

Below are some fun activities you may like your child to try over the Summer holidays. In addition to these, look upon the school website for interactive ideas:

<http://www.highworth.bucks.sch.uk/NEW/PAGES/FunLinksMaths.htm>

There are lots of fun mathematical website links under the 'Children' – 'Maths' link.

Your child may want to show their new teacher some of their home learning and this might earn them a **certificate**, or even their very own **Mufti Day!!**



# Time



## Diary

Keep a diary of the times you do different things this week. E.g. when you get up, visit a friend, eat breakfast, play, go to school, read, go to bed etc.

## Convert Clocks

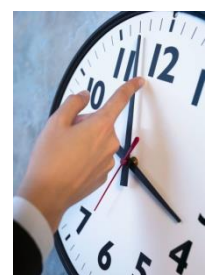
If you have a digital clock, try to write the time in an analogue way, if you have an analogue clock, write the time digitally or on the 24 hour clock. Check the time together at regular intervals.

## TV Times

If you watch TV, when are your favourite programmes on? What time do they finish? How long are they on for? Who spends the most time watching TV in your house? On which day do you watch TV the most/least?

## Time Yourself

How long does it take you to do different things? Brush your teeth/eat breakfast/have a shower/clean your room/do 10 star jumps/ hop around the garden etc. What can you do in two minutes? Try lots of different things!



## Birthdays

Look at a calendar. Find out how many days there are in a week, in each month, in a year. How many weeks are in a year? How many months are there in a year? Name them. Which is the sixth/last/third month etc? When are the birthdays or important dates in your family's year? Put them in order. Make your own calendar showing these special dates. What are the different seasons and when do they start?



## Mass



### Kitchen

Record the weight of different foods you have in your kitchen. Which are in kilograms (kg) and which are in grams (g)? Choose 5 packs and order them from lightest to heaviest. Are the big packs always heaviest? Are the small packs always lightest? Are there any units that you are not familiar with?

### Recipe

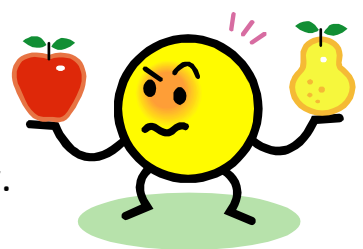
Look at a recipe for something you like. In what units are the ingredients measured? Follow the recipe, reading the scales accurately, then enjoy sharing what you have made together!

### Scales

Weigh different items around your home using any scales you have (kitchen, bathroom etc). Focus on accuracy. What items added together make 2kg, 100g, etc.

### Fruit and Veg

Find a variety of fruit and vegetables. Estimate how much they weigh then weigh them accurately. Put the items in order of mass. Can you add any together to make 300g, 50g, 2kg etc. Perhaps make a fruit salad or vegetable stir fry. How much did the peelings weigh?



# Capacity



## Water

In the bath/kitchen sink/paddling pool/bucket etc, pour water from different sized containers. How many little ones does it take to fill the largest one? Put the containers in order of capacity. Does the tallest/shortest container have the biggest/smallest capacity? (Use familiar objects like yoghurt pots, bowls, plastic bottles etc).



## Coloured Water

(A few drops of food colouring in the water makes reading scales much easier). Use a measuring jug of coloured water to measure the capacity (in litres and/or millilitres) of known items. Order them from smallest to greatest capacity.

## Units

In shops, look at and discuss any products that are sold by capacity, e.g. Paint, lemonade, soup, squash, milk. Estimate then calculate, how much liquid you drink each day.



# Length

## Kilometres (km)

In a car/bus/atlas, discuss the distance between places. With an adult, walk a kilometre from your home. Where does it take you? Record the distance (in km) of any journeys taken. (We work in kilometres (km) in school but know that many distances are measured in miles.)

## Metres (m)

At home find items shorter/longer than a metre. Order objects according to length.

## Centimetres (cm) and metres (m)

Who has the longest jump/shortest hair/shortest leg/longest throw etc. Estimate first, then measure accurately. Record as 142cm, 1.42m or 1m 42cm.

## Millimetres (mm) and centimetres (cm)



Measure plants and monitor their growth, perhaps recording weekly.



Snail race – measure how far a snail travels in 10 minutes (wash your hands!).



Find a leaf that is 10cm, 43mm, etc. Record as 43mm or 4.3cm or 4cm 3mm.

# Decimals

(Confident KS2 mathematicians!)

## Prices

Using receipts, order the prices, focusing on their decimal values.

## Coin Swap

With piles of £1, 10p and 1p coins, convert pounds to pence and vice versa. E.g. £1.62 = 162p, then swap roles. Write the values on cards and use to play snap to match equivalences.



## Measure Swap

Make a set of cards to play snap match equivalence with a range of different measures, such as cm to m ( $250\text{cm} = 2.5\text{m}$ ) or metres to km ( $1250\text{m} = 1.25\text{km}$ ).

# Money



## Receipts

When shopping, find things more expensive/cheaper than 50p, £1.00 etc. Which two items can be bought for £3.00? Find the cheapest bag of flour, rice etc. Look at the receipt together and order some items from least to most expensive.

## Shops

Use real money to play shops. Label toys/food etc. with prices (up to 50p) and role play paying and giving change accurately. Items can cost multiples of 5, 10 or 1 pence, depending on your child's confidence.

## Banks

Give piles of 2, 5 and 10ps to count. "If I give you six, 2ps how much is that? Five 5ps, eight 10ps + three 2ps etc. How many 2ps can you give me for 16p? I've got ten 5ps, how many 10ps will you swap me for them? Which is best to have, three 5ps, or eight 2ps?" Initially work with just one value of coin, then add more, depending on your child's confidence.

## Piggy bank

Give a selection of coins to count i.e. 1p, 2p, 5p, 10p, 20p, 50p, £1 and £2. (Perhaps empty a piggy bank). What is the best way to count all the money? Big coins first? Make 10s? Put all the same values together? Randomly? Start with a few coins then add more, depending on your child's confidence.





# Shape



## 2D ID

On walks, drives or at home, spot and name any 2D shapes that you see (e.g. road signs = triangle, window = square). Draw or photograph them, then label them with any properties that you know.

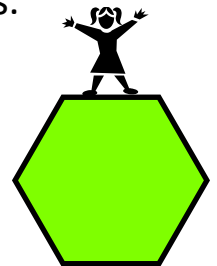
## 2D Cutting

From newspapers/magazines, cut out pictures of 2D shapes (e.g. a circular clock etc.) to make colourful pictures.



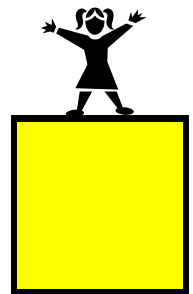
## Shape Make

Use an old food box or greetings card to make a range of 2D shapes. Quadrilaterals and triangles should be easy, as should irregular pentagons, hexagons, heptagons and octagons. You can draw around cans, coins, etc for different circles. Cut out the shapes and use them as templates to create interesting pictures. Can you use them to draw a robot?



## 2D Drawing

Use accurate ruler skills (or shapes made above) to make a picture using 2D shapes. E.g. a house with square windows, rectangular door, circular door handle etc).

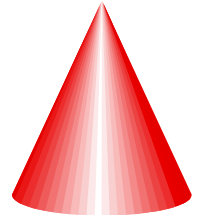


## Right Angle Hunt

Look around you to find lots of right angles (90 degrees). You could play an eye-spy type game ("I spy with my little eye a right angle on something blue/metal/over there etc.") Use a known right angle (like the corner of a ruler or book or set square) to find other angles that are smaller, same as, greater than a right angle.

## 3D ID

Draw and name any 3D shapes that you see at home or on your travels. E.g. beans can = a cylinder, ball = sphere etc. Have a go at naming them and identifying some of their properties.

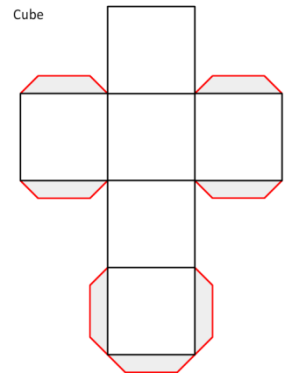


## 3D Model

Make a model with 'junk' using mathematical names for the shapes. Discuss their properties e.g. vertices (corners), edges, faces etc.

## Nets

Carefully unfold a small box (cereal box etc) and discuss its net. Use as a template to make nets for your own boxes. Discuss the purpose of the tabs. You could use your boxes for presents or for storage.



## Symmetry 1

Adults draw half a shape/picture/pattern, then your child can draw the other so that it is symmetrical (the same on both sides). Swap roles.

## Symmetry 2

Fold paper in half and cut out shapes across the fold so that they are symmetrical shapes. Children decorate them so that they are still symmetrical. (Butterflies and faces are always good).



## Symmetry 3

Children write words upside-down under the normal writing. (This can make good greetings cards). Children could draw or write when looking in a mirror too.

## Battleships

Play battleships on paper using coordinates e.g. (7,3). We remember this by going along the corridor and up the stairs.

## Maps

Use the grid references on maps to find different locations. You could then use points on the compass (Year 3: N, S, E, W and Year 4 NE, SE, NW, SW too) to move around the map. More confident mathematicians may be interested in the scale of different maps.

# Multiplication Tables

<b>x</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
<b>1</b>	1	2	3	4	5	6	7	8	9	10	11	12
<b>2</b>	2	4	6	8	10	12	14	16	18	20	22	24
<b>3</b>	3	6	9	12	15	18	21	24	27	30	33	36
<b>4</b>	4	8	12	16	20	24	28	32	36	40	44	48
<b>5</b>	5	10	15	20	25	30	35	40	45	50	55	60
<b>6</b>	6	12	18	24	30	36	42	48	54	60	66	72
<b>7</b>	7	14	21	28	35	42	49	56	63	70	77	84
<b>8</b>	8	16	24	32	40	48	56	64	72	80	88	96
<b>9</b>	9	18	27	36	45	54	63	72	81	90	99	108
<b>10</b>	10	20	30	40	50	60	70	80	90	100	110	120
<b>11</b>	11	22	33	44	55	66	77	88	99	110	121	132
<b>12</b>	12	24	36	48	60	72	84	96	108	120	132	144

When you know your times table facts, all areas of maths become sooooo much easier! If you know that:

$$6 \times 7 = 42$$

you also know that

$$42 \div 7 = 6$$

and

$$42 \div 6 = 7$$

and that

$$\frac{1}{6} \text{ of } 42 = 7$$

and

$$\frac{1}{7} \text{ of } 42 = 6$$

and that

$$60 \times 7 = 420$$

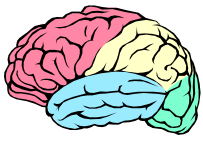
and

$$70 \times 6 = 420$$

and so on and so.....!

Challenge yourself to learn as many times tables facts as you can this Summer – perfect for long car journeys – get an adult to test you!





# General Skill Games

## Car plates

Using number plates, children can create and order numbers, add and multiply, identify odd and even numbers and patterns.

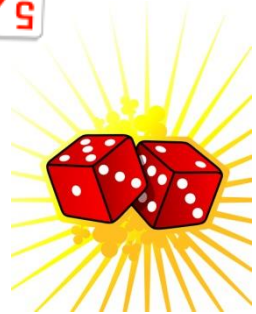
## Card Games

Playing 'Pontoon', 'Rummy' and 'Whist' are good card games to promote addition.



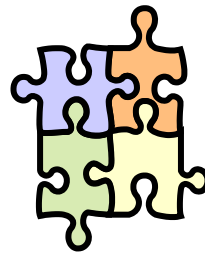
## Dice

Great to generate numbers for addition and multiplication.



## Jigsaw Puzzles

Are good for developing spatial awareness.



## Board Games

Such as 'Connect 4', 'Snakes and ladders', 'Ludo', 'Chess', 'Monopoly' etc. are good for thinking skills.



## Bingo and Guess my Number

Promote awareness of numbers.