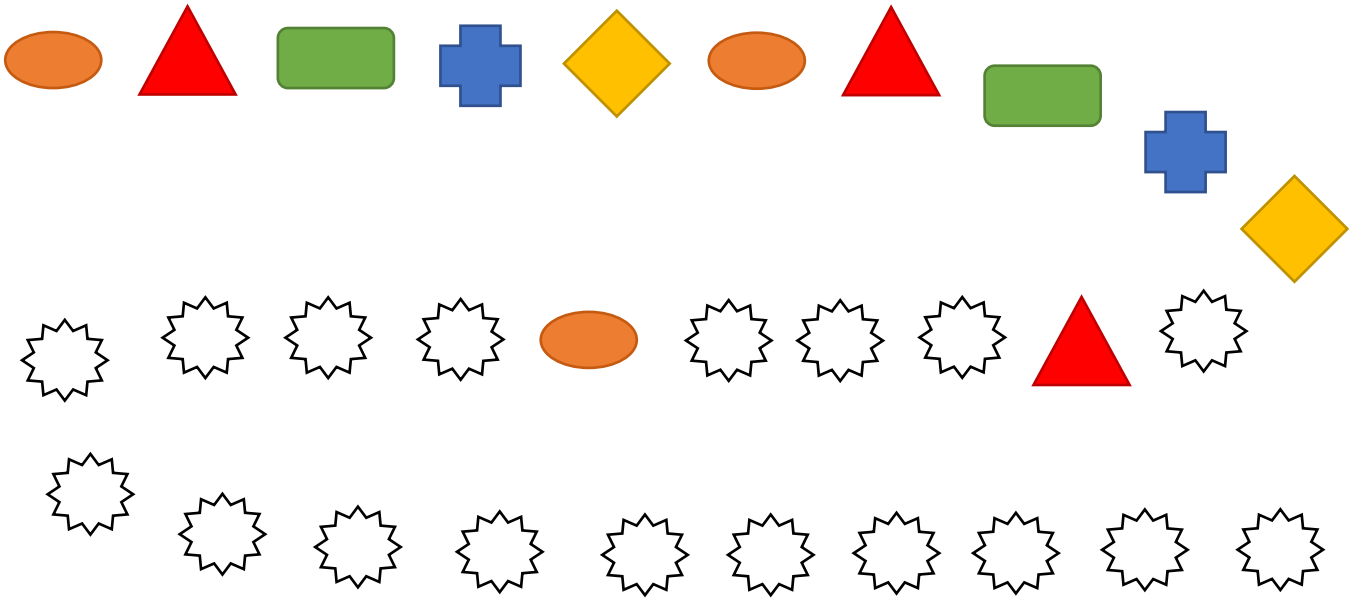
KS1 Problem

Hansel and Gretel

So that they can find their way back through the forest, Hansel and Gretel leave a trail of sweets.

But some animals have taken some of the sweets. This shape shows where a sweet has been taken 

Can you work out which sweets have been taken and put them back to complete the trail?



Challenge

What do you notice about where the yellow sweets are in the sequence?

Which sweet is second in the sequence? What position is the next one of these sweets? Carry on doing this. What do you notice?

Does this happen for all the different types of sweet?

Support for Parents and Carers

This problem is helping children to recognise repeating patterns. They should be encouraged to identify that there are five sweets in the pattern and that they then repeat each time.

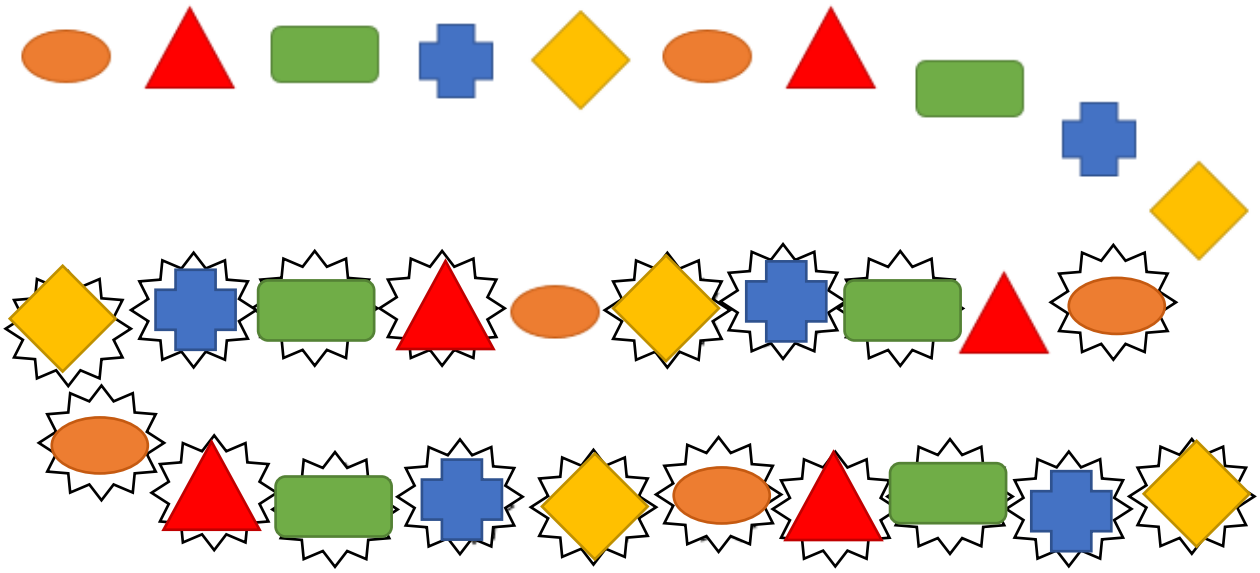
For younger children, provide them with pieces of paper so that they can recreate the sweets and place them in the pattern to help identify what comes next.

Lancashire Mathematics Team (2020)

KS1 Problem

For children in Years 1 and 2, they should be able to identify the missing sweets in the pattern without drawing them. They should be encouraged to answer the challenge questions by using the fact that there are five sweets so the yellow sweet will always be on the counting in fives numbers (Year 1) or multiples of 5 (Year 2). Year 2 should also be encouraged to notice that the positions of the other sweets, for example the orange ones are also increasing in fives, i.e. 1, 6, 11, 16, 21, 26. You could also ask them what they notice about the patterns the numbers are making and why they think this might be,

Solution



What do you notice about where the yellow sweets are in the sequence?

The yellow sweets are on the counting in fives numbers / multiples of fives: 5, 10, 15, 20, 25, 30.

Which sweet is second in the sequence? What position is the next one of these sweets? Carry on doing this. What do you notice?

The red sweet is second in the sequence. The next one of these is in the seventh place. Then 12th, 17th, 22nd, 27th. You count on five each time.

Does this happen for all the different types of sweet?

Yes it does. The orange sweet pattern is 1, 6, 11, 16, 21, 26. The green sweet pattern is 3, 8, 13, 18, 23, 28. The blue sweet pattern is 4, 9, 14, 19, 24, 29.