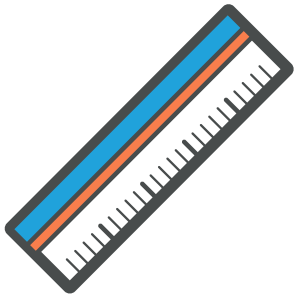

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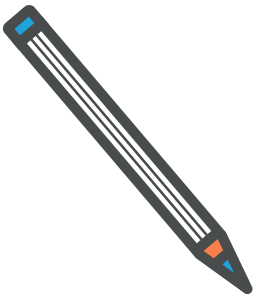
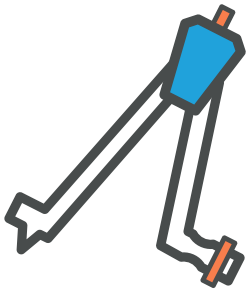
Easter activity pack





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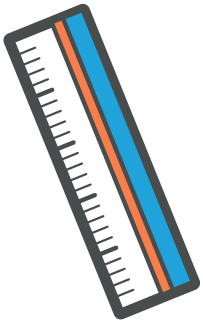


Tangrams

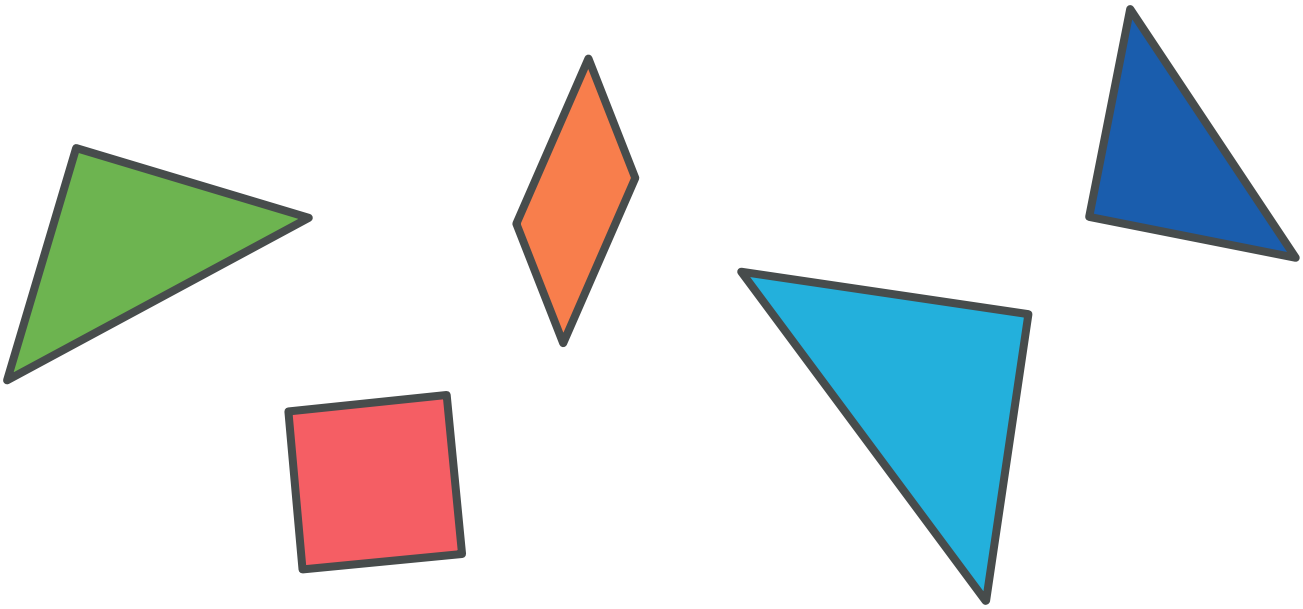
Tangrams are ancient, fascinating Chinese Puzzles, made up of seven movable geometrical shapes, with which you can create thousands of pictures and designs.

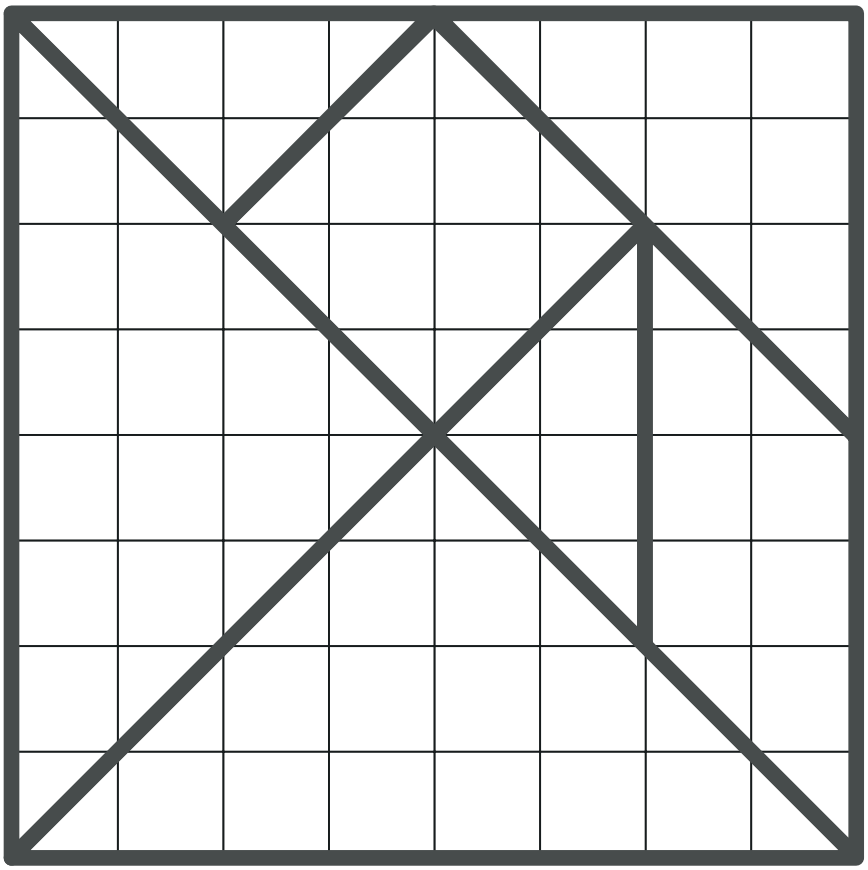
A Tangram begins with a square, which is then cut into seven standard pieces. Each piece is called a Tan. The seven tans are two large triangles, one medium triangle, two small triangles, a square, and a parallelogram.

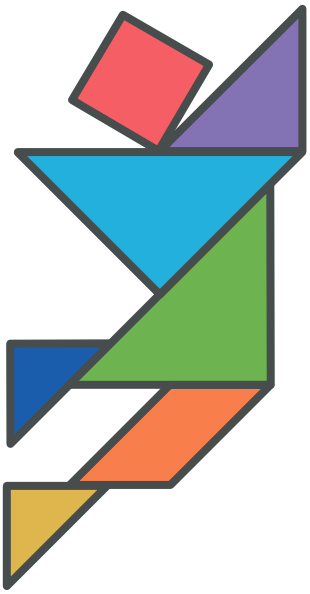
Children enjoy playing with tangrams and using them to create silhouettes of animals and objects.

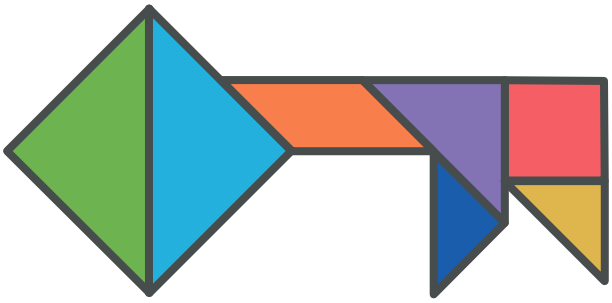
There are two templates to choose from. Ensure they carefully cut out the tans or you can purchase sets cheaply online.

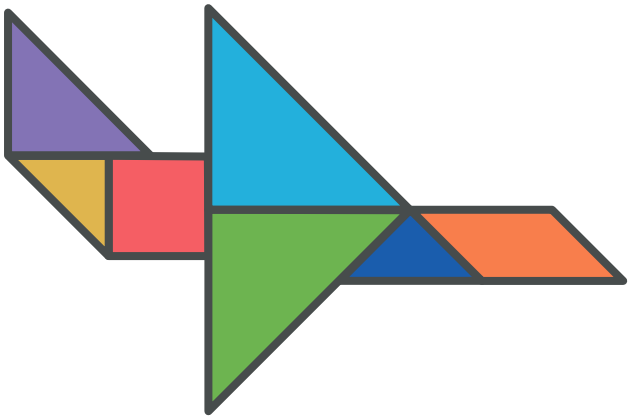
Rules of the Tangram puzzle:
All tangram pieces must be used, they must lay flat, all must touch, and none may overlap. Have a go at making the tangram puzzles below. There are three types - the coloured puzzle pieces (easy), the white puzzle pieces or the black silhouettes (challenging).

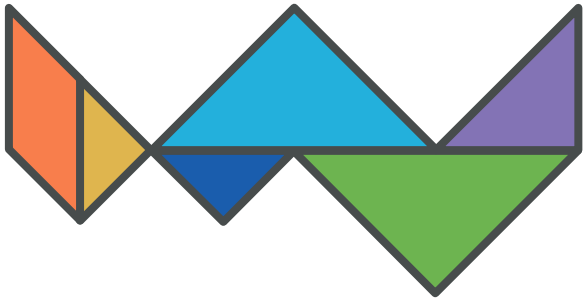


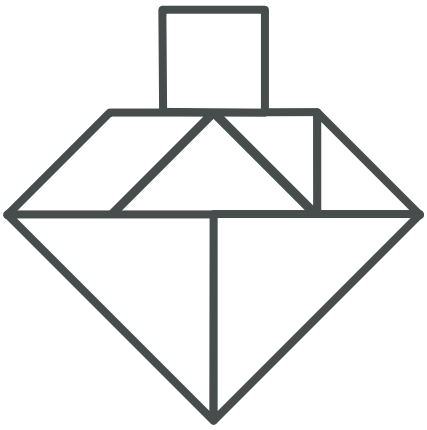


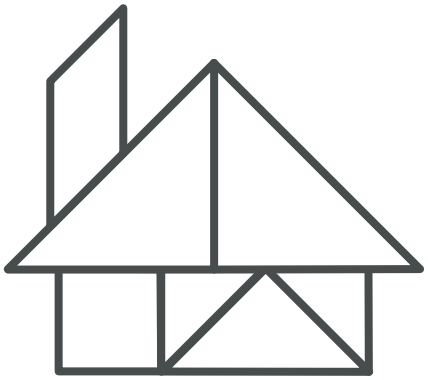


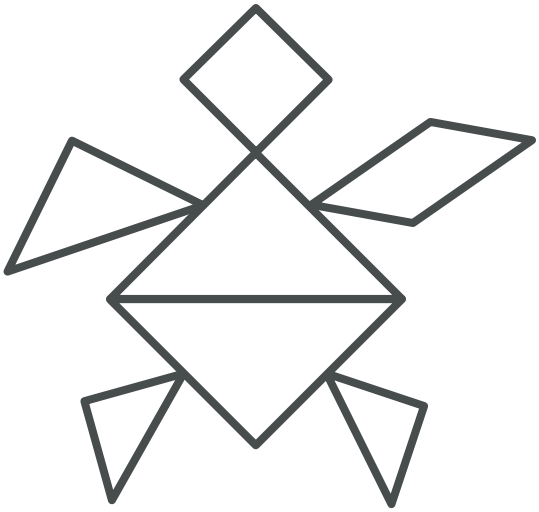


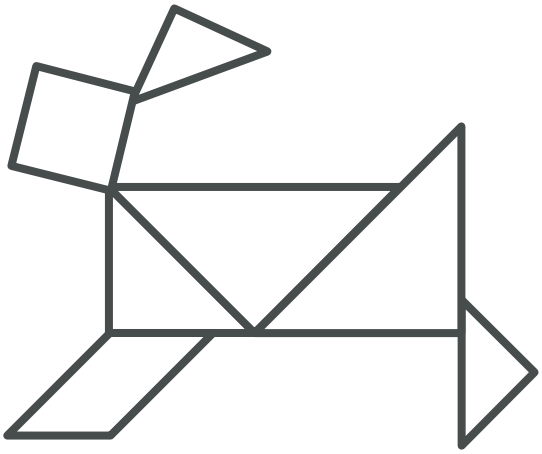


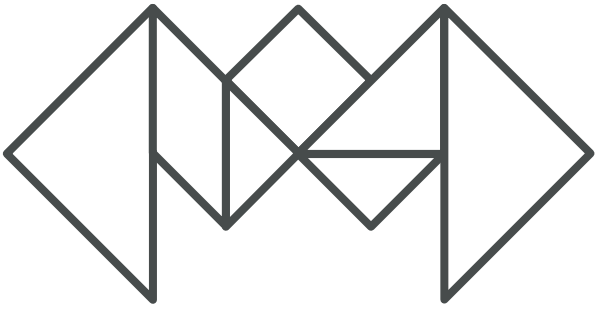


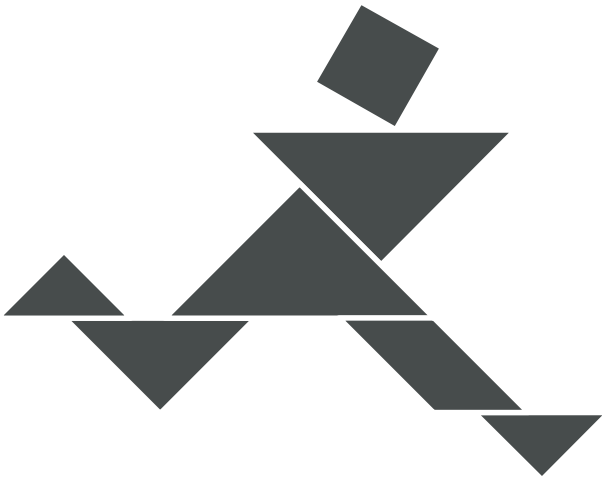


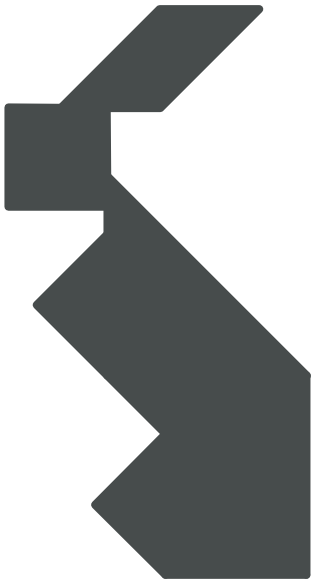


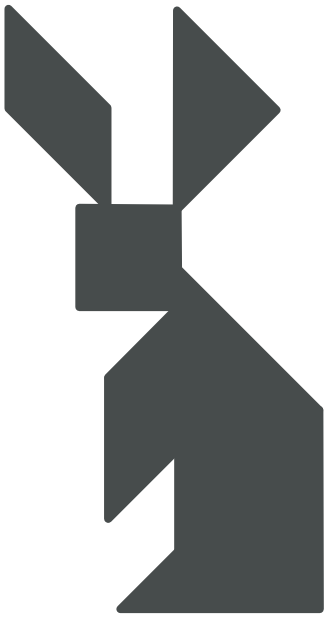


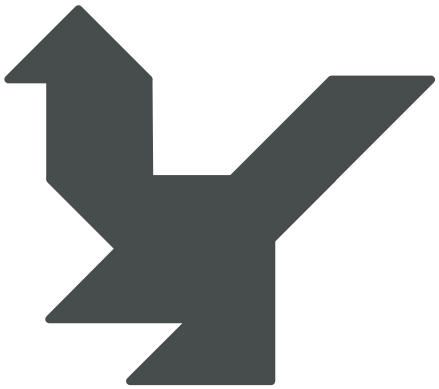


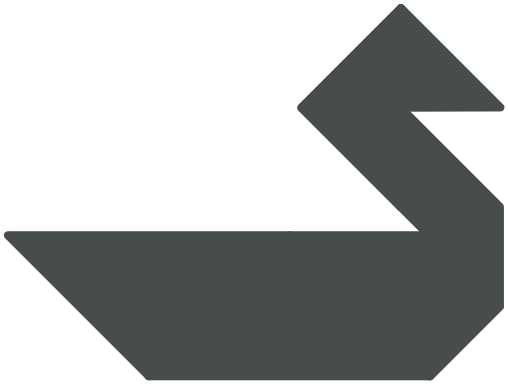


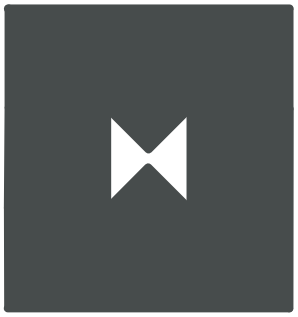


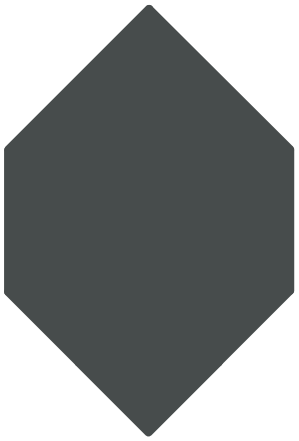












Tangram duos

Challenge the students in class (or your children at home) to create specific polygons with one or more of their tans, without overlapping them. It's best to start out very simply with the Tangram Doubles and work up to the more difficult challenges on the following pages.

Create a triangle using exactly 2 pieces.	**Create a square using exactly 2 pieces.**
Create a parallelogram using exactly 2 pieces.	**Create a trapezium using exactly 2 pieces.**

Tangram triples

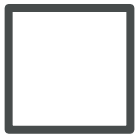
Create a triangle using exactly 3 pieces.	**Create a square using exactly 3 pieces.**
Create a parallelogram using exactly 3 pieces.	**Create a trapezium using exactly 3 pieces.**

Tangram quads

Create a triangle using exactly 4 pieces.	**Create a square using exactly 4 pieces.**
Create a parallelogram using exactly 4 pieces.	**Create a trapezium using exactly 4 pieces.**

Tangram polygon challenge 1

Try making the polygons using different numbers of tangram pieces.
Draw your findings on the chart below. Some solutions may not be possible.

	Number of tans			
	1	2	3	4
 Square				
 Triangle				
 Rectangle				

Tangram polygon challenge 2

Try making the polygons using different numbers of tangram pieces.
Draw your findings on the chart below. Some solutions may not be possible.

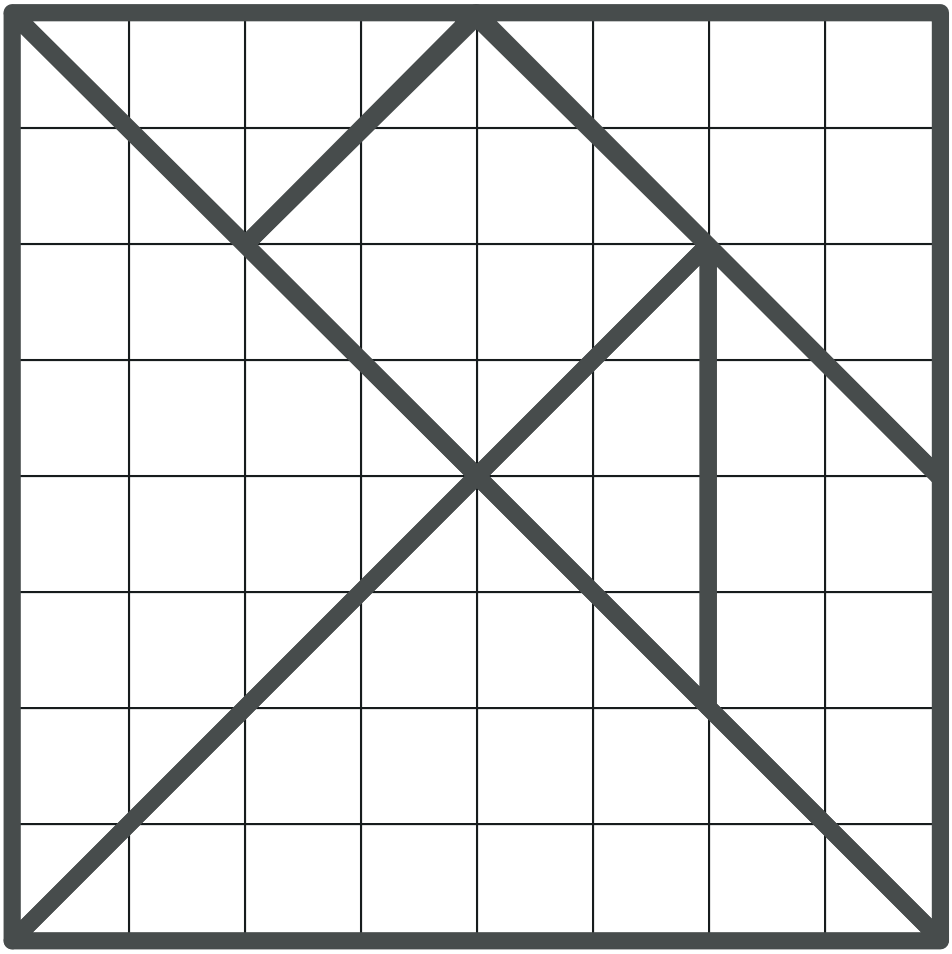
No. of pieces	1	2	3	4	5	6	7
 Square							
 Triangle							
 Trapezium							
 Parallelogram							
 Pentagon							

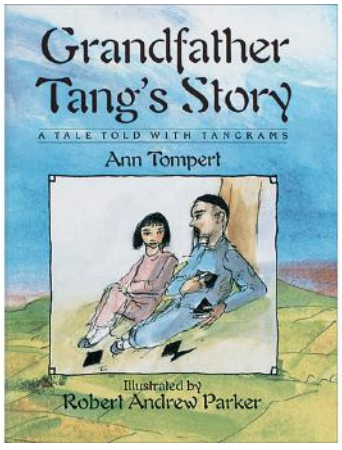
Other challenges:

How many different shapes can you make using 2 or more tangram pieces that have two right angles, one acute angle and one obtuse angle?

Have a go at these challenges...

If the square into which all the shapes fit is one whole, what fraction are each of the shapes?



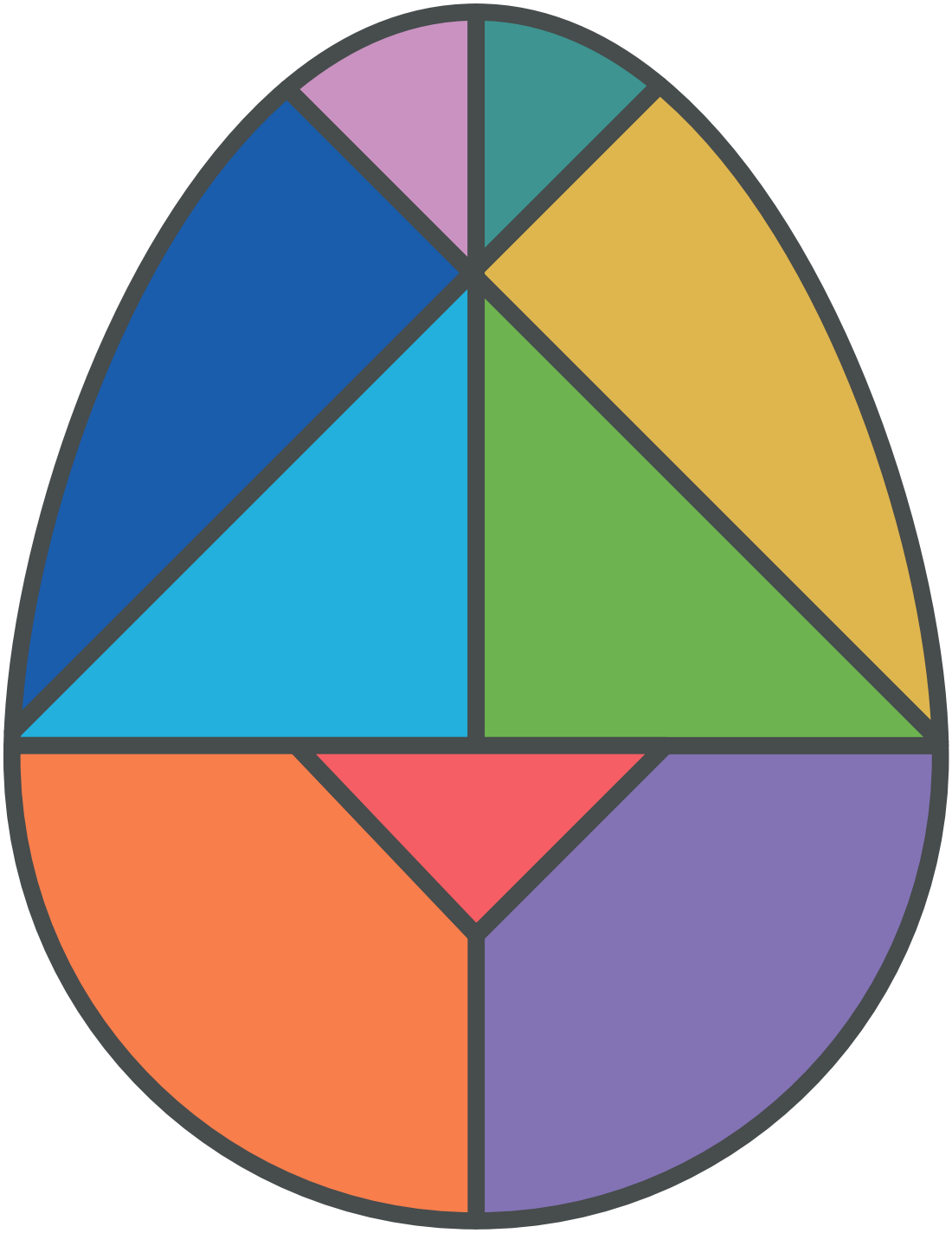


There is a story book 'Grandfather Tang's Story – a tale told with tangrams' by Ann Tompert.

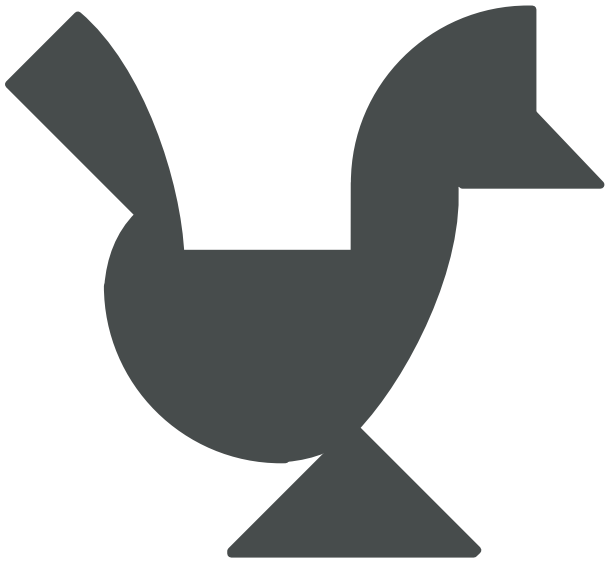
Have a go at making up your own tangrams and stories about them.

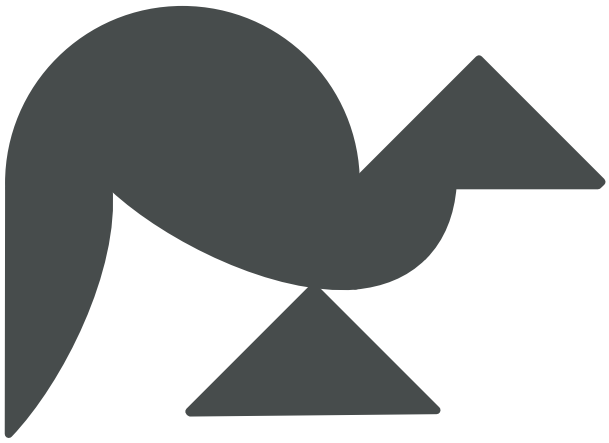
The magic egg tangram

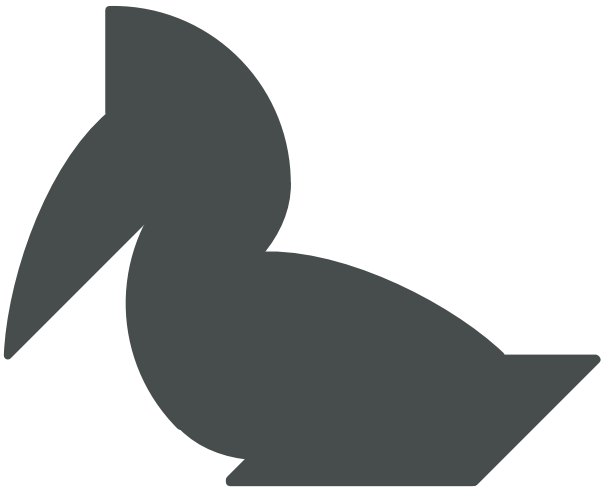
Use the tangram egg to make three birds shown on the following page.
You can make many more. There are nine tans this time.



The magic egg tangram



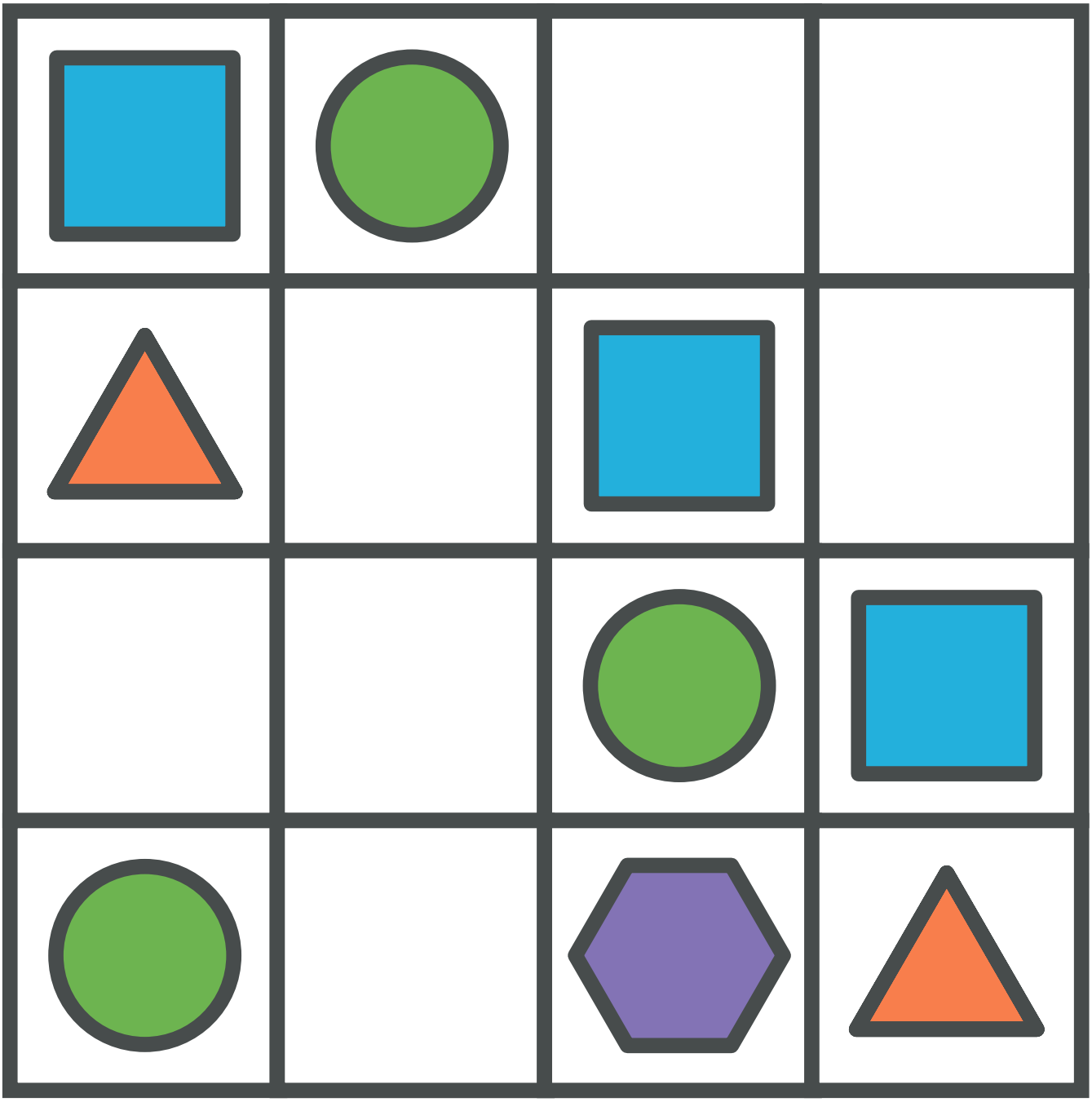




Shape sudoku

This is the same as number sudoku but instead of numbers you use shapes.

Place each of the four shapes in a square so that no row, column or group of any 4 squares has the same shape more than once.



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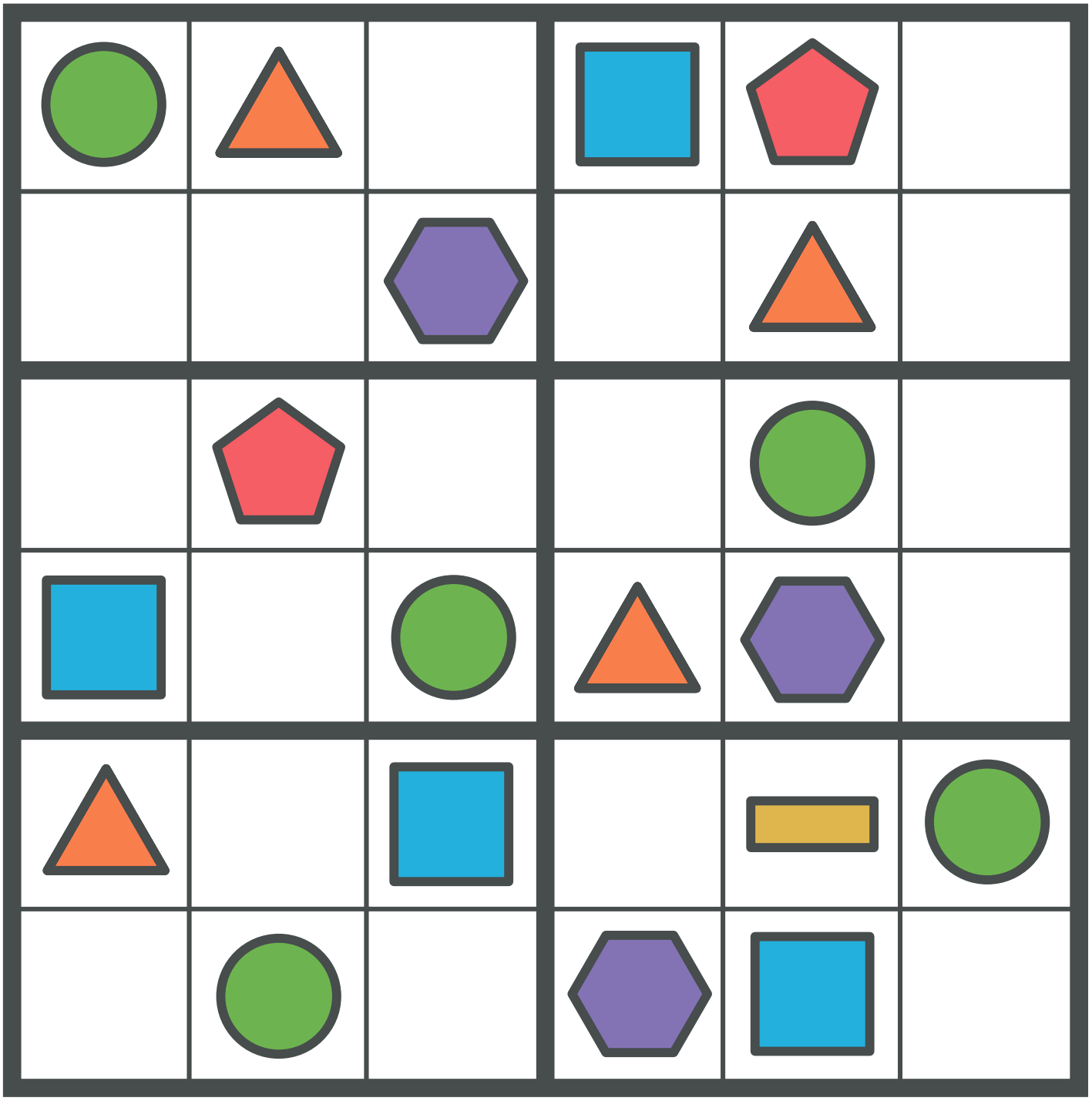
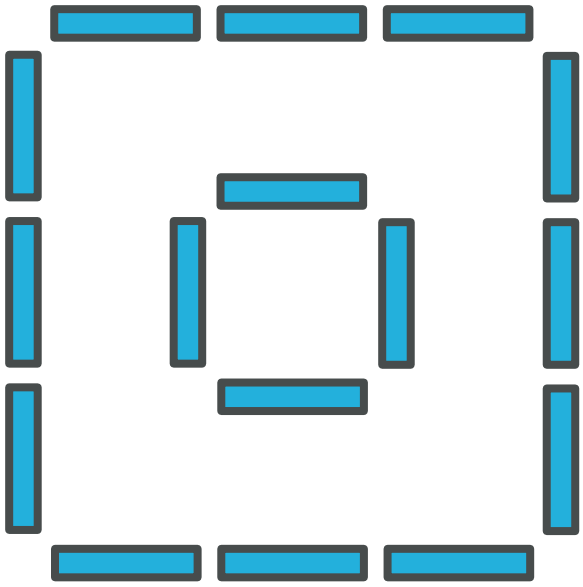
Try this awesome shape sudoku

Place each of the six shapes in a square so that no row, column or group of any 6 squares has the same shape more than once.

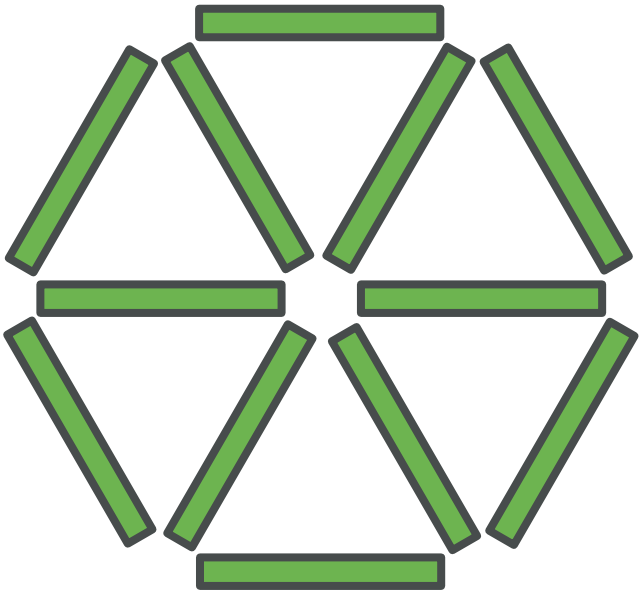


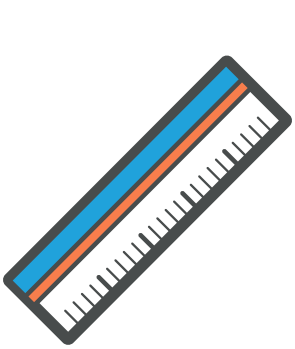
The shape teaser

Two squares to three
Make these shapes using rods/sticks.
Move 4 sticks to make 3 squares



A wheel into triangles
Move 4 sticks to form 3 equilateral triangles





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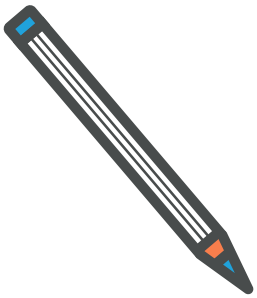
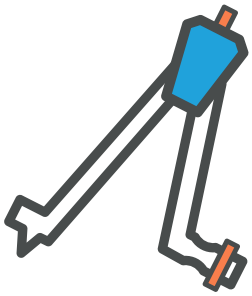
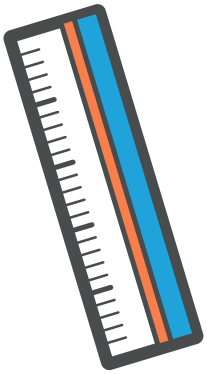
Easter activity pack

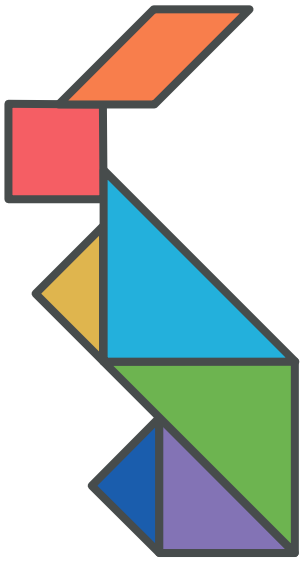
Solutions

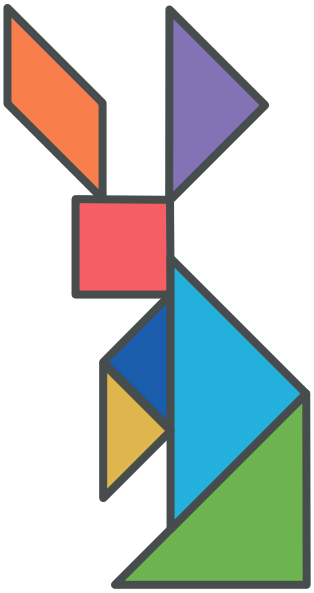




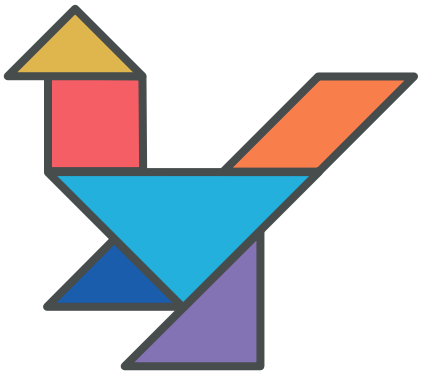


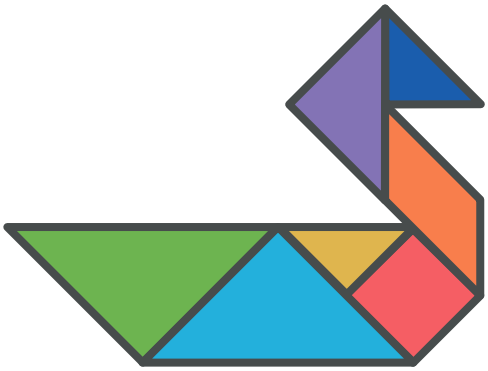


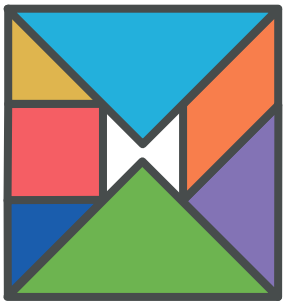
Solutions to the black silhouettes

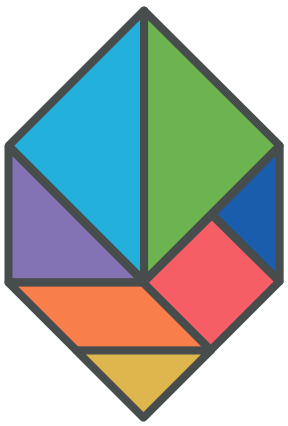










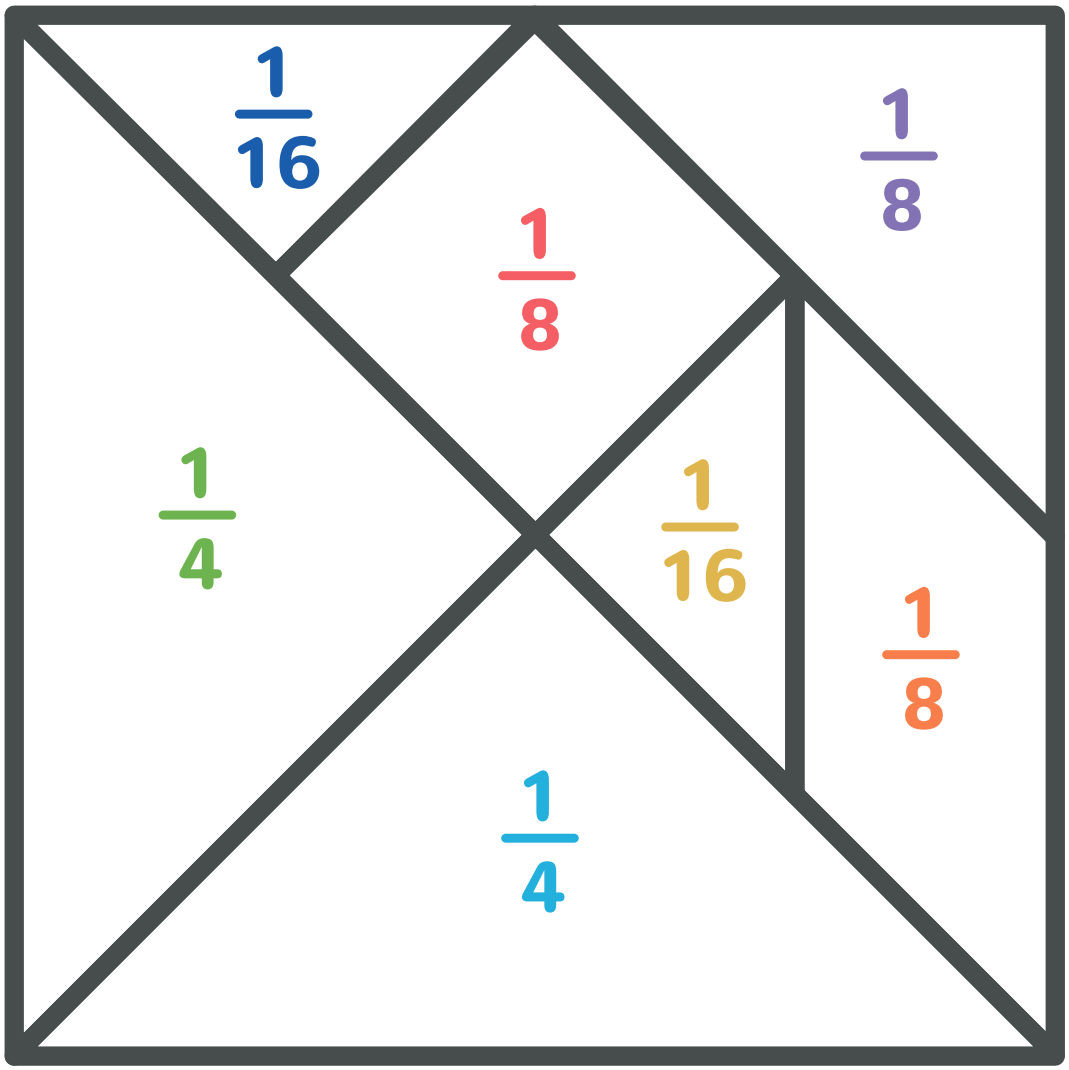


Solutions

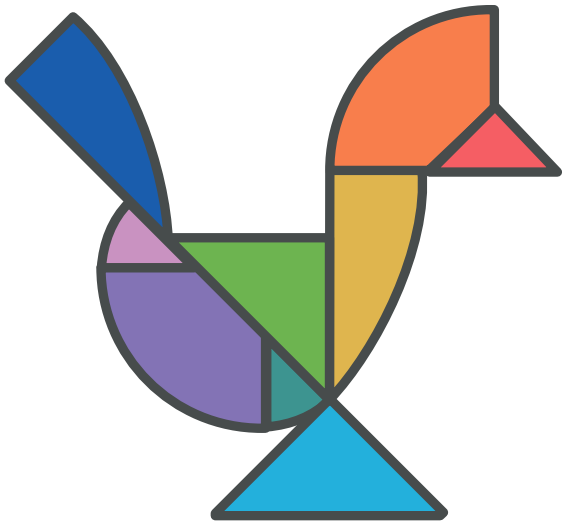
Tangram duos, triples, quads, polygon challenge 1 and polygon challenge 2

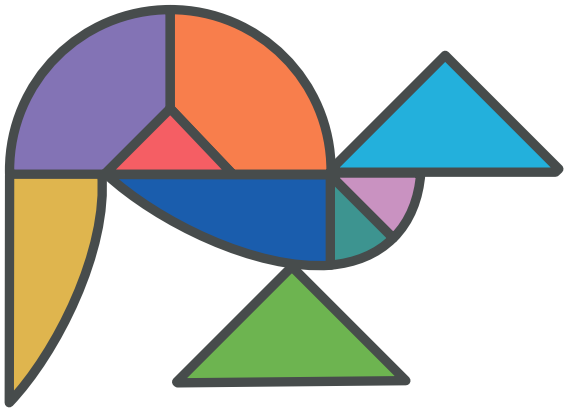
This is a practical exploration activity. There will be more than one solution for some, and some are not possible. For example, it's not possible to make a rectangle with 2 pieces (unless the rectangle is a square). Children could write 'no solution' if they are certain a solution is not possible!

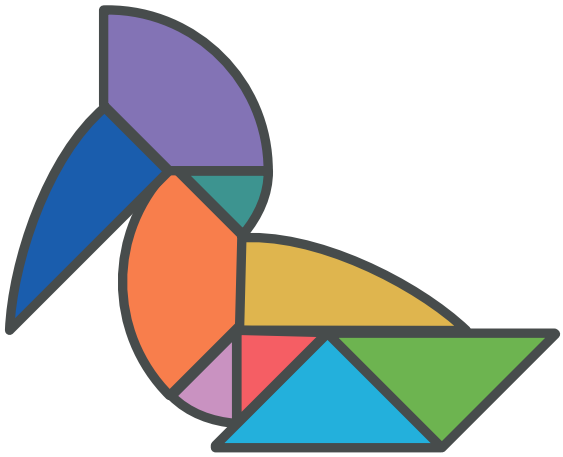
Have a go at these challenges...



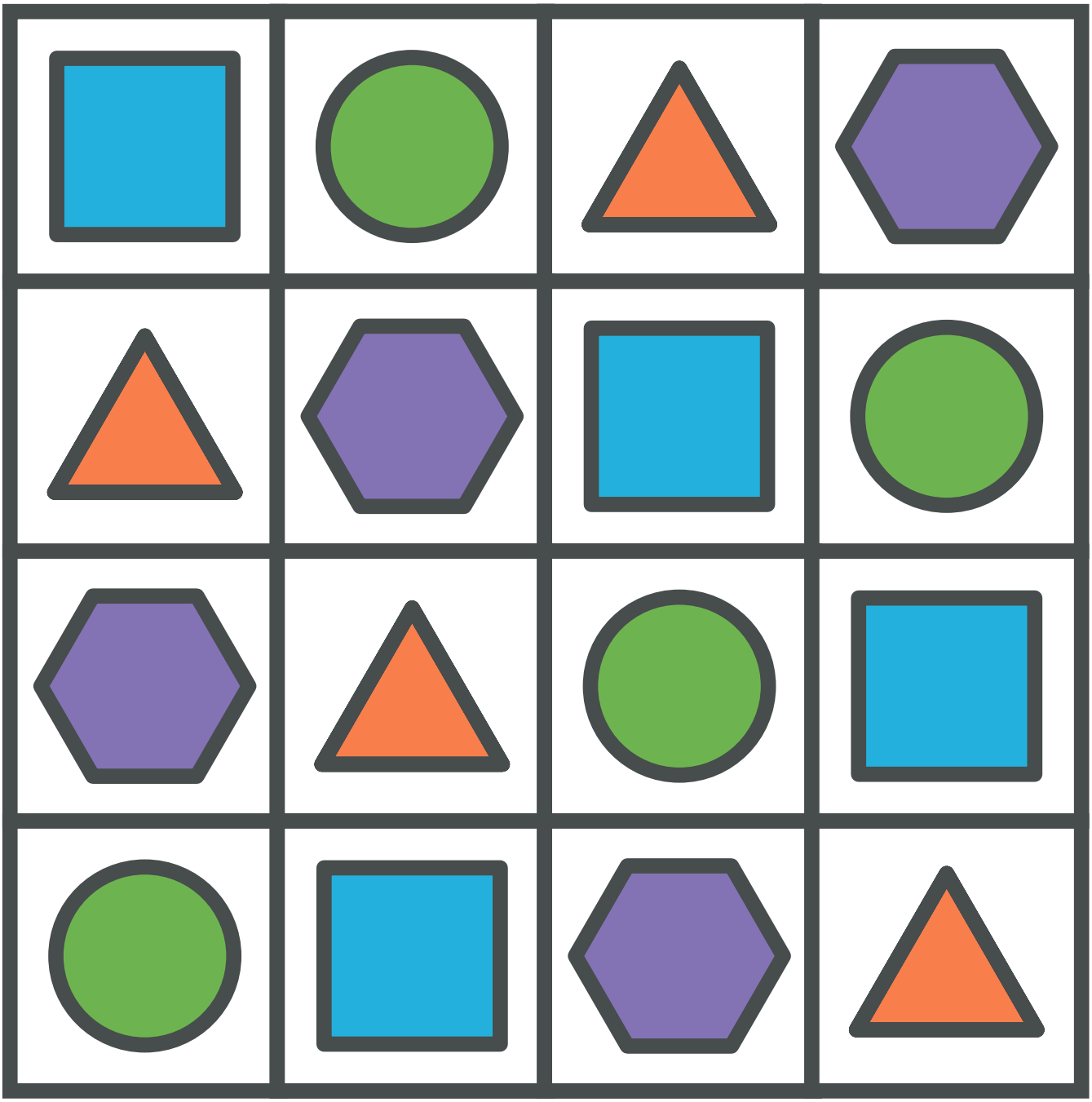
The magic egg tangram



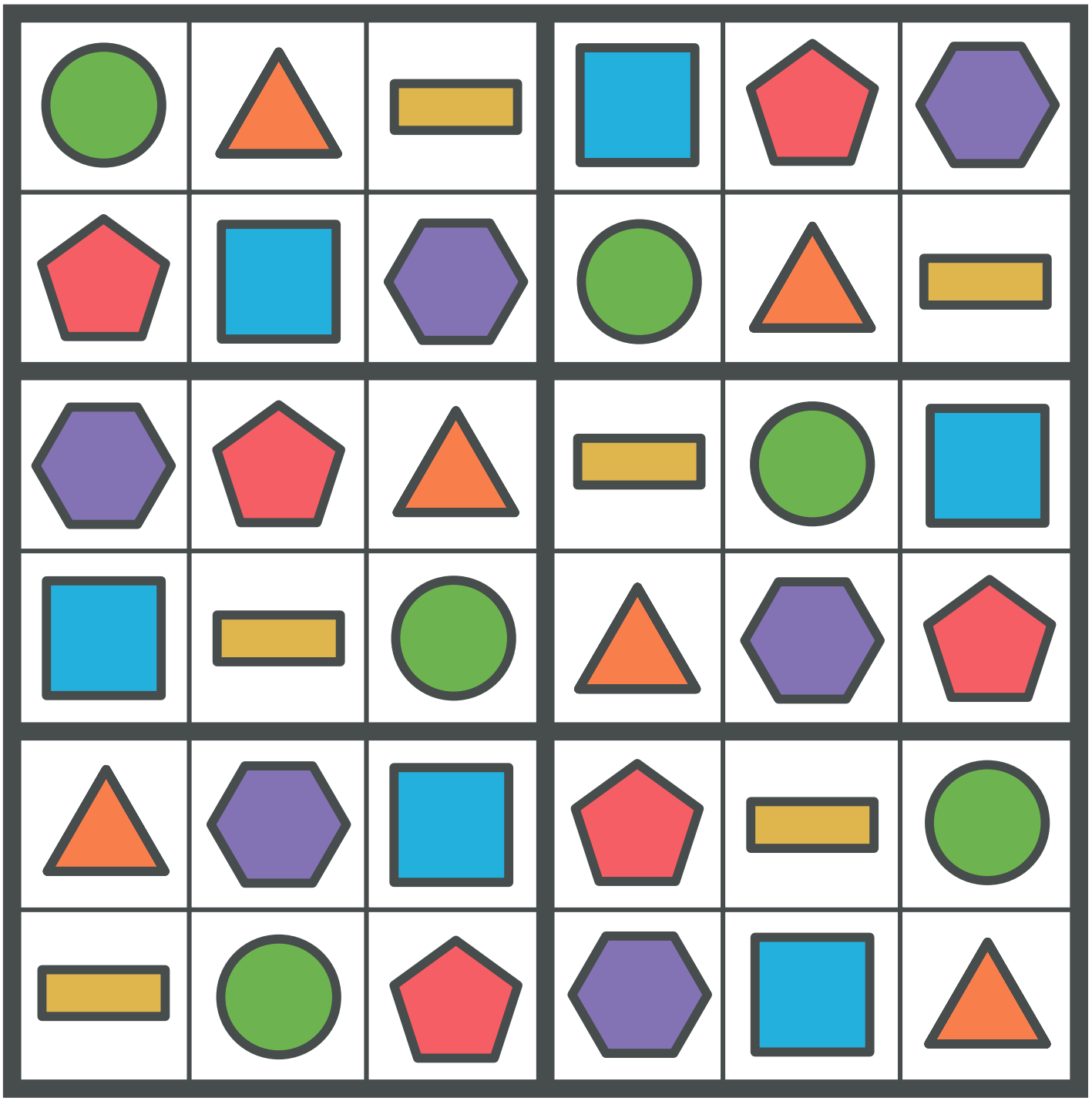




Shape sudoku

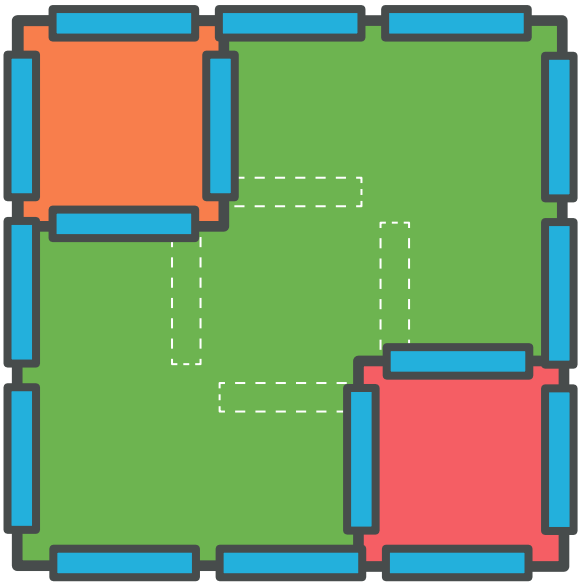


Try this awesome shape sudoku



The shape teaser

Two squares to three



A wheel into triangles