Day 4 Starter

Rule	Start	term 2	term 3	term 4	term 5	term 6	term 7
+2	17	19	21				
+5	103	108					
+3	-9	-6					
+10	1,019						

All the Digits

Age 7 to 11 ★★

This represents the multiplication of a 4-figure number by 3.

$$\begin{array}{r} \bigstar\bigstar\bigstar\bigstar \\ \times \qquad 3 \\ \hline \bigstar\bigstar\bigstar\bigstar\bigstar \end{array}$$

The whole calculation uses each of the digits $0 - 9$ once and once only.

The 4-figure number contains three consecutive numbers, which are not in order. The third digit is the sum of two of the consecutive numbers.

The first, third and fifth figures of the five-digit product are three consecutive numbers, again not in order. The second and fourth digits are also consecutive numbers.

Can you replace the stars in the calculation with figures?

Helpful Hint

This task is all about working systematically. Try to avoid just randomly guessing numbers otherwise you might lose track of which numbers you have used.

Also don't forget to factor in any carrying of numbers you need.

Remember if you want to send in any work to njs.year@taw.org.uk you will received some feedback from one of the Y6 teachers ☺

There is a sheet on the NJS website that you might want to print out (if you can) to help you visualise the problem. If you don't have a printer, you can easily create the number cards using pieces of scrap paper.

The next slide contains the answers, so make sure you are finished before you move on!

Answer to 'All the Digits'

This is the answer everyone agreed on:

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  5694
x    3
_____


17082
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Were you correct?
Where did you go wrong? Remember going wrong is perfectly normal – just as long as you learn from it! ☺

Half Time

Age 5 to 11 ★

When Spain played Belgium in the preliminary round of the men's hockey competition in the 2008 Olympics, the final score was 4 — 2.

4 2

What could the half time score have been?
Can you find all the possible half time scores?
How will you make sure you don't miss any out?

In the final of the men's hockey in the 2000 Olympics, the Netherlands played Korea. The final score was a draw; 3 — 3 and they had to take penalties.

3 3

Can you find all the possible half time scores for this match?
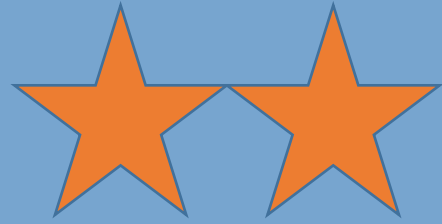
★★

Helpful Hint:

This task is all about being efficient. How can you make sure that you have covered every score and not repeated any?
Try to avoid just picking scores at random.
Maybe drawing a table with the two countries might help?
Remember to share any work you wish with njs.year@taw.org.uk for some teacher feedback.

Extension

- If the match between Spain & Belgium was stopped after 80 minutes and the final score had a sum of 15 points, can you find out what **all** the possible full time scores could have been?

- Don't forget that you must consider how many points each time had at half time – Belgium must have at least 2 points in each of your answers, and Spain must have at least 4 points in each of your answers! ☺