

What does it look like at HT in Year 6?

5 x 50 minute lessons per week (L1 every day).
Teacher 'Assessment for Learning' interventions.
TA 'Assessment for Learning' interventions.
2 tasks of differentiated homework per week.

As a result of the changes in the curriculum, children are all working towards the same targets. This focuses on a *depth of understanding* rather than the previous *breadth* of understanding.

We have 3 sets to help best support this:

1 top set

2 parallel sets

We will be testing the children Thursday/Friday to make final decisions on the best group for them to start Year 6 in.

The Curriculum:

Autumn 1	Whole and part numbers Calculations and algebra Larger numbers
Autumn 2	2D and 3D shapes and nets Numbers in everyday life
Spring 1	Solving problems Fractions and algebra
Spring 2	Using what you know Shapes and co-ordinates
Summer 1	Focus on algebra Solving more problems Fractions, equivalents and algebra
Summer 2	Fair shares Nets, angles and co-ordinates

The curriculum for Year 6 maths is taught through 14 different units.

At the end of each unit, the children will be tested on what they have been taught.

Each term, they will also be tested on SATs style tests to best prepare them.

Gaps from tests will be picked up through teacher AFL, TA AFL and through targeted interventions.

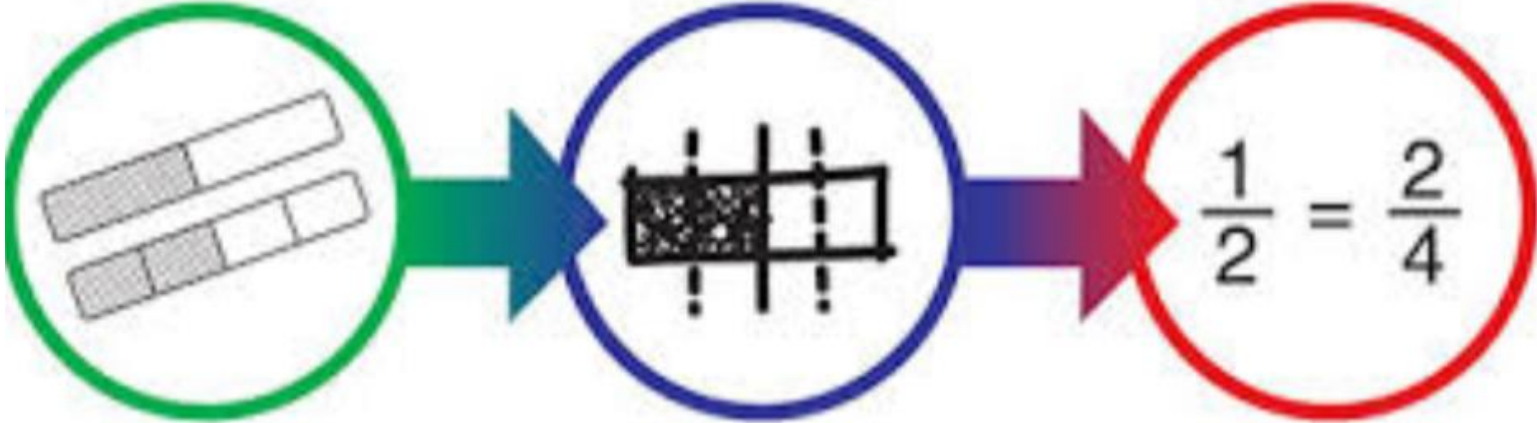
Year 6 Autumn Term				
Curriculum Target	In lesson (a, pa, oa)	APP test 2 weeks after (a, pa, oa)	Booster/AFL (date and initial)	
Unit 1 – whole and part numbers				
Identify the value of each digit in numbers given to two decimal places, and multiply and divide numbers by 10 and 100 giving answers up to two decimal places.				3 weeks
Solve problems that involve number and place value.				
Use, read, write and convert between standard units, converting measurements of mass from a smaller unit of measure to a larger unit, and vice versa, using decimal notation up to two decimal places.				
Read, write, order and compare whole numbers to at least 5 000 000.				
Round any whole number to a required degree of accuracy				
Compare and order fractions.				
Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.				
Solve number and practical problems that involve fractions.				
Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.				
Unit 2 – calculations and algebra				
Perform mental calculations, including with mixed operations and large numbers.				3 weeks
Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.				
Solve problems involving addition, subtraction; use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy				
Interpret line graphs and use these to solve problems				
Use knowledge of the order of operations to carry out calculations involving the four operations				
Solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate				
Use simple formulae				
Find pairs of numbers that satisfy an equation with two unknowns.				
Autumn 1 Half Termly Test		Raw score:		

Teach through the style of...

Concrete

Pictorial

Abstract



Mastery in maths

What does it involve?

deep and sustainable learning - CPA method helps embed this.

ability to build on something already learnt.

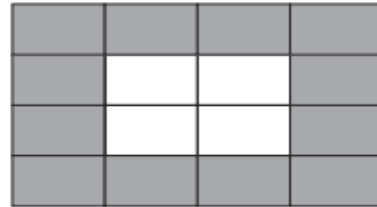
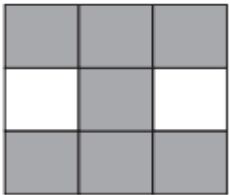
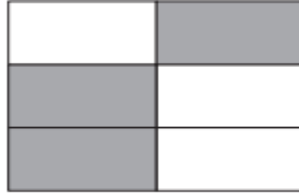
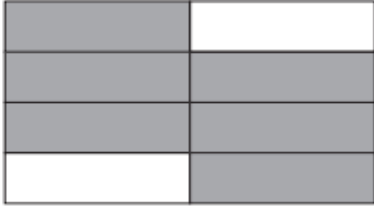
ability to reason about a concept.

ability to make connections to other concepts.

ability to show the same problem in different ways.

Examples from recent test papers

Tick two shapes that have $\frac{3}{4}$ shaded.



1 mark

Examples from recent test papers

A cat sleeps for **12 hours** each day.

50% of its life is spent asleep.



Write the missing percentage.

A koala sleeps for **18 hours** each day.

%

of its life is spent asleep.



1 mark

Examples from recent test papers

Adam says,

0.25 is **smaller** than $\frac{2}{5}$

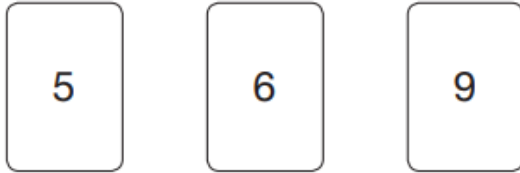


Explain why he is correct.

A large, empty, cloud-shaped box with a scalloped border, intended for the student to write their explanation. The box is white with a thin black outline.

Examples from recent test papers

Chen uses these digit cards.



She makes a 2-digit number and a 1-digit number.

She multiplies them together.

Her answer is a **multiple of 10**

What could Chen's multiplication be?

$$\begin{array}{|c|c|} \hline & \\ \hline \end{array} \times \begin{array}{|c|} \hline \\ \hline \end{array}$$

Examples from recent test papers



Adam buys **6** bags of white balloons.

Chen buys **3** bags of red balloons.

Adam says,

'I have four times as many balloons as Chen.'

Explain why Adam is correct.

SATS

Begin on Monday 13th May 2019

3 papers - usually the Wednesday and Thursday

- 1.** Arithmetic - 30 minutes
2. Reasoning - 40 minutes
3. Reasoning - 40 minutes

How can you help?

1. Ensure children know all times tables up to 12 x 12 and can recall them at speed, out of order and know the inverse.



	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

If a child is not able to recall number and multiplication facts, they will find it difficult to solve problems.

Make sure they are using
Times Table Rock Stars

2. Practice properties of numbers e.g. factors and multiples and prime numbers.

Factors

"Factors" are the numbers we can **multiply together** to get another number:

$$\begin{array}{ccc} & 2 \times 3 = 6 & \\ \swarrow & & \swarrow \\ \text{Factor} & & \text{Factor} \end{array}$$

2 and 3 are factors of 6

A number can have **many** factors.

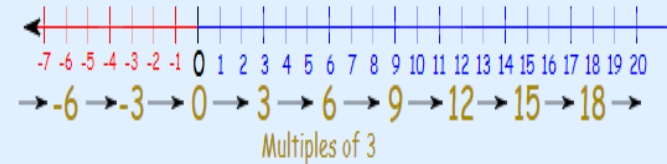
Example: 12

- $3 \times 4 = 12$, so **3** and **4** are factors of 12
- Also $2 \times 6 = 12$, so **2** and **6** are also factors of 12,
- And $1 \times 12 = 12$, so **1** and **12** are factors of 12 as well.

Multiples

A multiple is the result of **multiplying** a number by an **integer** (not a fraction).

Example: Multiples of 3:



..., -9, -6, -3, 0, 3, 6, 9, ...

Example: 15 **is** a multiple of 3, as $3 \times 5 = 15$

Example: 16 is **not** a multiple of 3

PRIME NUMBERS

Prime numbers are numbers (greater than 1) that cannot be divided by any number except themselves and one.

The numbers shown in yellow are all prime numbers. 1 is not a prime number!

To test if a number is a prime, divide it by 2, 3, 5, 7, 9 or 11.



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

✓ 7

7 is a prime number because it can only be divided by 7 and 1.

✗ 70

70 is not a prime number because it can be divided by 70, 35, 14, 10, 7, 5, 2 and 1!

3. Ensure they are secure in all 4 written methods.

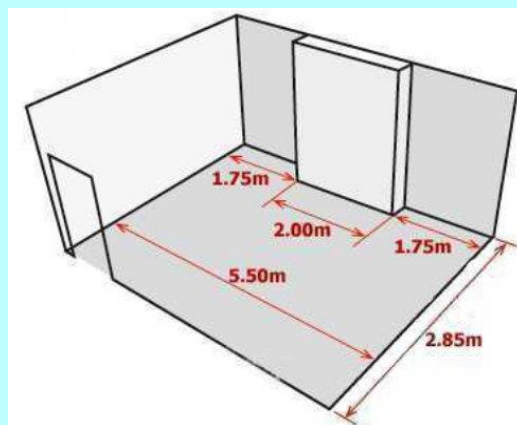
Column Addition

Column Subtraction

Column multiplication

Long Division (chunking)

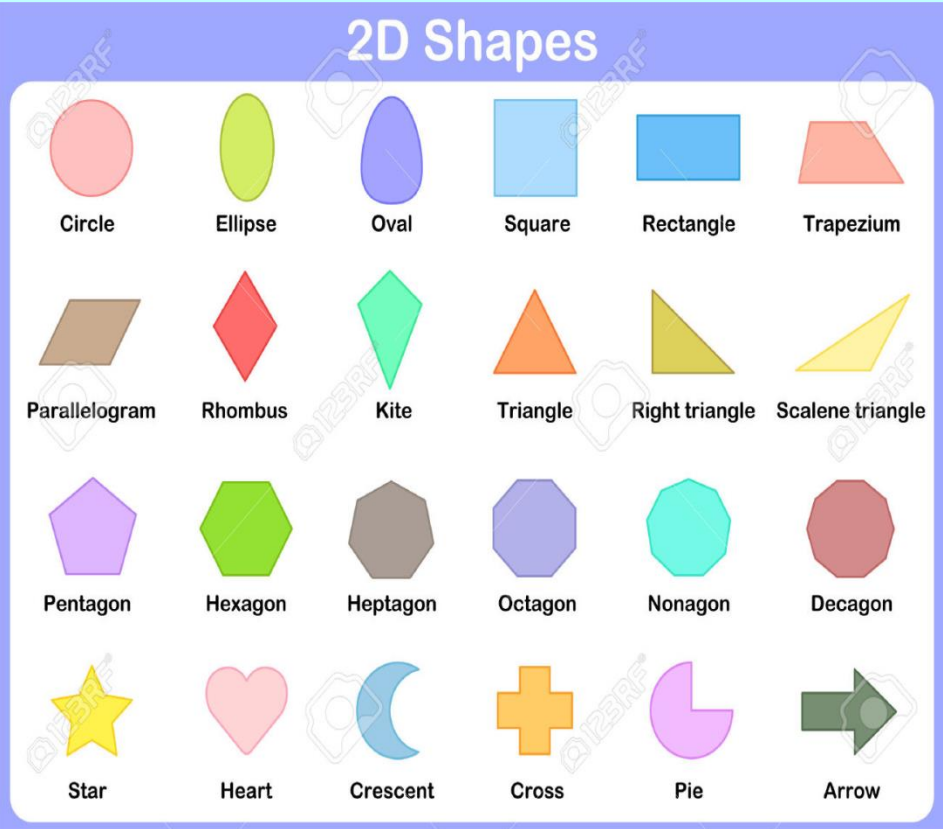
5. Encourage them to see maths is EVERYWHERE.






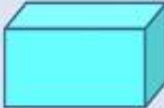


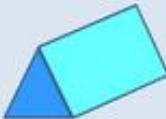

Departures 1 of 2		Departures 2 of 2		Next
07:14	Sevenoaks Delayed Plat 5	07:50	Beckenham Jnc Cancelled	Ashford
07:36	Caterham & Cancelled	07:51	Brighton & Cancelled	Bedford
07:40	West Croydon Cancelled	07:53	Victoria Cancelled	Brighton
07:42	Brighton Cancelled	07:55	East Grinstead Cancelled	Chatham
07:44	Sevenoaks Delayed Plat 5	07:58	Dartford On time Plat 4	Dartford
07:44	East Croydon Cancelled	07:58	Uckfield Cancelled	East Cr
07:48	Dartford On time Plat 4	08:00	Himbleton Cancelled	Gatwick
	07:30:35		07:30:35	Hayward

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6. Ensure they have a good understanding of 2d and 3d shapes and their features e.g. corners (vertices), sides and edges.



Properties of 3D shapes

Cone  2 Faces 1 Edge 1 Vertex	Sphere  1 Face 1 Edge 0 Vertices	Tetrahedron  4 Faces 6 Edges 4 Vertices	Cuboid  6 Faces 12 Edges 8 Vertices
Cylinder  3 Faces 2 Edges 0 Vertices	Cube  6 Faces 12 Edges 8 Vertices	Triangular Prism  5 Faces 9 Edges 6 Vertices	Square-based pyramid  5 Faces 8 Edges 5 Vertices

7. Encourage and support them with their homework and let us know if we can help.



	Task 1	Task 2
Maths	Hand out: Monday Not to be handed in.	Hand out: Monday Due in: Thursday
	Response: Adult to sign in diary to confirm completion.	Response: Complete task in homework book and hand in.
English	Hand out: Thursday Not to be handed in	Hand out: Thursday Due in: Monday
	Response: Adult to sign in diary to confirm completion.	Response: Complete task in homework book and hand in.
Topic	Given out half termly. Due date given with project.	

Any questions?

