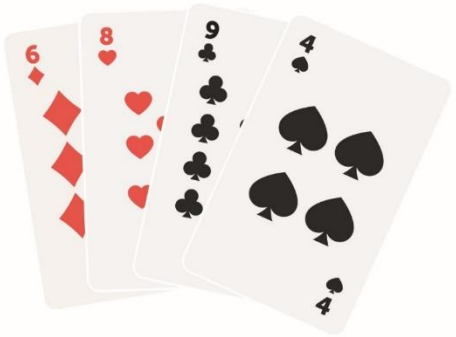
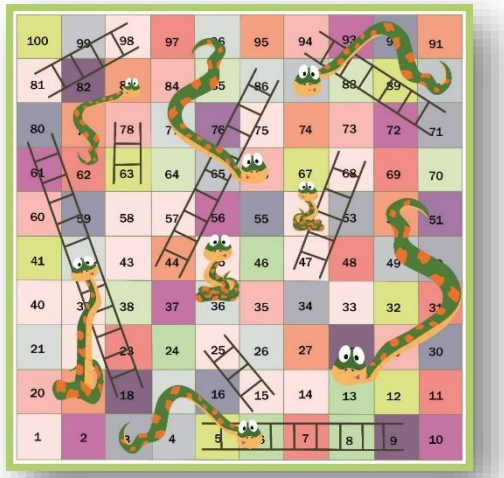
Maths Everywhere Games and Activities





Y4

Array Hunt

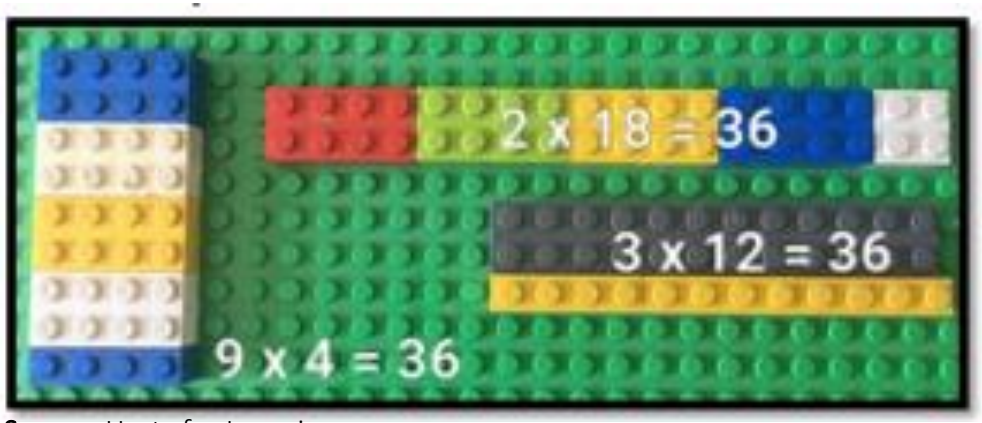
Go on a hunt, looking for arrays (rectangles of amounts, in columns and rows).
Here are some ideas including crayons and Lego® bricks. But also have a look for tiles and patterns on materials.

For each of the arrays you find, say which multiplication fact is represented.
There are ___ rows of ___. The product is ___.

Can you find another array with the same product?

There are 6 rows of 6 studs. The product is 36 studs. 6 x 6 = 36

If not, draw/build an array with a different number of rows by the same product.



Source: Herts for Learning

Y4

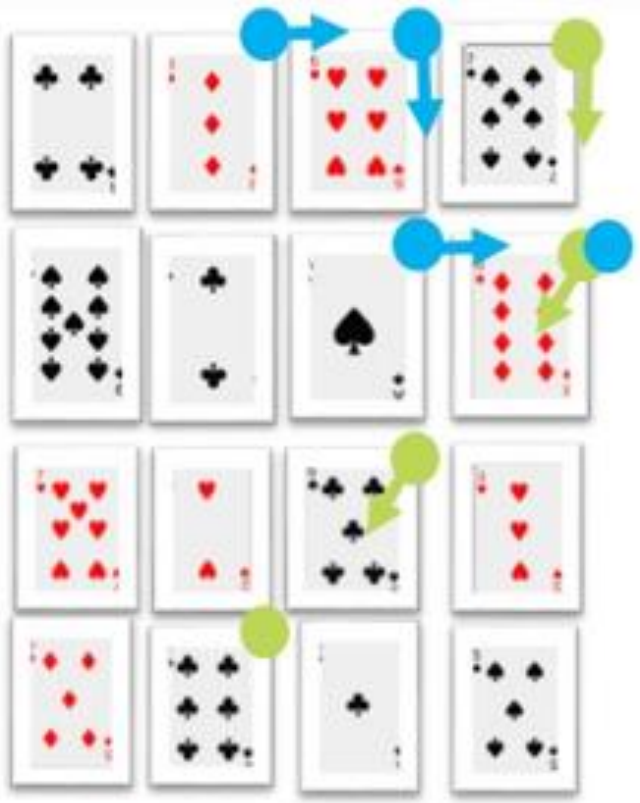
Moggle

You will need a set of playing cards but take out the picture cards, tens and shuffle them.

Deal 16 cards into four rows of four cards. Make as many times tables facts as you can from cards that tough sides or corners – look at the green and blue examples.

7 → 8 → 5 → 6 7 x 8 = 56

3 → 6 → 1 → 8 3 x 6 = 18



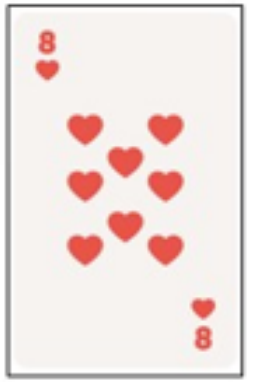
Turn it into a game for two players by challenging each other to find the most facts from the 16 cards dealt.

Y4

Source: Herts for Learning

Multiplication tables games

You will need a set of playing cards or a dice.
Decide on a multiplication table that you have begun learning and are beginning to remember the facts for.



Playing on your own or with a partner, roll the dice or choose a playing card.
If using the cards, Jack = 10, Queen = 11, King = 12.
If using the dice, roll it twice and add up the 2 numbers.
Now say the whole fact.

I'm working on learning my 6s.
I rolled a 5.
5 x 6 = 30
Extend to: I also know 6 x 5 = 30 and 30 ÷ 5 = 6 or 30 ÷ 6 = 5

Which facts do you know best and already remember quickly?
Which ones are you using counting or another strategy to work out?

Y4

Source: Herts for Learning

Room Makeover

Choose one room in your home for an imaginary makeover.

Imagine you have a budget of £2500 to buy items for the room. You might like a new rug or comfy chair.

Choosing items either from the list in the table (which you can add your own ideas to), or looking in a catalogue or online, select items that add up as close to the £2500 limit (without going over).

Keep a running total after 'spending' on each item so you can track how much is left from £2500.

Item	Cost	Amount left
Rug		
Lamp		
Small table		
Armchair		
Curtains		

Y4

Source: Herts for Learning

Units of measure

Collect a list of all the units of measure found around the house and where they are. These might include time in hours and minutes (on a clock or watch), mass in grams (scales in the kitchen). How many different ways to measure can you find?

What is being measured?	Unit	Where it is found
Time	Hours and minutes	Clock and watch

Use a ruler or tape measure to create your own measuring strip.

- On paper or card, draw a long straight line.
- Use a ruler or measuring tape to mark the line into centimetres and millimetres.
- Find as many things around your house are **not longer** than your line. What are the shortest and longest items you can find that fit onto your measuring strip?

Y4

Source: Herts for Learning

Measurements and equivalence

Collect a range of packets, tins, boxes and bottles with a range of measurements on. Most will have their amount on using a metric unit: grams)g) or kilograms (kg), millilitres (ml) or litres (l)

First create two lists. Those with:

a) a mass in g/kg
b) a capacity in ml/l

Then convert each g into kg (and vice versa), ml into l (and vice versa).

For example:

Cornflakes	720g = 0.72kg	Carton of apple juice	200ml = 0.2l
Tin sweetcorn	160g = 0.16kg	Washing up liquid	380ml = 0.38l

Now, for each list, put the items in order from largest to smallest.

Y4

Source: Herts for Learning

Digital time on timetables

Lots of things run to a timetable. For example: buses and trains, programmes on television and films at the cinema. Look up a timetable of your choice (this might be train times from where you live, or it might be the programmes on the channel you watch most).

Harpenden	07:22	07:32	07:58	08:28
St Albans	07:28	07:38	08:04	08:34
Radlett	07:33	07:43	08:09	08:39
Elstree and Borehamwood	07:37	07:47	08:13	08:43

What is the earliest ...?
For example, what is the earliest train / bus / programme / film on the timetable?
Are the times in 12 hour or 24 hour digital time? How do you know?

How many different ways can you say the same time?
For example:
07:24
Twenty four minutes past seven
Seven twenty four in the morning

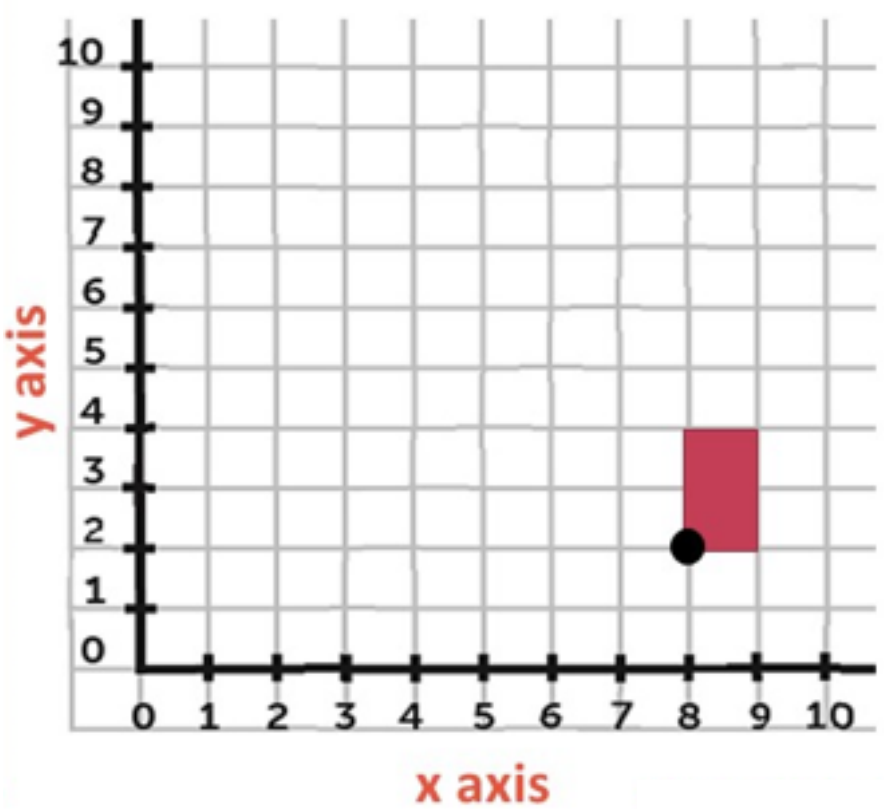
Make a timetable of the activities in your day using 24 hour time.

Y4

Source: Herts for Learning

Battleships

- Draw or print a coordinates grid, as shown, up to 10 on each axis.
- Create a barrier, so you can't see the other player's grid.
- Each player shades the three rectangles (ships) that cover up to 4 connected squares.
- For each shape (ship), mark the vertices (corners) with a dot and list the coordinates.
- Take it in turns to guess all four coordinates to work out the location of the other player's ships.
- One all four coordinates have been guessed the ship is sunk.
- First player to sink the other player's ships in the winner!



Coordinates are plotted (x axis, y axis).
So the vertex shown by the black dot is (8,2).

Source: Herts for Learning

Y4

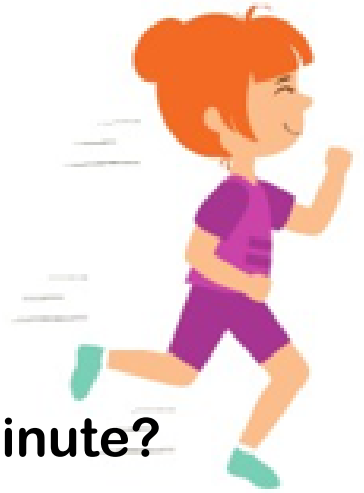
Exercise Challenge

Find a way to time 15 seconds, either on a watch or phone stop watch, or asking someone to count to 15 out loud slowly.

Decide on an exercise you could for 15 seconds.
For example, doing as many as you can: star jumps, hops, step ups onto the bottom step of the stairs.

Can you improve your score and do more if you try again?

Test which exercise you can do more of in 15 seconds.
Can you do more hops or star jumps?



If you can do this many in 15 seconds, how many would that be in a minute?
Hint: think about how many lots of 15 seconds there are in 1 minute.
Use this thinking to predict how many could you do in 2 minutes or 20 seconds.

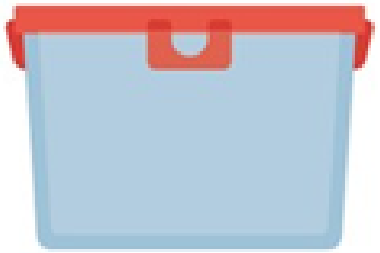
Y4

Source: Herts for Learning

Estimation Challenge

You will need a medium sized container, such as a plastic box, lunch box or plastic bowl. You need lots of small items to fill it. This might be small toys such as Lego® bricks, beads, marbles or even pasta shapes.

Ask each family member to predict how many they think can fit inside. Compare their estimates to yours. Did you choose similar numbers?
Fill it up with the items you have chosen.
Do you / they still think your prediction is correct? Why? Why not?



Now decide the most efficient way to count the items.
You might want to count them into groups of ten, or put them in 5s or 25s.

Who was closest? Who was furthest away?
If you repeated the challenge again, with different items, what do you think would be the same and different and why?

Y4

Source: Herts for Learning

4 digit numbers hunt

Go on a hunt for 4 digit numbers.
Any number with 4 digits counts, including decimal numbers.
Numbers with either more or fewer than 4 digits do not count.

Think about where you might find 4 digit numbers recorded. For example, on packaging, books, food labels, calendars. How many can you find?

When you have found and recorded a good selection of 4 digit numbers, put them in order from smallest to largest in value.

Y4

Source: Herts for Learning

Number Riddles

I'm thinking of a 4 digit number.
The thousands digit is double the hundreds digit.
The tens and ones digits are both odd.
All four digits are different.
The number is between 8000 and 8500.

What number am I?
There are 20 possible answers.
Can you find them all?

Th	H	T	O

Write your own similar riddle with clues to a 4 digit number and give them to someone else to solve.

Y4

Source: Herts for Learning

Families of equivalent fractions

Fractions can be put into families of the same size. On this fraction wall, you can find fractions of the same size, such as $\frac{1}{2}$ or $\frac{2}{4}$.

Try making a family of $\frac{1}{2}$ or $\frac{1}{3}$ or $\frac{1}{4}$.

Once you notice the pattern, can you continue it?

Make a fraction wall with materials.
Materials that work well are playdough / modelling materials and Lego® / construction pieces with spots or holes.

The first (largest) piece needs to show 1 whole. One the next row, show the family you are collecting e.g. thirds. What else is now the same size as your chosen fraction ($\frac{1}{3}$)? Then continue the pattern.

Y4

Source: Herts for Learning