Procedure

Part 1

1. Cut 20 segments from each ball of yarn (10-15cm each). These will become “wormettes” . The students will be birds searching for a meal.

2. Hide the yarn in both easy and difficult locations throughout the schoolyard habitat area. Place them so that some colours match the background, while others contrast.
3. Show the students the balls of yarn, and have them predict how many “wormettes” of each colour they will be able to find. Record their predictions on a worksheet.
4. Students proceed outdoors to search their habitat area for 5 to 10 minutes, gathering up as many “wormettes” as they can find.
5. Record student colour totals. Discuss the results. Which colours were most easily found? Which colour were difficult to find?
6. At the end of the sampling time, students put their “wormettes” together and total up each colour. Discuss the results. Which colours were most easily found? Which colours were difficult to find?
7. Students return to the area to look again. Record any new findings. Total up the “wormettes” which have been found.
8. Return to the classroom. Use a large sheet of chart paper to prepare a graph of the “wormettes” colours which were found. At this time, point out how many “wormettes” of each colour were not found, and discuss reasons why it was difficult to find some colours. Use the discussion questions for PART ONE with the class.
9. Students prepare a tally graph and a bar graph to illustrate their investigation. The graphs should be kept for comparison purposes during the investigation of winter, spring, and summer colours.

Part 2

1. Present the class with a selection of Canadian landscape pieces by the Group of Seven and discuss the colours which are dominant in each painting. Search for examples of the dominant and camouflage “wormette” colours which the students found in their schoolyard habitat area.
2. Using the three most commonly found colours of “wormettes” (dominant), or the three most rarely found colours (camouflage), students choose pencil crayons, water colour paints, or crayon to create a two-dimensional work of art. Another option would be to provide students with a simple quilt pattern and ask them to colour the pattern using either the three dominant or three camouflaged colours for the season.

3. Repeat this investigation in the winter, during the spring, and at the beginning of summer. Make enough new “wormettes” to have 20 of each colour for each season. Keep student art samples and graphs to compare changes throughout the seasons.

Discussion and Questions

Part 1

- Discuss which “wormettes” were easy or hard to find. Why?
- Was it easier to find “wormettes” the second time we searched? Why or why not?
- Were all of the “wormettes” found? Why or why not?
- Was it difficult to find certain colours? Why?
- Would the results be the same if we looked at a different time of the day or if we looked at night? Do all birds look for food at all times throughout the day and night?
- Would the results be the same if we attempted this investigation next month?
- What predictions can we make about a change in colour next month?
- If you were a “wormette” what would be the benefits of having the habitat colours change every season?
- If you were really a bird, what difficulties might you have finding food at different seasons of the year if you had a preference for a certain colour of “wormette” ?
- Does the changing of the colours influence the types of animals who can live within our habitat? How?
- Make connections to animal camouflage techniques and discuss how predators overcome the problems of finding camouflaged prey (i.e. they use other senses such as smell or they wait patiently until the prey moves).

Part 2

- How have the Group of Seven communicated the dominant colours of the seasons in their landscapes?

- Can we communicate the changes of the seasons in our art by using three of the most dominant colours to produce a piece of art, or to complete a pattern page?
- If we repeat this activity on a monthly or a seasonal basis, can we develop a calendar of colour changes in our schoolyard habitat?

Student Evaluation

Develop a rating scale for students to determine how well they have completed the goals of the lesson.

Enrichment and Extension Activities

- This activity can be used to report upon the changing patterns of colour within the schoolyard habitat area. Student graphs and art samples may be displayed within the school
- The information gathered can be shared among schools from other parts of Ontario and Canada to compare and contrast colour patterns.
- Discussions and activities which help to illustrate the subtle changes which occur, and their impact upon the animals and plants of the habitat are encouraged.

Educator Notes

This lesson can be used to assist in the identification of some factors which contribute to the survival of populations within an ecosystem. This lesson plan can also be used to introduce the concept of change within a natural community. It could also be an opportunity for an intermediate class to be partnered with a Grade 2 class, examining change throughout the seasons. See the partner lesson “Colours of the Seasons”

References

The Thicket Game. Project Wild, Wild Education, Kanata, Ontario. [http:// www.wildededucation.org](http://www.wildededucation.org), 1995, p. 137.

DeVito, Alfred and Krockover, Gerald *Creative Sciencing: Ideas and Activities for Teachers and Children.* Foresman and Company, 1991, p. 90.