Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Summative Portfolio (may be worked on throughout unit)

SS6 - Tessellations

**Create a portfolio containing the following:**

1. Create at least one tessellation using two or more different pattern blocks to make a composite shape. For example: a) hexagons, squares, and triangles or b) squares and triangles.

Record the design created.

Explain how the angle measurements allow it to tessellate.

1. Create a pentagon that will tessellate. And create a pentagon that will not tessellate.

Use drawings to help explain why the shapes will or will not tessellate.

1. Do two of the three parts. Use diagrams to illustrate the transformations.

Create a tessellation that is created by

1. only using translations
2. only using reflections
3. only using rotations
4. Describe one of your tessellations in a way that another student can re-create it without seeing the original.
5. Find one or more tessellations in your everyday environment (at school, at home, etc.). Identify the characteristics that make each a tessellation. Use drawings in your explanation.
6. Chris started to change a triangle tile by adding a bump to half of one side.

Create your own modified triangle tile that will tessellate.

How do you know it will tessellate? Explain using transformations and conservation of area.

Fill an area (e.g., a sheet of paper) with your tile to demonstrate how it tessellates. If desired, use colour to make a design.