

# This week is London Maths Week 2020



Try some of their activities for maths at home.

I have picked a few for you here.....

## Monday

### How to make a hexaflexagon



[Download Hexaflexagon activity sheet pdf](#)

### Maths Magic: How to step through a playing card



What materials do I need?

- Playing cards (or any card cut to the size of a playing card)
- Scissors

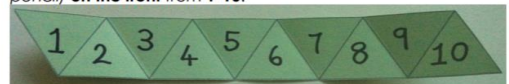


How to make...  
your own **hexaflexagon**

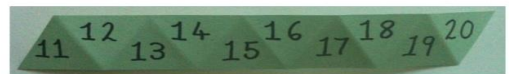


1. **Cut out** the template and **crease the lines**.

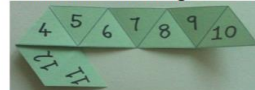
2. Orientate as shown and **label the triangles** (lightly with pencil) **on the front** from 1-10.



3. Flip the strip over and **label the triangles on the back** from 11-20 (start with 11 on the back of 1...).



4. **Fold the first 3 triangles down and behind**.



5. **Fold the last 4 triangles down and in front**.



6. **Slide triangle 11 over triangle 19**.



7. **Fold triangle 20 in front of triangle 11**.



8. **Glue 20 to 11**.

**Now get going colouring the sides and turning it inside out!**



maths on toast | the family maths charity

You found this resource at Maths on Toast [www.mathsontoast.org](http://www.mathsontoast.org)

## Tuesday

# Wednesday

## Multiple Monsters



**1. Fold**  
Get a strip of paper and fold it (like a fan) into four, five or six sections.



**2. Draw a Monster**  
Make sure the legs go right up to the folds



**3. Cut it out**



**4. Unfold and decorate**  
Unfold the monsters. How many legs did you start with and how many do you have now? Why not give them some eyes and spots or stripes.



### Why's this maths?

You are multiplying by using paper.

For more fun activities visit [www.mathsontoast.org.uk](http://www.mathsontoast.org.uk)  
Don't forget to share your creations and comments on Twitter, Facebook or Instagram tagging @mathsontoast using #positiveaboutmaths



# Thursday

## How to make Platonic solids



Download Super Shapes activity sheet 1 pdf

Download Super Shapes activity sheet 2 pdf

Download Super Shapes activity sheet 3 pdf

### What materials do I need?

- Drinking straws
- Tape
- Pens/pencils
- Scissors
- Glue
- Print outs of the activity sheets

**How to make your own icosahedron – a shape made of twenty triangles**

1. Colour and decorate the shapes opposite
2. Cut out along the outside line – ask an adult if you need help
3. Fold all the inside lines away from you.
4. Can you see how the shape will look? Check using the example.
5. 'Roll up' your shape. Stick the tabs marked A to the triangle edge marked A (but stick the tab underneath!)
6. Can you see how the other tabs stick? Feel free to ask for help.

### Patterns of Plato's Solids

Once upon a time there was an Ancient Greek Philosopher called Plato. He was investigating the secrets of the universe. Plato thought five solids were particularly special. The shapes are now named after him - the Platonic Solids. Plato thought fire was made of tiny tetrahedrons, water from icosahedrons, or from octahedrons and earth from cubes. The dodecahedron, he said, 'the gods used for arranging the constellations on the whole heaven'.

He wasn't quite right - but the solids have some remarkable relationships!

Shape	Vertices (corners)	Edges	Faces
tetrahedron (pyramid)	4	6	4
cube	8	12	6
octahedron	6	12	8
dodecahedron	20	30	12
icosahedron	12	30	20

Can you count the corners (vertices), edges and faces of any 3D shapes you have made? How do you sum ADD together the number of vertices and faces, and take away the number of edges. You'll get 2 Aesop's mathematical magic, of wick.

In the sixteenth century Kepler built a model of the solar system based on the Platonic Solids. His model was wrong, but he worked out some useful things from his mistake.

You found the resource of Maths on Toast [www.mathsontoast.org](http://www.mathsontoast.org)

### How to make your own tetrahedron – a shape made of four triangles

1. Colour and decorate the shapes opposite
2. Cut out along the outside line – ask an adult if you need help
3. Fold all the inside lines away from you.
4. Can you see how the shape will look? Have a look at the example.
5. Stick the tabs down to hold it in place... feel free to ask for help.

## How to make a toasty tangram...

3 March 2014



Make your own tangram puzzle out of toast, and then make giraffes, cats or whatever you want. It's playing with your food, but it's also definitely mathematical. To see what other people have made, have a look at the [Tangram Gallery](#). You can email us your work if you'd like us to include it.

# Friday

## The Tangram Gallery

Here are all the toasty tangrams you have made! To include your work, just email [info@mathsontoast.org.uk](mailto:info@mathsontoast.org.uk) a picture of your work (with you if you like!) and say it's for the Gallery. You can be anonymous, tell us your school class, or give us your first name and age – up to you.

