Maths Home Learning Activities For Summer

- Home **cooking** presents a variety of mathematical opportunities like measuring, sequencing and timings. Cooking is also a great way to develop independent living skills.

Shortbread Biscuits

Ingredients

55g of caster sugar
180g of plain flour
125g of butter

Equipment

Oven
large mixing bowl
wooden spoon
fork
wire cooling rack
fridge
rolling pin
biscuit cutters
baking tray

Method

1. Heat the oven to 190c or gas mark 5.
2. Beat the butter and the sugar together until smooth.
3. Stir in the flour to get a smooth paste.
4. Turn on to a work surface and gently roll out until the paste is 1cm / 1/2in thick.
5. Cut into rounds or fingers and place onto baking tray. Sprinkle with caster sugar and chill in the fridge for 20 minutes.
6. Bake in the oven for 15-20 minutes, or until pale golden-brown. Set aside to cool on a wire rack.

Fluffy Slime

You will need:

250ml white, washable glue (plus extra to vary the thickness of your slime)

300g cornflour (plus extra for adapting consistency of slime)

food colouring

Instructions:

1. Pour the white glue into a bowl.
2. Add the cornflour, a heaped tablespoon at a time, and mix thoroughly.
3. Add several drops of the food colouring and continue to mix.
4. Knead the slime for 10 minutes.
5. As the mixture comes together, start to use your hands to get all the ingredients into one large ball.

Healthy Lollipops

Ingredients

5 carrots
Juice of 3 large oranges
Zest of 1 orange
1 satsuma or tangerine, peeled and chopped (optional)

Method

1. Grate the carrots very finely and place in a sieve.
2. Push the carrot through the sieve with the back of a spoon, collecting the juice in a measuring jug.
3. Reserve the carrot pulp to use in other recipes like salads or soups.
4. Add the juice from the oranges into the measuring jug.
5. Add some water so there is 360ml of liquid in the measuring jug.
6. Stir in orange zest and the optional satsuma or tangerine pieces.
7. Pour into lolly moulds.
8. Put in the freezer and let them set overnight.

Simple Pizza

Ingredients

350g flour
2 $\frac{3}{4}$ tsp baking powder
1 tsp salt
1 tbsp oil
170ml water
Additional toppings from your fridge or cupboard

Method

1. Preheat your oven to 200°C/180°C Fan. Clean your work surface carefully so that you can knead your dough on it later.
2. Mix together the flour, baking powder and salt.
3. Add in the oil and water and stir together until it makes a ball.
4. If the dough feels stiff (it should be soft but not sticky), add in more water - a splash at a time.
5. Sprinkle a thin layer of flour on your work surface. Knead the dough on the floured surface for 3-4 minutes.
6. Roll into 2 balls and then flatten them out. You can use a rolling pin or a clean, sturdy bottle for this.
7. Add toppings from your fridge onto the pizza dough.
8. Place on baking paper on a baking tray and cook for 15 minutes.

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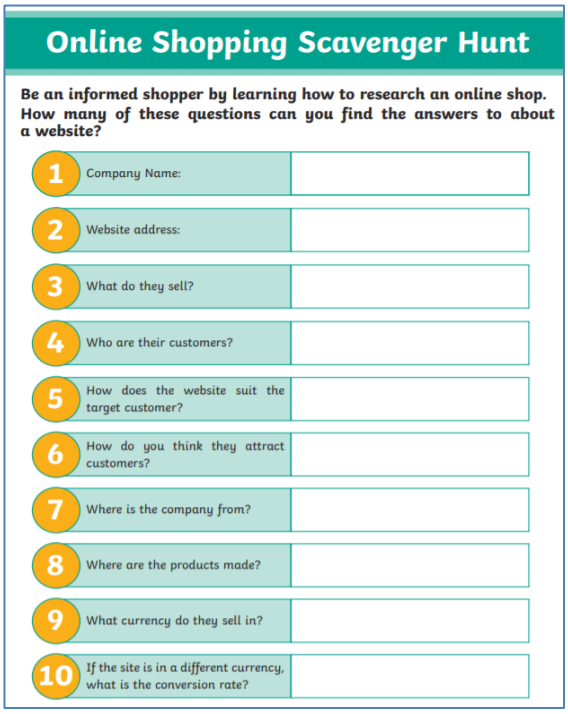
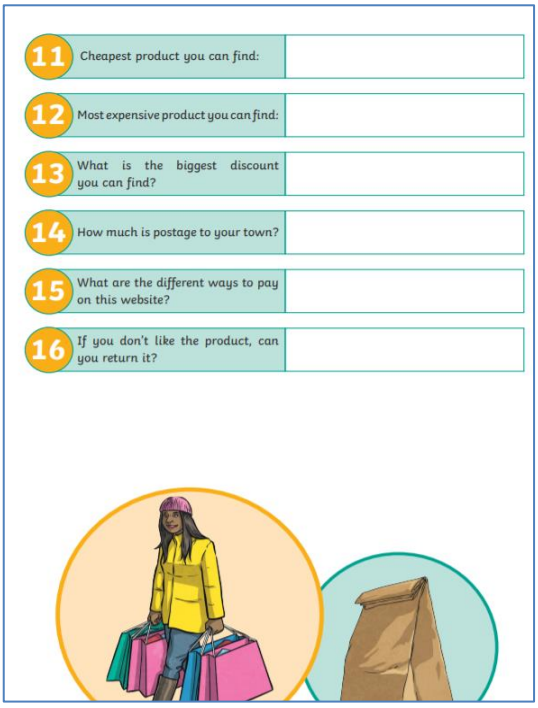
- **Shopping** (online) is a great learning opportunity for budgeting, calculating money and rounding up/estimating. A great opportunity to discuss online safety too!



Online Shopping Scavenger Hunt

Be an informed shopper by learning how to research an online shop. How many of these questions can you find the answers to about a website?

1	Company Name:
2	Website address:
3	What do they sell?
4	Who are their customers?
5	How does the website suit the target customer?
6	How do you think they attract customers?
7	Where is the company from?
8	Where are the products made?
9	What currency do they sell in?
10	If the site is in a different currency, what is the conversion rate?



11	Cheapest product you can find:
12	Most expensive product you can find:
13	What is the biggest discount you can find?
14	How much is postage to your town?
15	What are the different ways to pay on this website?
16	If you don't like the product, can you return it?

- Many **craft** activities can incorporate geometry and measure, also reusing many home items which is good for the environment.

Ice Cream Cone

Supplies
- Cotton wool balls
- Brown or beige coloured card (rectangular shaped)
- Brown pencil crayon
- Tissue paper
- Small pom-poms
- Small round beads
- PVA glue
- Sticky tape

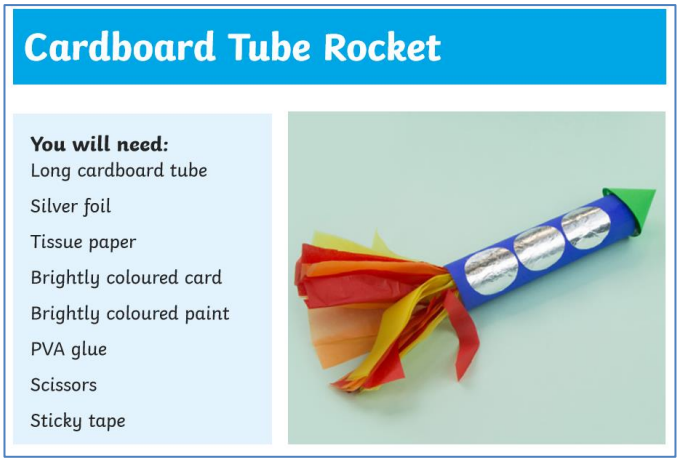
1 Using a brown pencil crayon, draw some diagonal lines onto the coloured card. Then draw more lines going diagonally the other way; this will leave you with a diamond pattern.

2 Now place the card horizontally and roll it into a cone shape. Secure it into place using either sticky tape or glue.

3 Crumple the tissue paper up and use it to fill the base of the cone.

4 Now drizzle PVA glue onto the tissue paper and begin to add balls of cotton wool. Layer these up, adding more glue as needed. Stop once the 'ice cream' is coming out of the top of the cone.

5 Drizzle glue onto the top of the cotton then decorate the ice cream with 'toppings'. We used small pom-poms and beads, along with a large red pom pom for a cherry.



Cardboard Tube Rocket

You will need:
- Long cardboard tube
- Silver foil
- Tissue paper
- Brightly coloured card
- Brightly coloured paint
- PVA glue
- Scissors
- Sticky tape

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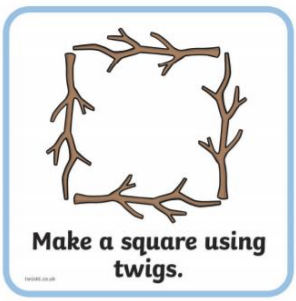
- **Outside** Treasure Hunts are a great way to explore number and shape, and get fresh air and exercise at the same time.


Find some circles.

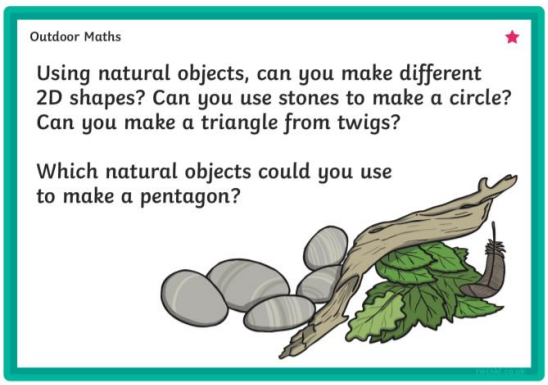

Make a circle from stones.

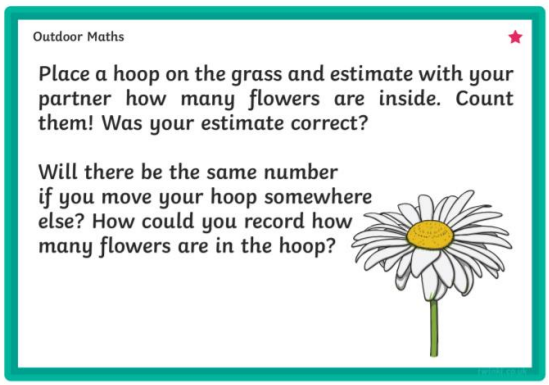

Make a square using twigs.

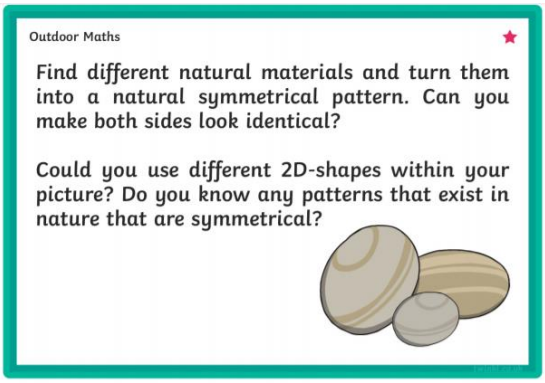

2
Find 2 plant pots.

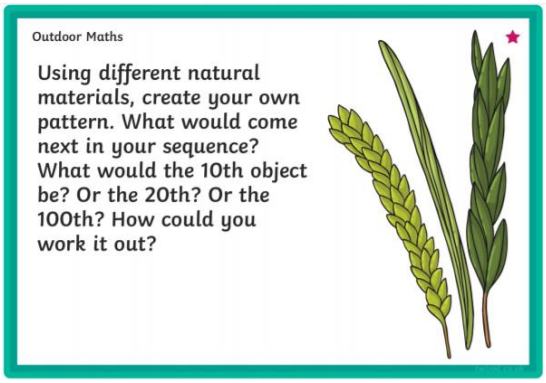

Make a triangle from twigs.


3
Find 3 minibeasts.


Outdoor Maths
Using natural objects, can you make different 2D shapes? Can you use stones to make a circle? Can you make a triangle from twigs?
Which natural objects could you use to make a pentagon?


Outdoor Maths
Place a hoop on the grass and estimate with your partner how many flowers are inside. Count them! Was your estimate correct?
Will there be the same number if you move your hoop somewhere else? How could you record how many flowers are in the hoop?


Outdoor Maths
Find different natural materials and turn them into a natural symmetrical pattern. Can you make both sides look identical?
Could you use different 2D-shapes within your picture? Do you know any patterns that exist in nature that are symmetrical?

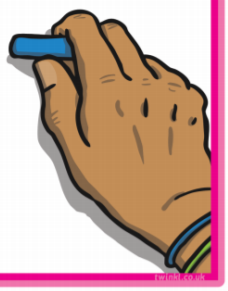

Outdoor Maths
Using different natural materials, create your own pattern. What would come next in your sequence? What would the 10th object be? Or the 20th? Or the 100th? How could you work it out?

Outdoor Maths ★★

Go on a hunt to find some natural objects.

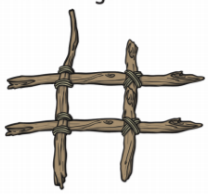
Using chalk, can you create a diagram to sort the objects using different criteria?

You could use a Venn diagram or a Carroll diagram. Can you sort them another way?



Outdoor Maths ★★

Find 4 sticks and arrange them in a pattern like this:



Collect natural objects to use. Put different amounts of objects in each row and column. Can you make each row and column total 10?

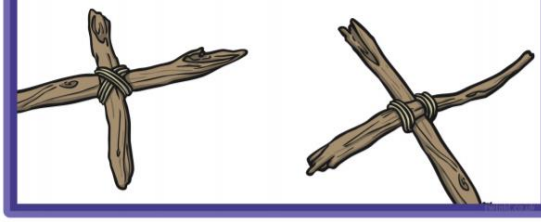
Outdoor Maths ★★

Collect a variety of different natural objects. Using chalk, make a tally chart using the objects that you have found.

Which object did you find the most of? Which object was hardest to find? Could you show your findings in another way?

Outdoor Maths ★★★

Using two sticks and some string, make an angle measurer. Can you find different angles using natural objects? Which angles can you see on a leaf? Do trees have any right angles?



Outdoor Maths ★★★

Find a variety of sticks. Break some of them into halves or quarters and turn your sticks into a fraction wall!

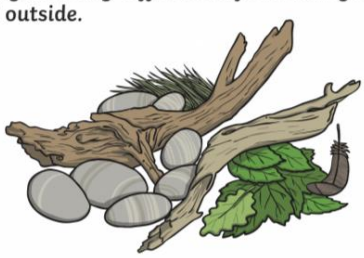
Outdoor Maths ★★★

Give your partner a magic number (e.g. 100). Estimate how far you will walk to if you walk 100 steps. Count it out and find where you finish. Were you right? Did you go further than you thought you would?

Is it possible to go 100 steps in every direction from where you are standing? Why?

Outdoor Maths ★★★

Must a triangle always have straight sides? Investigate using different objects that you have found outside.



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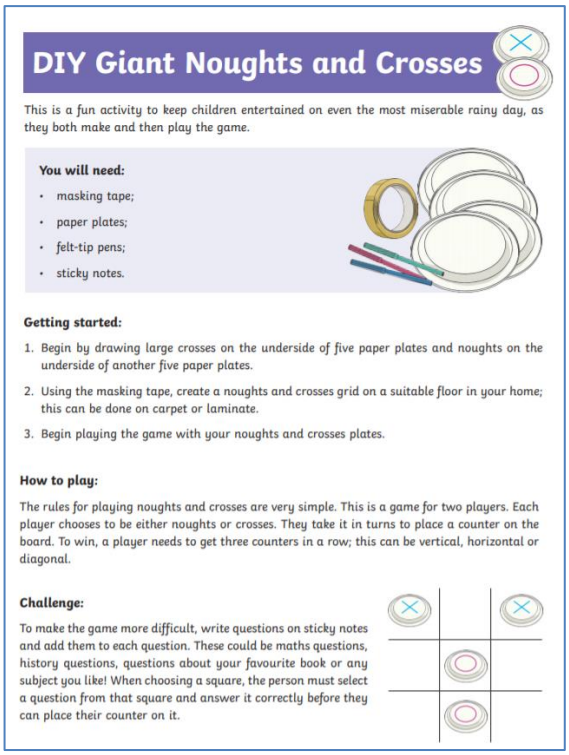
- **Games** (board games, card games, dominoes etc) can offer opportunities for students to practice counting and to improve short- and long-term memory. They also provide a great way to develop cooperation and turn taking.



DIY Giant Noughts and Crosses

This is a fun activity to keep children entertained on even the most miserable rainy day, as they both make and then play the game.

You will need:

- masking tape;
- paper plates;
- felt-tip pens;
- sticky notes.

Getting started:

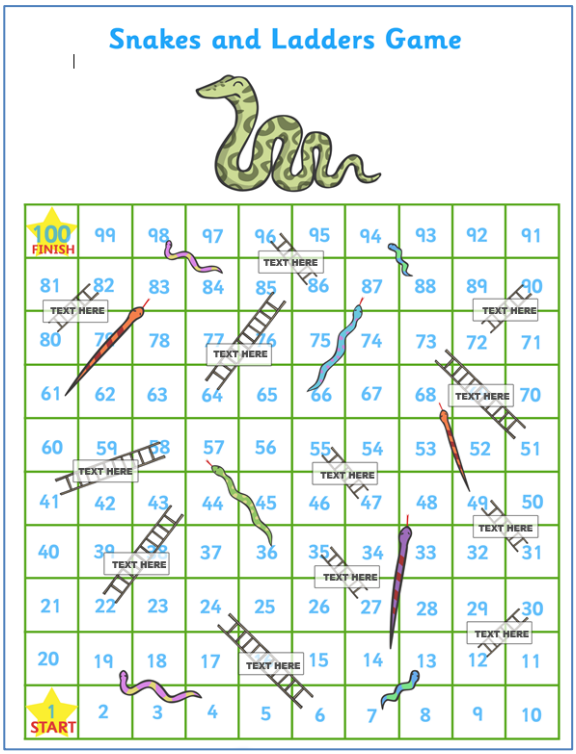
1. Begin by drawing large crosses on the underside of five paper plates and noughts on the underside of another five paper plates.
2. Using the masking tape, create a noughts and crosses grid on a suitable floor in your home; this can be done on carpet or laminate.
3. Begin playing the game with your noughts and crosses plates.

How to play:

The rules for playing noughts and crosses are very simple. This is a game for two players. Each player chooses to be either noughts or crosses. They take it in turns to place a counter on the board. To win, a player needs to get three counters in a row; this can be vertical, horizontal or diagonal.

Challenge:

To make the game more difficult, write questions on sticky notes and add them to each question. These could be maths questions, history questions, questions about your favourite book or any subject you like! When choosing a square, the person must select a question from that square and answer it correctly before they can place their counter on it.



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Websites:

- **Sumdog** – online maths games
  https://pages.sumdog.com/

  To log in…
  Username – first name of your child
  Password – meerkats
  School - melland

- **Worksheet Works** – covers multitude of subjects providing worksheets and ideas
  https://www.worksheetworks.com/

- **BBC Bitesize** – covers multiple subjects with ideas and activities
  https://www.bbc.co.uk/bitesize

- **Teaching Ideas** – maths games, ideas and worksheets
  https://www.teachingideas.co.uk/subjects/maths

- **Twinkl** – some free maths worksheet resources
  https://www.twinkl.co.uk/sign-in

- **Maths no Problem** (Youtube) – Very successful method of learning maths used in Singapore
  https://www.youtube.com/c/MathsnoproblemCoUk/playlists

- **Maths no Problem** (website) – free videos and activities for home learning
  https://mathsnoproblem.com/en/programs/school-at-home/

- **Cool Maths Games** – interactive maths games
  https://mathsnoproblem.com/en/programs/school-at-home/

- **Top Marks** – interactive maths games
  https://www.topmarks.co.uk/maths-games/5-7-years/counting