



Quarrybrook

EXPERIENTIAL EDUCATION CENTER

Program Title: Patterns in Nature

Audience: 4th grade students

Program Theme: Patterns are seen in our everyday lives. How do they help us identify information in the natural world?

Program Goals: Through hands-on activities, students will gain a better understanding as to what information patterns provide us, in our everyday life and in the natural world.

Next Generation/Common Core Connections:

Topic: CCSS.MATH.CONTENT.4.Operations & Algebraic Thinking.C.5: Generate and analyze patterns.

Dimensions: Patterns

Program Outline:

Activity 1: WHAT IS THE PATTERN? (30 min.) – Students will be introduced to patterns (in our daily schedule, in math, in nature...). Students will be asked to identify the pattern within various sequences, and to provide the next element in those sequences.

Objectives: Students will be able to recognize patterns and decipher the rules that different patterns follow.

Intended Outcomes: Students will be able to identify the patterns and figure out the next element within various sequences.

Activity 2: NATURE’S PATTERNS (75 min.) – Now that students have practiced recognizing patterns and identifying what rules they follow, we’ll head into the forest to observe and decipher patterns in the natural world, such as the number and arrangement of flower petals and pine cone scales, spider webs, animal tracks, tree bark, animal skin coloration, etc.

Objectives: Students will notice the various patterns present in a natural environment, and identify what information those patterns provide us.

Intended Outcomes: Students will be able to identify the rules followed by the patterns they have observed in the natural world.

Conclusion/Wrap-up: (15 min.) Students will be asked to recall various patterns they identified during the walk, and the role of patterns in our everyday life.

Successful completion of this program will help support your students' proficiency in NGSS Performance Expectations:

4-PS4-3 Generate and compare multiple solutions that use patterns to transfer information.