# 2-D Shapes – 4th Class

A <u>Name The Shapes:</u>

<u>Write out the names of each shape:</u>
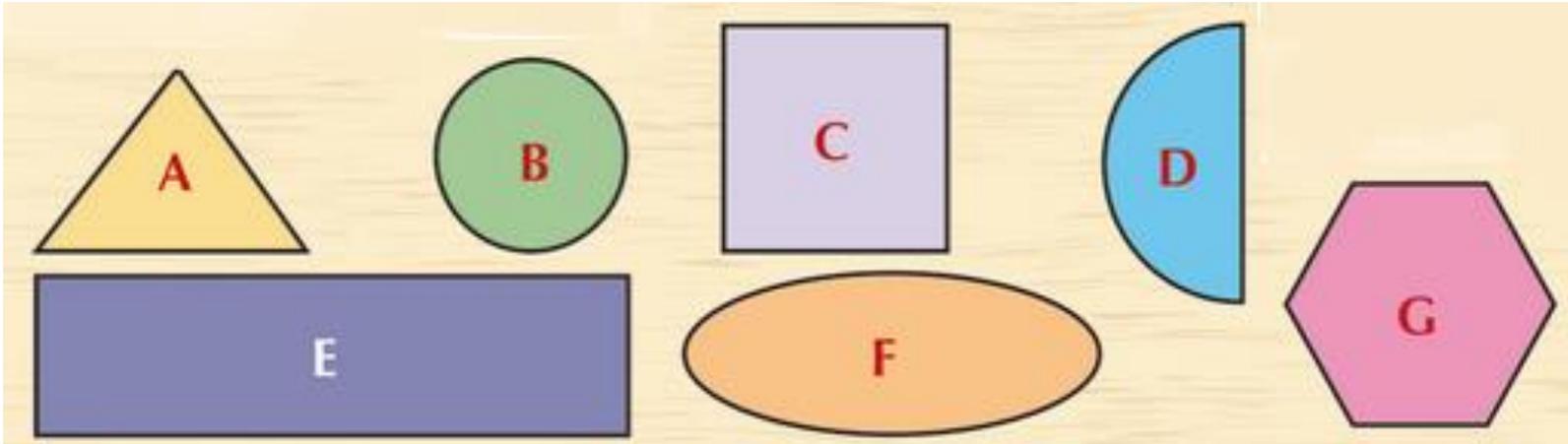
<u>To learn some more about these and other types of shapes you can click and watch the video here:</u>

Here is some extra information on some special types of quadrilaterals which are shapes with 4 sides:

Type of quadrilateral	Properties
Parallelogram	Opposite sides are equal and parallel. Opposite angles are equal.
Rhombus	Opposite sides are parallel. All sides are equal.
Rectangle	Opposite sides are parallel and equal. Each angle is a right angle.
Square	Opposite sides are parallel. All sides are equal. Each angle is a right angle.
Trapezoid	Only one pair of opposite sides are parallel.
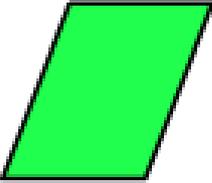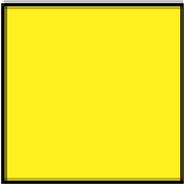
Try copying and filling in the grid below on a sheet or in your copy:

All About Quadrilaterals

Quadrilaterals have _____ sides, _____ vertices, & _____ angles

	Draw It	Describe It
1 square		
2 rectangle		
3 rhombus		
4 trapezoid		
5 parallelogram		

Triangles

A triangle is any shape that has 3 sides and 3 angles. But there are different types of triangles. Here is a video showing and explaining the different types: (You only need to watch the video up to 2 minutes 30 seconds).

C Now try these sentences.

The triangle.

1. Every triangle has ___ sides.
2. Every triangle has ___ angles.
3. The three sides of an equilateral triangle have the same ___.

Equilateral Triangle

Isosceles Triangle

Scalene Triangle

4. ___ sides of an isosceles triangle have the same length.
5. If no two sides of a triangle have the same length, we call it a ___ triangle.
6. Something in the classroom in the shape of a triangle is the ___.
7. Something outside the classroom in the shape of a triangle is the ___.
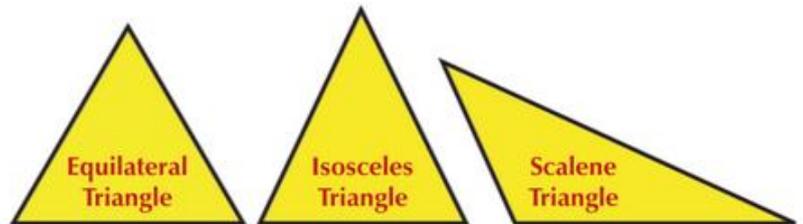
Polygons

Another name for any 2-D shape is a polygon. A polygon is any 2-D shape formed with straight lines. We've looked at quadrilaterals which are 4 sided shapes and different types of triangles. There are also other shapes or polygons that can have more than 4 sides. Here are some common types.
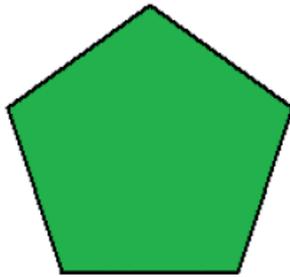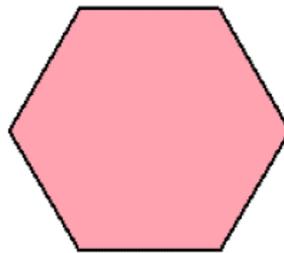
Regular Pentagon	Regular Hexagon	Regular Heptagon
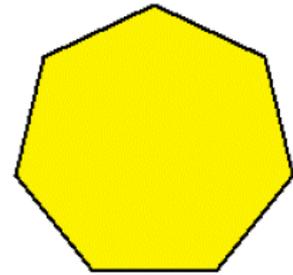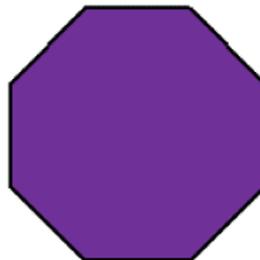
Regular Octagon

Shapes or polygons can be regular or irregular. Here is the difference between these two types.

Regular shapes	Irregular shapes
• All sides are the same length.	• All sides are not all the same length.
• All angles are the same size.	• All angles are not all the same size.

So here are examples of regular and irregular polygons:

Regular and Irregular Polygons

Name	Regular	Irregular	Number of Sides
Triangle			3
Quadrilateral			4
Pentagon			5
Hexagon			6
Octagon			8
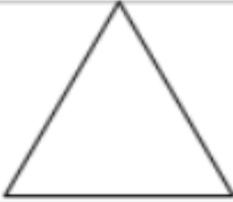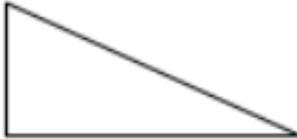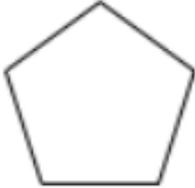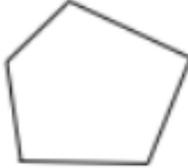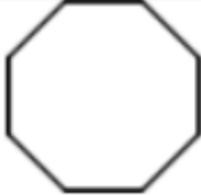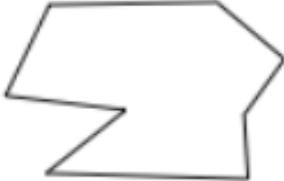
D In your copy or on a sheet see can you draw a <u>regular</u> pentagon, hexagon, octagon and quadrilateral. Then try and draw an <u>irregular</u> pentagon, hexagon, octagon and quadrilateral.

Colour the regular shapes red and the irregular shapes blue.

- Take a walk around your house or outside. Make a list of all the different 2-D shapes you can see. See can you find 4 examples of each of the shapes from Activity A.

Tessellation

If 2-D shapes can fit together without leaving any gaps or by not overlapping then they can tessellate. Here are some examples of tessellating shapes.

These tessellations are regular because all the shapes are the same.
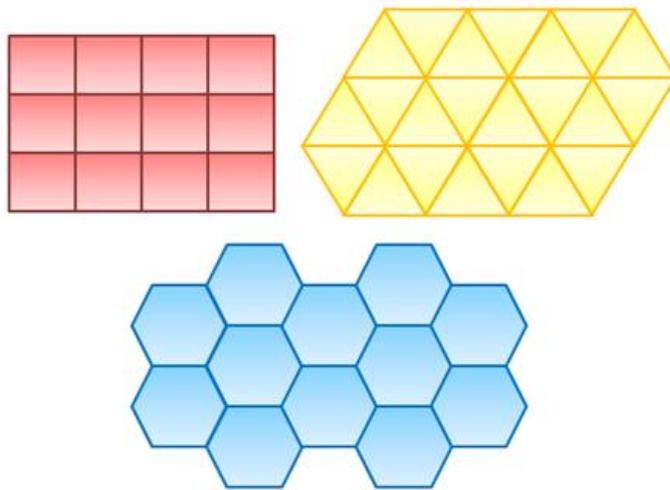
These tessellations are irregular because they include different shapes. They are still tessellations though because they fit together without any gaps and without overlapping.
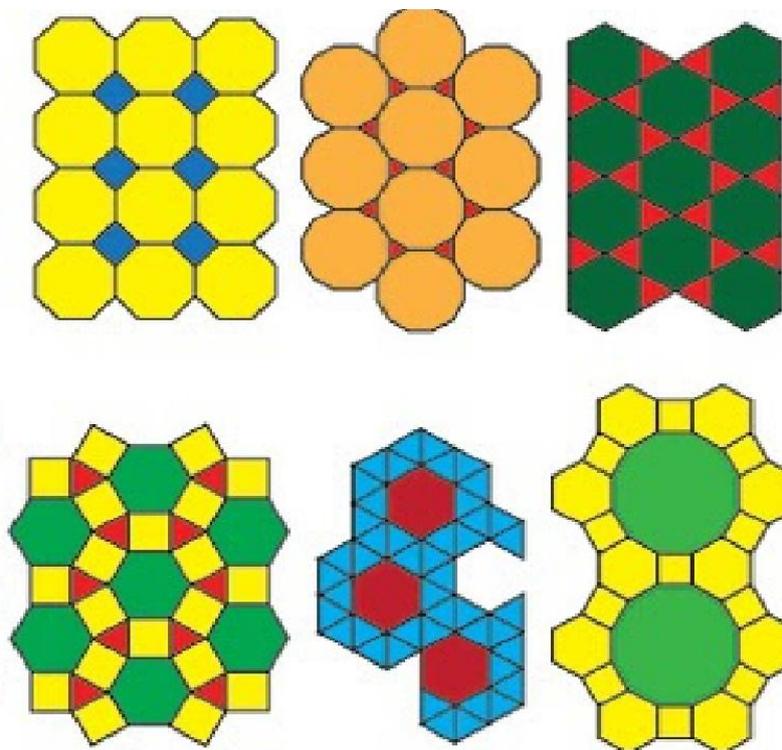
Which shapes might tessellate? Write yes or no for each

1.

2.

3.

4.

5.

6.

7.
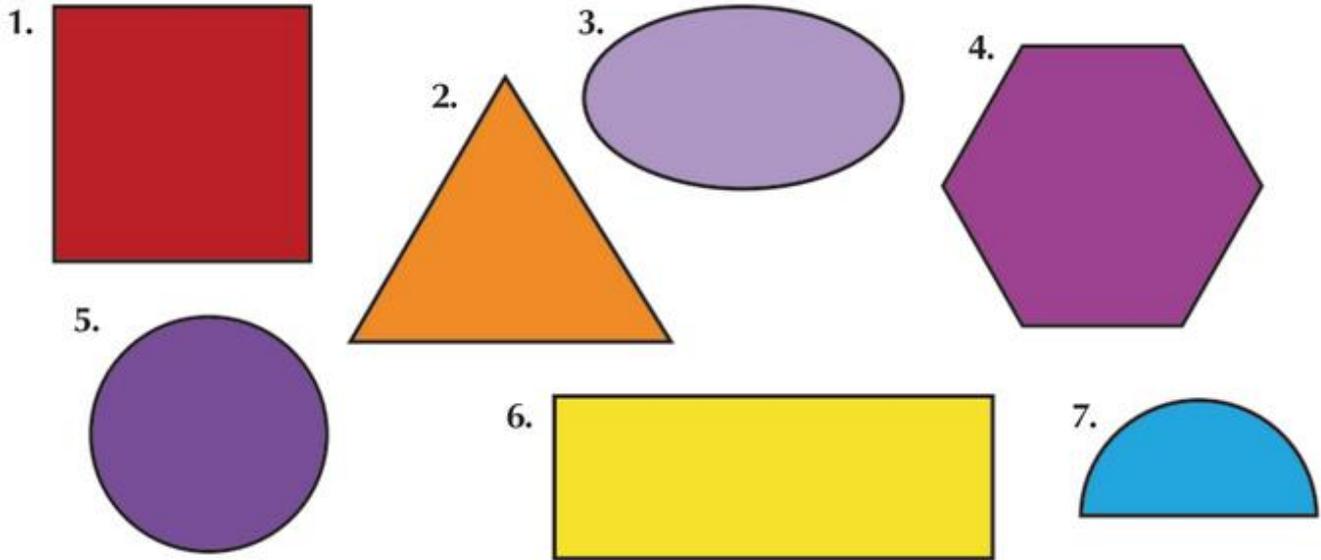
- Click on the picture below to try making some different tessellations and other shape pictures using this online activity:
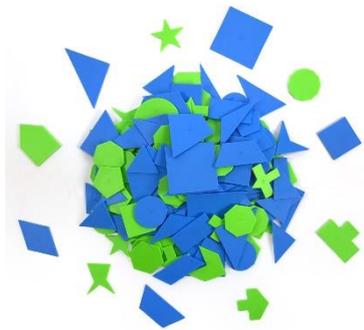
Finally you could try making some simple tessellation art at home yourself by following the steps in the video below: