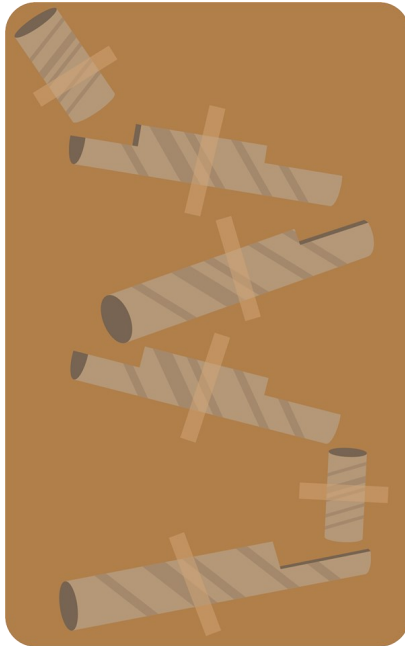




Marble run

Collect as many different sized cardboard tubes as you can, some tape, marbles and a large sheet of heavy cardboard.

Use them to create a marble run like the one in the picture.
You could paint the tubes and background too.

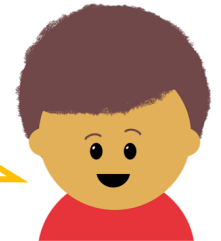


Let's do this!



Use a timer and measure how fast a marble takes to complete the run.

Ask a trusted adult or older child if they have a timer on their phone.



Challenges



Can you adjust the run so the marble completes it in a faster time?

Can you adjust it so the marble takes longer?

Can you get the marble to take exactly 1 minute?



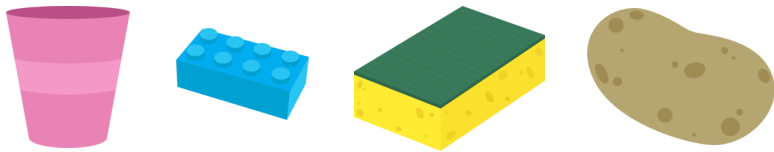


Shape patterns

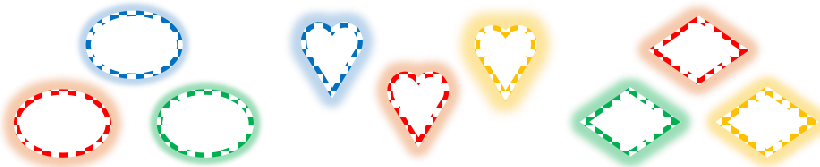
Have fun creating printed shape patterns.

You will need items that are different shapes which you can use to print with, paper and poster paint.

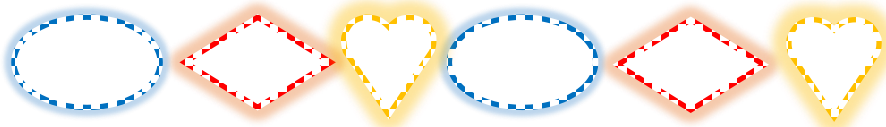
You might use objects from around your house or cut shapes from a potato.



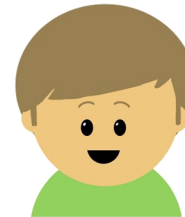
First, practice printing each object on your paper.



Then, choose three to make a repeating pattern.

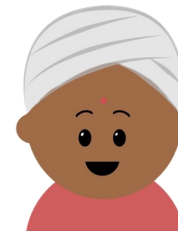
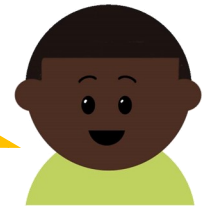


Let's do this!



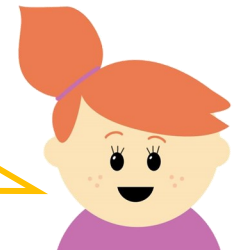
Which shapes can you turn to make a new print?

Make up some questions about your pattern
e.g. What will the 8th shape be?



Can you make a repeating pattern with just one shape?

What is the longest repeating pattern that you can make?



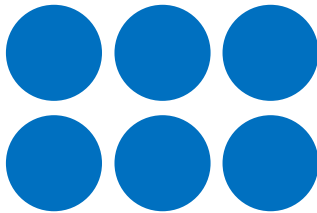


Multiplication fun

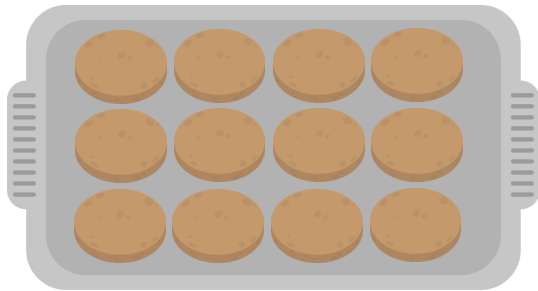
Did you know examples of multiplication are all around you in the form of arrays.

An array is the visual representation of a multiplication fact.

For example, 2×3 is represented by this array. (There are 2 rows of 3.)



Which multiplication fact is this array of cookies representing?

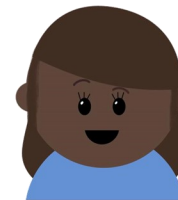
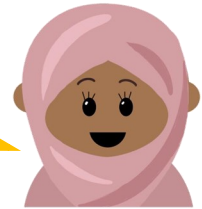


Let's do this!



Look all around.
Can you see any arrays in the room?

What about tiles on the floor, walls or ceiling?
What multiplication facts do they represent?



Can you find any objects and arrange them in arrays? Write down the fact they show.

What is the biggest array you can find?
How can you work out the number of items in it?

