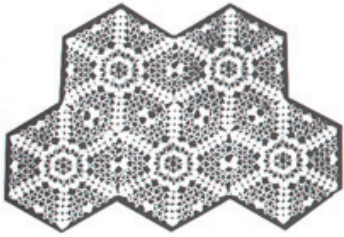# Tessellations

Activity 1 - Making Tessellations

Have you ever noticed how the tiles are arranged in ceramic floors, on the walls of a bathroom, or how wallpaper and your clothing often have repeating patterns? Regular tessellations are made up from congruent regular polygons. The patterns in a regular tessellation can be formed using only one type of regular polygon. For example, there can be a tessellation made only by repeating the same equilateral triangle over and over in every direction.

Tessellations are a super cool and interesting mathematical phenomenon. The math behind tessellations can sometimes get fairly complex but the basics are

Easy for everyone to understand. The beauty of tessellations can be appreciated by everyone! Tessellations are geometrical patterns made up of one or more repeating

Shapes, which completely cover the

Surface and fit together without any gaps or overlaps. Any given pattern in a tessellation can be continued infinitely in

Every direction. Tessellation can also be described by the words "tiling" or "mosaic". Tessellations were discovered and used in art thousands of years ago by many different ancient cultures

Long before they were studied in mathematics. Geometric mosaics have been found in decorative designs of the Sumerians, who

Lived around 4000 B.C. Some of the most extensive tessellation works are found in Islamic designs. These designs display an

Amazing variety of geometrical patterns because, according to Islamic religion, the representation of people, animals or any real life objects in art is forbidden.

Tessellations have fascinated mathematicians and artists for many years because tessellation designs combine math with art and reveal the

Incredible beauty of geometry.

Originality of tessellations does not have any limits. Imagination and a little bit of mathematical knowledge are all that one
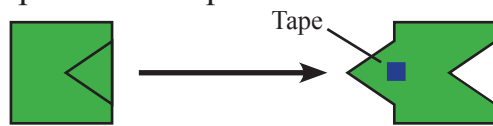
Needs to begin creating tessellations!

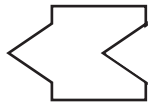# Can you believe THIS is math?

Tessellations

Activity 1 - Making Tessellations - *continued*

To make your tessellation you will need: paper, thick cardboard, a compass, tape, scissors, a pencil and coloured markers.
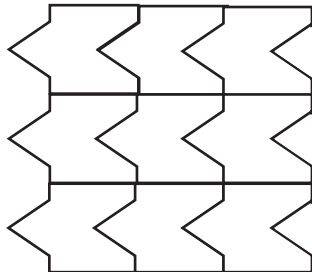
1. Cut a square with sides of five centimeters.

2. Cut out part of the square and move to the opposite side. Tape in position.
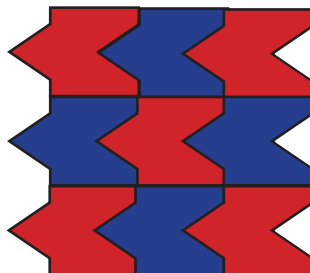
3. Take the new tile and place it in the middle of the picture. Draw a light outline with your pencil.

4. Repeat the previous step to make a design in the same way this was made.

5. Outline the pencil markings and colour in the shapes to finish your tessellation.

Can you believe THIS is math?