

# SD 38 K-12 Mathematics & Numeracy

## Grades 3-5: Week Four

**Big Idea:** We use patterns to represent identified regularities and to make generalizations.

**Curricular Content:** patterns – increasing and decreasing patterns, pattern rules using words and numbers, tables and charts, symbols and variables

**Curricular Competencies:** develop, demonstrate and apply mathematical understanding through play, inquiry and problem solving, visualize and explore mathematical concepts, represent mathematical ideas in concrete, pictorial, and symbolic forms, engage in problem-solving experiences that are connected to place

**Core Competencies focus:** Communication, Creative Thinking

Teachers and Families: The following are five problems/tasks to choose from for this week, based on the above curricular areas of focus.

Find some small materials like cubes or rocks or coins at home. Create an increasing (growing) or decreasing pattern with them.

What is the pattern rule?

Draw and label your pattern. Create a table to represent your pattern.

Here is a pattern.

What could come next?

What would be the 10<sup>th</sup> step?



How do you know? Explain your thinking using pictures, numbers and words.

Here is a pattern.

What could come between these two steps?

What else could come between? What would come next?



How do you know? Explain your thinking using pictures, numbers and words.

Attached are some photographs of land art. What different kinds of patterns can you see? Using found materials outdoors or in your home, create an increasing or decreasing pattern in a circular or spiral form. Take a photograph or draw your pattern, and then label and describe it. What is the pattern rule for your pattern?

### Numeracy Task:

Look around your home, out your window or in your neighbourhood. How are patterns used in design? How are they used in how buildings and homes are numbered or organized? Record your findings with pictures, numbers and words. How could you use a table or chart to show the types of patterns you find?

# Outdoor Math Art – What patterns do you see?

created by artist James Brunt



created by students in Oliver, BC



created by students at Grauer Elementary in Richmond, BC

