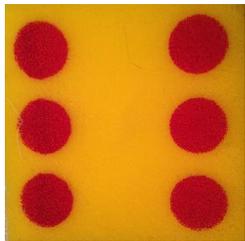


# Year 4 Maths Everywhere – Array hunt

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 \_\_\_\_\_.

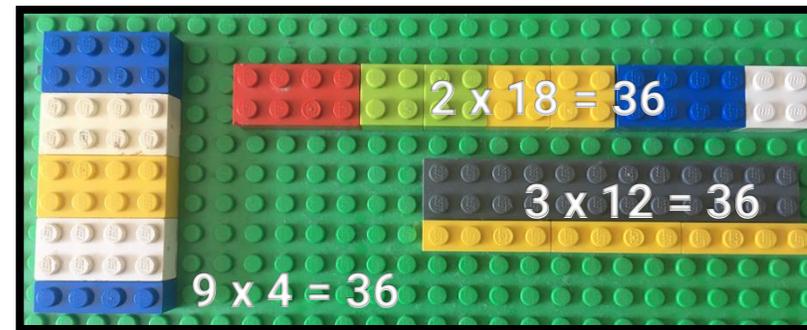
The product is \_\_\_\_\_.

Can you find another array with the same product?



*There are 6 rows of 6 studs.  
The product is 36 studs.  
 $6 \times 6 = 36$*

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



# Year 4 Maths Everywhere – Moggle

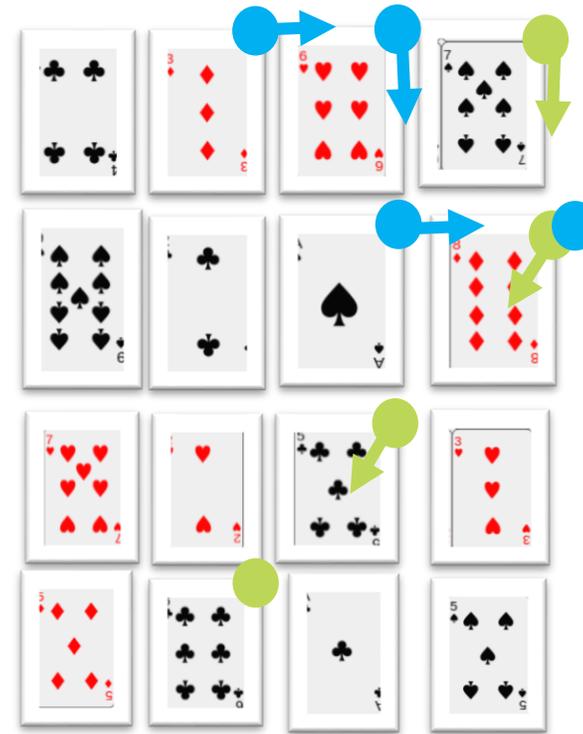
You will need a set of playing cards but take out the picture cards, tens and shuffle them.

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

$$7 \rightarrow 8 \rightarrow 5 \rightarrow 6 \quad 7 \times 8 = 56$$

$$3 \rightarrow 6 \rightarrow 1 \rightarrow 8 \quad 3 \times 6 = 18$$

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



# Year 4 Maths Everywhere – Multiplication tables games

You will need a set of playing cards **or** a dice.

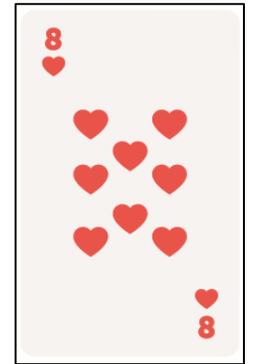
Decide on a multiplication table that you have begun learning and are beginning to remember the facts for.

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.**

$$5 \times 6 = 30$$

**Extend to: I also know  $6 \times 5 = 30$  and  $30 \div 5 = 6$  or  $30 \div 6 = 5$**

Which facts do you know best and already remember quickly?

Which facts are you using counting or another strategy to work out?



# Year 4 Maths Everywhere – Room makeover

| Item        | Cost | Amount left |
|-------------|------|-------------|
| Rug         |      |             |
| Lamp        |      |             |
| Small table |      |             |
| Armchair    |      |             |
| Curtains    |      |             |
|             |      |             |
|             |      |             |

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.



## Year 4 Maths Everywhere – 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 that are **not longer** than your line. What are the shortest and longest items you can find that fit onto your measuring strip?



# Year 4 Maths Everywhere – Measurements and equivalence

Collect a range of packets, tins, boxes and bottles with a range of measurements on. Most will have their amount 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 measure.



# Year 4 Maths Everywhere – 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 or seven twenty four in the morning.

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

