Shotton Hall Primary School
Working together to
S H I N E
Successful, **H**appy, **I**nspired and **N**urtured towards **E**xcellence

Maths

Crack the Code with Factors, Multiples, Square Numbers and Cube Numbers

Solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes.

Each answer to the questions below will be a number. Match the number to a letter in the grid below. If your answers are correct, your letters will spell out a phrase.

1	2	3	4	5	6	7	8	9	10	11	12	13
A	B	C	D	E	F	G	H	I	J	K	L	M
14	15	16	17	18	19	20	21	22	23	24	25	26
N	O	P	Q	R	S	T	U	V	W	X	Y	Z

Which number?	Notes/Number	Letter
This number is a multiple of seven and two and is a factor of 28.		
This number is a square number, a multiple of three and one more than a cube number.		
This number is a prime number and a factor of 36.		
When this number is squared, the answer is the largest square number in the list above.		
This prime number is > 19 and < 29.		
This number is a multiple of five and three.		
This multiple of nine is in between two prime numbers.		
This number is the difference between 5^2 and 6^2.		

Using and Recognising Square and Cube Numbers

Recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3}).
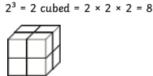
Square Numbers

The product of a number multiplied by itself.

Can be illustrated as a square, e.g

2^2 = 2 squared = 2 × 2 = 4

Cube Numbers

The product of multiplying a digit by itself three times.

Can be illustrated as a cube, e.g.

2^3 = 2 cubed = 2 × 2 × 2 = 8

A. Complete the table.

1^2	1 × 1	1
2^2		4
3^2	3 × 3	
	4 × 4	16
5^2		
		36
	7 × 7	
8^2		
10^2		100

B. Complete the table.

1^3	1 × 1 × 1	1
2^3	2 × 2 × 2	
3^3		27
	4 × 4 × 4	64
5^3	5 × 5 × 5	
6^3	6 × 6× 6	
		343
8^3		512
	9 × 9 × 9	729
10^3		

C. Calculate the missing numbers.

a) $7^2 + 4^3$ =	b) $8^2 + 10^2$ =	c) $5^3 - 5^2$ =
d) $5^2 +$ _____ = 89	e) _____ $- 8^2$ = 17	f) $3^2 × 2^3$ =
g) $3^2 +$ _____ = 5^2	h) $6^3 ÷ 2^2$ =	i) 13^2 =
j) $10^3 - 2^2$ =	k) 100^2 =	l) _____^{2} = 144

English
The Highwayman by Alfred Noyes

You should have read the whole poem.

Watch this video to remind yourself of the difference between metaphors and similes.

https://www.bbc.co.uk/bitesize/topics/zfkk7ty/articles/z9tkxfr

Now try this:

1. Write a list of all the metaphors you can find in 'The Highwayman'.

2. Which metaphor is your favourite? Explain why.

3. Write a list of all the similes you can find in 'The Highwayman'.

4. Which simile is your favourite? Explain why.

Foundation Subject –

Science

Today you are going to try to <u>choose some materials</u> and test them to decide what properties they have and what they can be used for.

Fill in the table below and explain how hard each material is, by trying to scratch it with a nail or pin.

Material	Can it be scratched with a nail?	Can it be torn or cut through with a nail?	Give it a star rating out of 5 for 'hardness'
			☆☆☆☆☆
			☆☆☆☆☆
			☆☆☆☆☆
			☆☆☆☆☆
			☆☆☆☆☆
			☆☆☆☆☆

Rank the Materials		Which of the materials could be used to make these objects?
Lightest to Heaviest	Weakest to Strongest	
		a table
		_____
		a suitcase
		_____
		shoes
		_____

Think about what Stephanie was trying to create - which material would be best suited to Stephanie's job? It must be strong but light.