**Math & Art**

**Watch this video about the Introduction to Transformations:** <https://www.khanacademy.org/math/basic-geo/basic-geo-transformations-congruence/transformations-intro-basic-geo/v/introduction-to-transformations>

**The Art of Transformations:**

Perform a single transformation (translation, rotation, and reflection) of 2-D shape and draw the image.

**Example of each type of transformation:**

• The yellow dotes and blue quadrilateral (image) have undergone a translation because the orientation remains the same. (They simply slide from one place to the next):



• Relative to that yellow point the blue quadrilateral (image) has undergone a 90⁰ rotation counterclockwise:



• The blue irregular pentagon (image) is an example of a reﬂection because the black image is reflected across a line (just like the image in a mirror):



**This art project is inspired by a quilted square pattern.**

**Task:**

This week you will be trying your hand at this traditional art form. You will design and **draw** a quilt block pattern using a combination of squares, rectangles, triangles and/or other shapes of your choice. Your block should use at least 3 different colours.

**Note:** Using graph paper or creating your own squares on a piece of paper will make this activity much easier.

**An example of a quilt block pattern:** **An example of an overall design of the quilt:**





**Design Challenge:**

Now it’s your turn to design your own quilted block pattern that you will repeat on the entire grid paper. Your quilt design needs to demonstrate:

•A quilted block pattern design that is **transformed** to create visual appeal to the overall design of the quilt.

•At least 1**translation** demonstrated in the quilted square and overall design of the quilt.

•At least 1**reﬂection** demonstrated in the quilted square and overall design of the quilt.

•At least 1**rotation** demonstrated in the quilted square and overall design of the quilt.

**Simplified version:**

**Art project using a quilted square pattern.**

Note: This art project can also be simplified by using different coloured construction paper and cutting out the same shapes and sizes to create a single quilt block pattern. Don’t forget to include the three types of transformations. Once you are happy with the pattern you can create the overall design of the quilt.