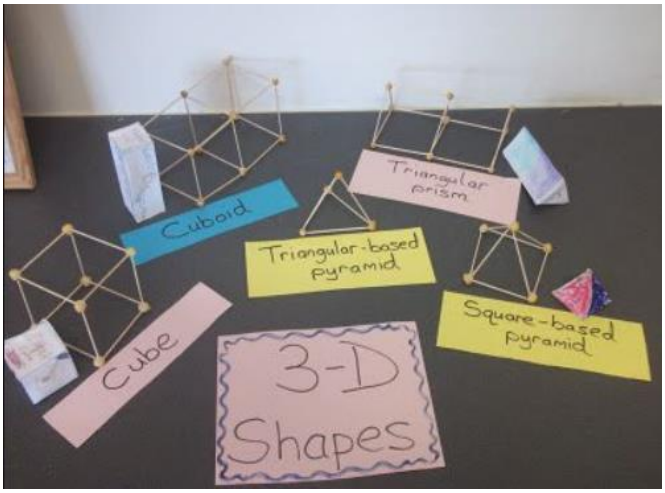
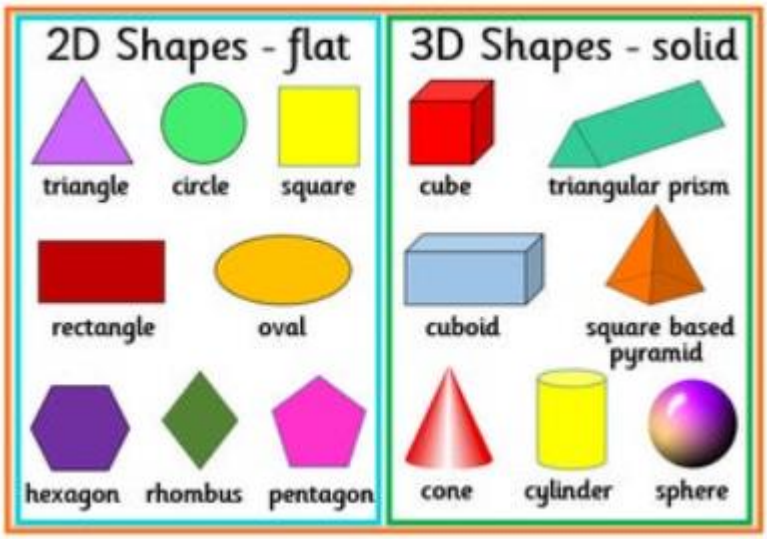
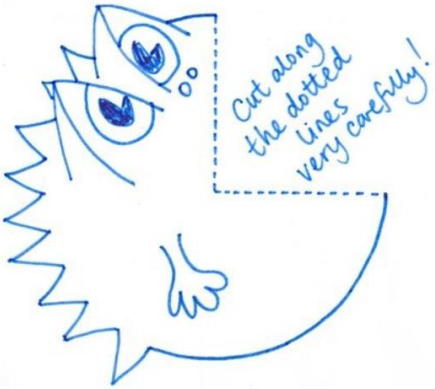
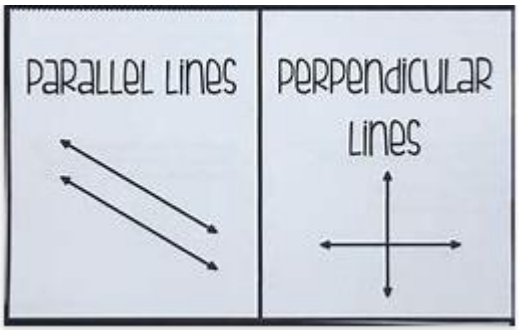
Year 3

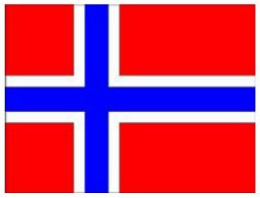
Select from the list below and complete one each day. Whilst completing each activity look for patterns and connections. Make sure you enjoy the activity and share it with your parents. Complete as much as you can but each activity should take no longer than an hour.

	Activity	Parent Comment
1	Design 3 different types of jumpers and 3 different types of trousers/leggings. How many combinations of outfits can you make? What about if we added 3 different types of shoes too? How many combinations could we have now?	
2	Go and look in your sock drawer. How many pairs of socks do you have? What different colours of socks do you own? How many of them are patterned? How many of them are plain? Are there any other ways that you could put your socks into categories? Using this information express your sock draw in fractions, e.g. $\frac{1}{4}$ of my socks are patterned $\frac{1}{2}$ of my socks are white When you have finished, make sure all of your socks are in pairs and put them away in your drawer.	

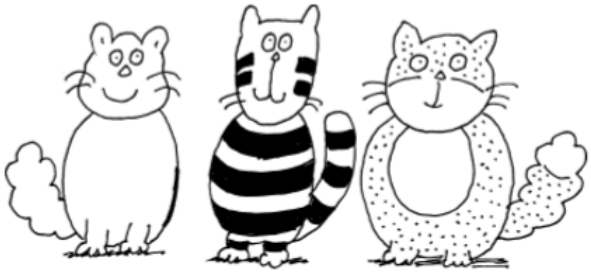
3	Using match sticks/cut straws/tooth picks/twigs from the garden and playdough/blue tack/marshmallows make a range of 3D shapes. Can you name these shapes and identify some properties of them?  	
4	 Go on a shape hunt! How many of these 2D and 3D shapes can you find around you house? Which is the most common shape in your house? Can you reason why that shape is used the most?	

5	Make a Right Angle Eater (take a circle, fold it in half and then half again, open up the circle and cut one of the quarters out. This should be a 90 degree 'mouth')  Use your angle eater to investigate where two straight lines meet on objects in your home. Can you find right angles in your home? Can you find angles that are smaller than a right angle or larger than a right angle?	
6	Draw 20 random lines across a piece of A4 paper. Make sure that these lines overlap. Colour each section a different colour. What shapes can you see in your picture? What angles can you see in your picture? 	

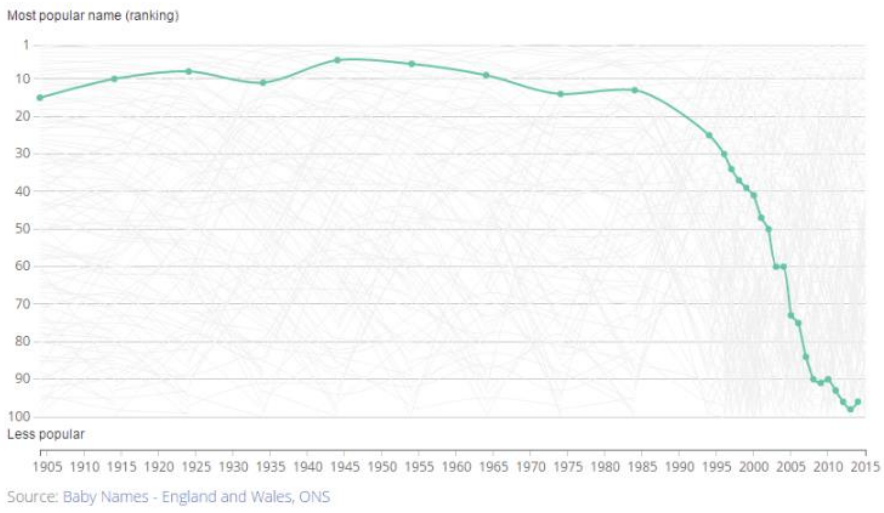
7	Google the nRich problem 'Seeing squares' Play against a friend or the computer to be the first to join two dots together to make a square. **Seeing Squares** **Age 5 to 11** ★ This game can be played against a friend or against the computer. Players take it in turns to click on a dot on the grid - first player's dots will be blue and the second player's (or computer's) will be red. If you choose to play with a friend rather than the computer click "2 player", (click "1 player " if you choose to play the computer). The winner is the first to have four dots that are shown joined by straight lines to form a square. Squares can be any size, anywhere and can be tilted. For a further challenge, why not increase the size of the grid using the arrow buttons? If you are not using the interactive game, you may like to print off some dotty paper. Full Screen and Mobile Version	
8	Google horizontal, vertical, parallel and perpendicular lines.  Can you describe what these are to your grown up? Can you find examples of these types of lines around your home? What types of objects do not have parallel lines? Why might you think this is?	

9	Google nRich 'National Flags' Problem Investigate the mathematical features found in flags of the world. **National Flags** **Age 7 to 11** ★ During an Olympic Games many national flags are on display.    Here's a chance to investigate some of them. Pick a flag and investigate some of the following:- What shapes can you see in it? Can you describe them and their angles? Does the flag have any lines of reflective symmetry, if so how many lines? Can you find any pairs of parallel lines? If so mark them on your flag. Are there any lines perpendicular to one another? Can you find a way to classify the shapes in your flag? Now try with another flag.	
10	Using a ruler or a tape measure find 5 objects in your house that are smaller than 1cm. Can you put these things in order from smallest to largest? Can you find 10 objects that are between 1cm and 20cm. Can you order them?	

11	Measuring on yourself or on a friend collect the data to fill in the grid below. Is there anything surprising about this data? Can you see any patterns or connections? Measure the following parts of your body and compare them to each other. Think carefully about the different ways you know to compare data sets. What do you notice about each comparison? My height: / From my feet to my navel: From my finger tips to elbow: / From my wrist to my elbow: From my shoulder to the top of my head: / From my chin to the top of my head: From my navel to the top of my head: / From my shoulder to the top of my head: From my knee to my navel: / From my knee to my foot: The width of my front two teeth: / The height of my front two teeth: The length of my face: / The width of my face: From my lips to my eyebrows: / The length of my nose:	
12	Find a recipe for your favourite food. With the supervision of an adult make this dish as independently as you can. Weigh and measure the ingredients, follow the instructions systematically and make sure it is cooked for the correct amount of time and at the correct temperature.	
13	Work out the perimeter of the different rooms in your house. Which is the biggest room? Which is the smallest room? Which room was the hardest to calculate the perimeter for?	

14	Google the nRich problem 'How much did it cost?' **How Much Did it Cost?** **Age 7 to 11** ★★ Dan bought a packet of crisps and an ice cream. The cost of both of them together is in one of the boxes below. If you are using dollars instead of pounds then go to £1.85 | 75p | £1.74 | £2.25 | £1 | £1.56 £2.10 | 80p | £1.80 | £3.06 | £1.44 | £1.50 £1.60 | £1.25 | £1.20 | 90p | £1.45 | £1.27 Use these clues to find out how much he paid: 1. You need more than three coins to make this amount. 2. There would be change when using the most valuable coin to buy them. 3. The crisps cost more than 50p. 4. You could pay without using any copper coins. 5. The ice cream costs exactly twice as much as the crisps.	
15	**Kieron's cats** Kieron has three cats. Each is a different weight. The first and second weigh 7 kg altogether. The second and third weigh 8 kg altogether. The first and third weigh 11 kg altogether. What is the weight of each cat?  Can you write a problem similar to this? Can your grown up solve your problem based on the clues that you have given them?	

16	You have an imaginary £10 to spend. Using an Argos catalogue, Amazon or similar shopping website create a wish list that totals your money. Can you spend your £10 exactly?	
17	Investigate a digital clock in your house  - What time will have the most sections of the clock lit up? - How many times a day will the digit 5 be used? - What time will be shown when the least sections will be lit up?	
18	Ask someone in your house to time you brushing your teeth. Try to estimate when you have been brushing your teeth for two minutes. How close to two minutes were you? See if you can get closer to two minutes each time you brush your teeth. How long does it take you to get dressed? How long does it take you to tidy your room? Record these times, and the time that it takes you to do other jobs during the day.	

19	How many of these can you do in 1 minute? -star jumps -hops -squats -sit down and stand up -sit ups -run around your garden -throw a ball straight up and catch it -skip What time did you start doing these activities? What time did you finish? How long did it take you to complete the set? Do you think you could fit more of each activity into a minute tomorrow?	
20	The name Robert used to be the 12th most popular name in 1905 but in 2015 it was only the 97th most popular name.  Use the internet to research your own name or a name that you like and see how that name has changed in terms of popularity over the last 100 years. Can you create a chart or a graph to display this data?	

If you do not have access to a computer, then have a look at this information for the name Alfie and interpret this as a graph or chart. Can you write some statements about this data?

Year	Ranking (out of top 100 names)
1997	97
1998	71
1999	64
2000	57
2001	54
2002	49
2003	17
2004	25
2005	23
2006	16
2007	10
2008	6
2009	4
2010	4
2011	4
2012	7
2013	11
2014	14
2015	14
2016	12
2017	15
2018	15