<u>**Session 5 : Optional Bank Holiday Challenges**</u>

Choose one of the activities below to have a go at. If you like, you could try both!

Activity 1

Crack the code.

Janine and Kieran are taking part in a treasure hunt. They have reached the final clue but cannot solve it. Can you help them?

Clue :
To find the prize, you need to first decide, the answer to the following maths puzzle.
A square has sides of 4, multiply its perimeter by 22 to find your blue digits.
To find the red digits, you need to find the number that was squared to make 64.
Finally, the green digits will be known when you can subtract 46,329 from 761,307.
Now fill in your digits below.

Now use the code to find the prize's location.

0	1	2	3	4
t	n	r	g	s
5	6	7	8	9
a	p	e	d	h

Where is the prize hidden?

Type your answer here.

Now have a go at making your own maths puzzles like the one you have just solved. You could test it out on the other people in your house. You could even make a full treasure hunt!

Activity 2

Factor Track

'Factor Track' is not a race but a game of skill. The idea is to go round the track in as few moves as possible, keeping to the rules. You can do this on your own or with a partner.

Rules:
- You start on the (yellow) 60 and must make your way round to the (red) 'end' square.
- You can move to any factor of the number you are on, except 1.
- You must land exactly on each green square, so you can't go round corners in one move. (So your first move could be either 2, 3, 4, 5 or 6 squares. Although 10, 12, 15, 20 and 30 are also factors of 60, these numbers are too big as you may not go around corners.)
- Have a go at moving round the 'training' track following the rules and counting your moves. Can you do it in fewer moves?
- When you feel ready, try the more challenge track where there are possible short cuts. You will have to work out whether they are worthwhile. What is the best route to take to do it in the least number of moves? Which squares do you need to land on?

Hint: Remember that a factor is a number that fits exactly into another. For example 3 is a factor of 9 because 3 x 3 = 9.

There is a PDF version of this challenge as well.

Training Track

60		14	48	25	40	31	10	19	28

End	72
19	72
6	2
10	24
7	36	3		24	
2	9
	7	14	13	18
14	5			32

Challenge Track