KS2 - Maths Parent Workshop

FoxFederation

Nick Marsh – Maths lead

What we will cover today

FoxFederation

- How we teach maths at Fox
- Key concepts covered in Key Stage 2
- How you can support home

What is teaching for Mastery?

FoxFederation

What does it mean to Master something?

FoxFederation

- I know how to do it
- It becomes automatic and I don't need to think about it e.g. driving a car
- I'm really good at doing it
- I understand what I am doing
- I can show someone else how to do it.

What is teaching for mastery?

FoxFederation

Teach less but teach it better

Go slow to go fast

Go deep to build firm foundations - depth is simplicity, not complexity, so accessible for all

Whole class teaching – to maximise teacher input with additional pre-teaching/intervention for those who need it.

Revisiting key concepts throughout our curriculum

FoxFederation

Year 3

	Unit	Unit name
Autumn 1	1	Adding and subtracting across 10
	2	Numbers to 1,000
Autumn 2		
Spring 1	3	Right angles
	4	Manipulating the additive relationship and securing mental calculation
Spring 2	5	Column addition
	6	2, 4, 8 times tables
	7	Column subtraction
Summer 1	8	Unit fractions
Summer 2	9	Non-unit fractions
	10	Parallel and perpendicular sides in polygons
	11	Time

- Number and place value
- Number facts
- Addition and subtraction
- Geometry
- Other

Revisiting key concepts throughout our curriculum

FoxFederation

Year 4

	Unit	Unit name
Autumn 1	1	Review of column addition and subtraction
	2	Numbers to 10,000
Autumn 2	3	Perimeter
	4	3, 6, 9 times tables
Spring 1	5	7 times table and patterns
Spring 2	6	Understanding and manipulating multiplicative relationships
	7	Coordinates
Summer 1	8	Review of fractions
	9	Fractions greater than 1
Summer 2	10	Symmetry in 2D shapes
	11	Time
	12	Division with remainders

- Number and place value
- Number facts
- Addition and subtraction
- Multiplication and division
- Geometry
- Other

Revisiting key concepts throughout our curriculum

FoxFederation

Year 5

	Unit	Unit name
Autumn 1	1	Decimal fractions
	2	Money
Autumn 2	3	Negative numbers
	4	Short multiplication and short division
Spring 1	5	Area and scaling
Spring 2	6	Calculating with decimal fractions
	7	Factors, multiples and primes
Summer 1	8	Fractions
Summer 2	9	Converting units
	10	Angles

- Number and place value
- Number facts
- Addition and subtraction
- Multiplication and division
- Geometry
- Other

Revisiting key concepts throughout our curriculum

FoxFederation

Year 6

	Unit	Unit name
Autumn 1	1	Calculating using knowledge of structures (1)
	2	Multiples of 1,000
Autumn 2	3	Numbers up to 10,000,000
	4	Draw, compose and decompose shapes
Spring 1	5	Multiplication and division
	6	Area, perimeter, position and direction
Spring 2	7	Fractions and percentages
	8	Statistics
Summer 1		KS2 tests
Summer 2	9	Ratio and proportion
	10	Calculating using knowledge of structures (2)
	11	Solving problems with two unknowns
	12	Order of operations
	13	Mean average

- Number and place value
- Number facts
- Addition and subtraction
- Multiplication and division
- Geometry
- Other

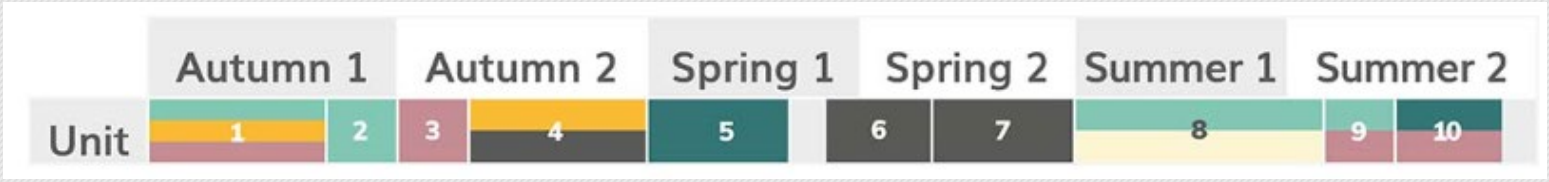
Revisiting key concepts throughout our curriculum

FoxFederation

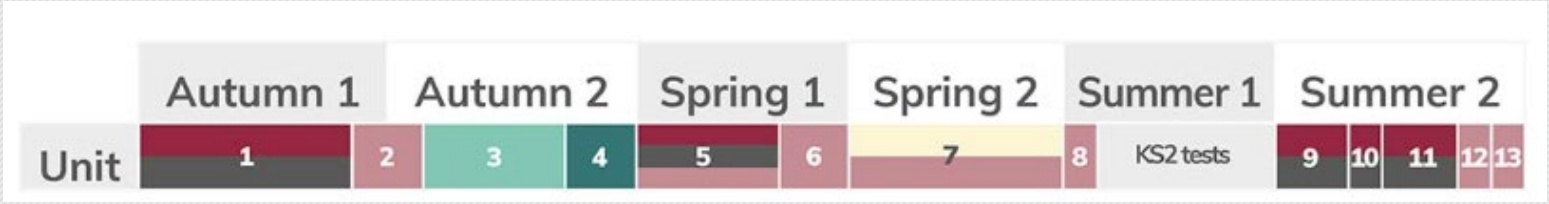
Year 3

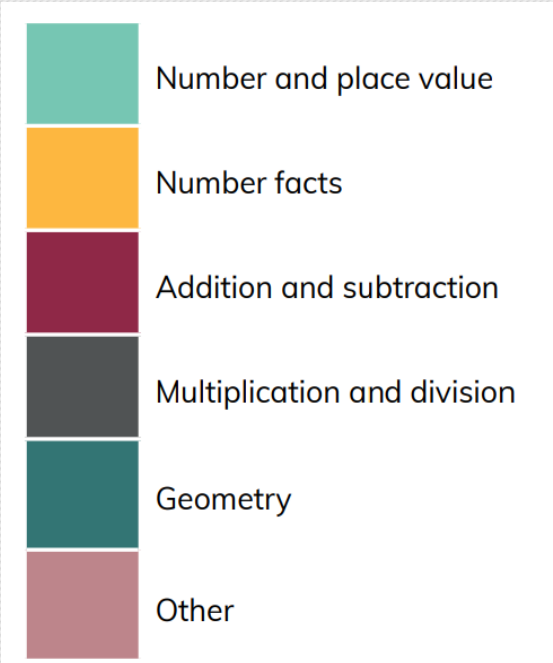
Year 4

Year 5



Year 6





How do we teach Maths at Fox?

FoxFederation

The children have 5 one hour Maths lessons per week.

We use a range of strategies, representations and resources to help children improve their understanding and mathematical structures.

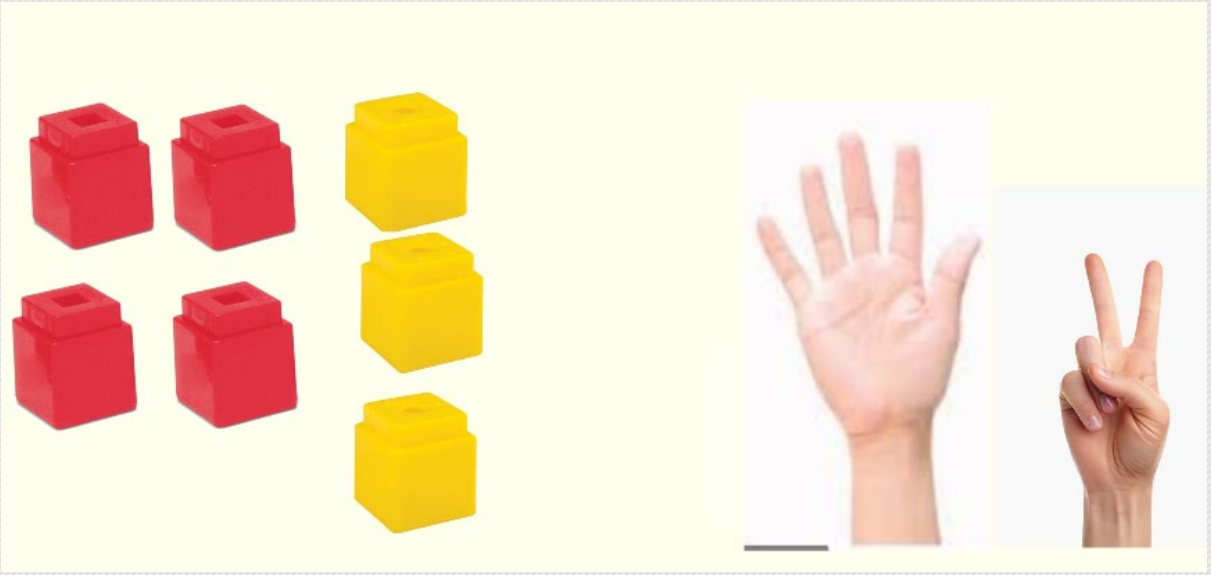
Concrete > Pictorial > Abstract

FoxFederation

If children play with mathematical objects before they are asked to solve problems with them, they are more successful and more creative.

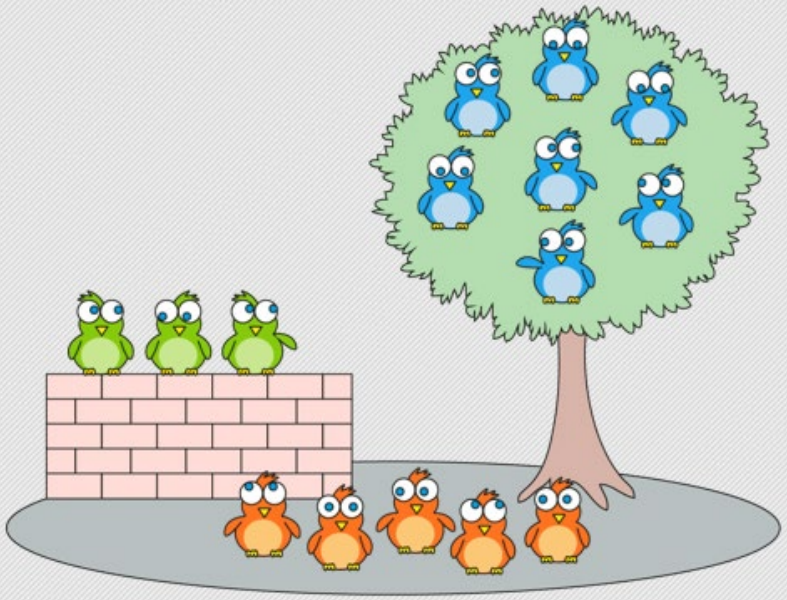
Representations – Concrete

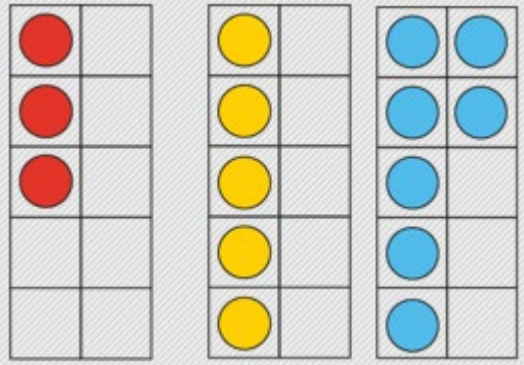
FoxFederation



Representations - Pictorial

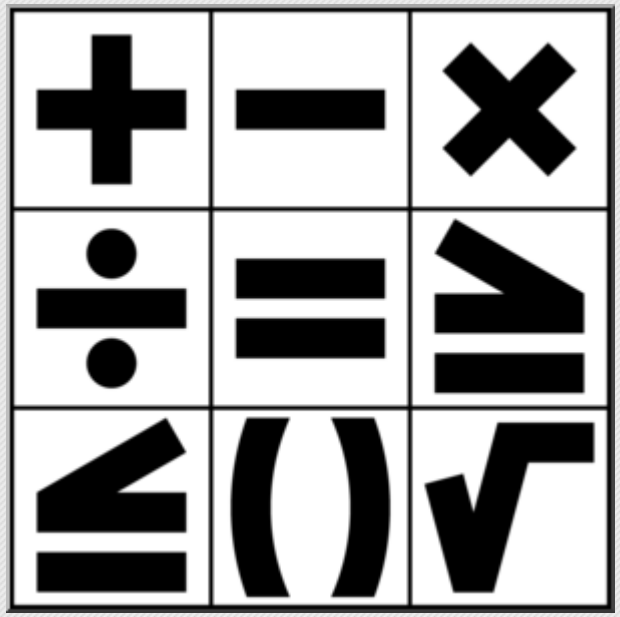
FoxFederation



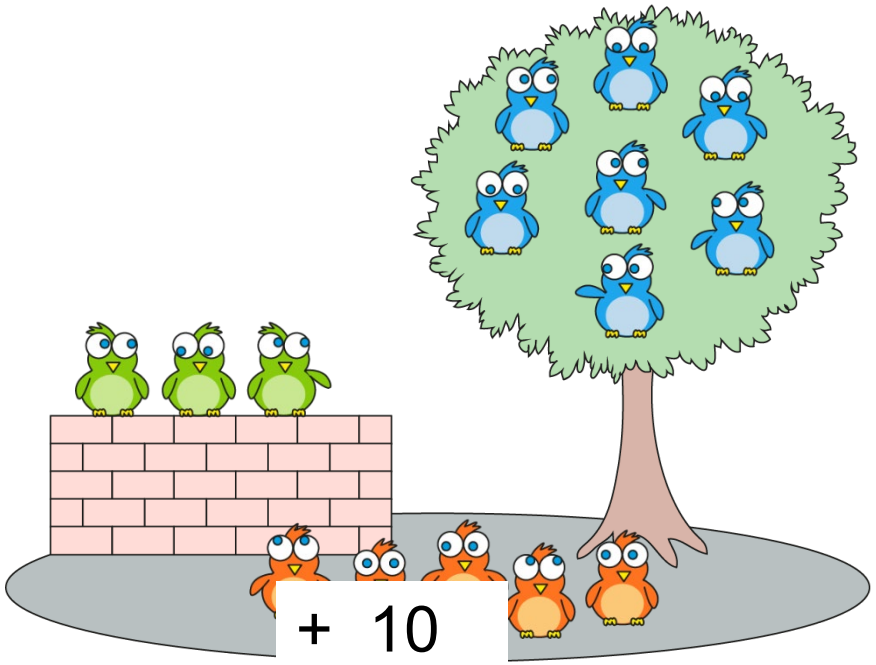


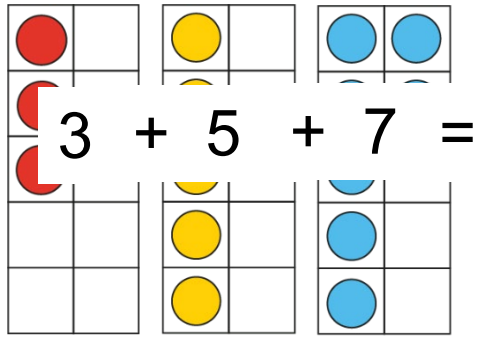
Abstract

FoxFederation



3 + 5 + 7





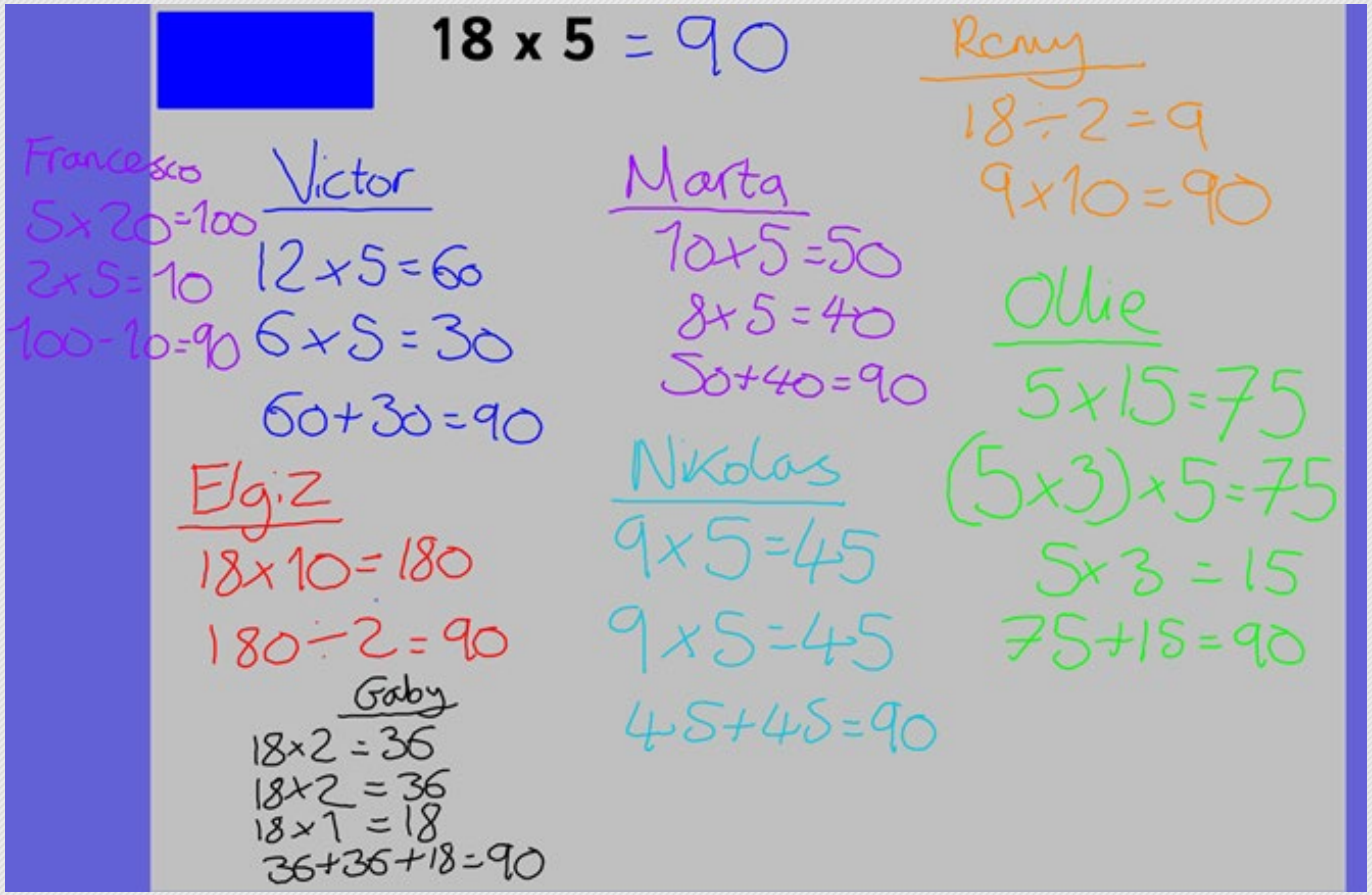
3 + 5 + 7 = 5 + 10

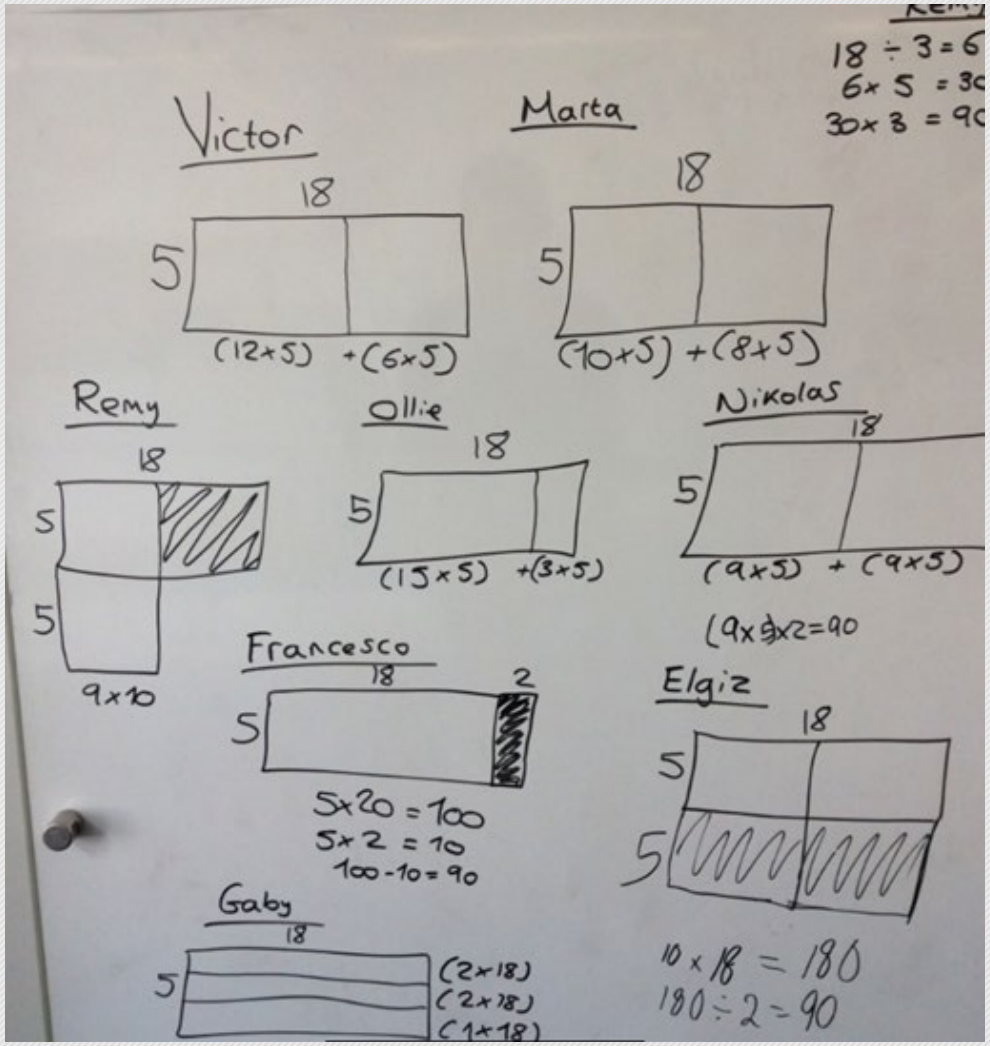
3 + 5 + 7

© Crown Copyright 2017

Going deep to build firm foundations

FoxFederation





How do we teach maths?

FoxFederation

There is a great emphasis on speaking and listening

- Vocabulary
- Questioning
- Mathematical Vocabulary
- Reasoning and explanation
- Pushing the children to answer in full sentences with sentence scaffolds.

This is an essential part of children showing they have mastered a concept.

Can they explain their understanding.

Reasoning

FoxFederation

Spot the mistake

0.23+1.62 = 3.92

$$\begin{array}{r} .23 \\ +\ 1.62 \\ \hline 3.92 \end{array}$$

This question in a little more tricky.
Can you work out why?

1.36 + 1.68 = _____

LO : To explain the relationship between multiples of three and multiples of six

$0 \times 3 = 0$	$0 \times 6 = 0$
$1 \times 3 = 3$	$1 \times 6 = 6$
$2 \times 3 = 6$	$2 \times 6 = 12$
$3 \times 3 = 9$	$3 \times 6 = 18$
$4 \times 3 = 12$	$4 \times 6 = 24$
$5 \times 3 = 15$	$5 \times 6 = 30$
$6 \times 3 = 18$	$6 \times 6 = 36$
$7 \times 3 = 21$	$7 \times 6 = 42$
$8 \times 3 = 24$	$8 \times 6 = 48$
$9 \times 3 = 27$	$9 \times 6 = 54$
$10 \times 3 = 30$	$10 \times 6 = 60$
$11 \times 3 = 33$	$11 \times 6 = 66$
$12 \times 3 = 36$	$12 \times 6 = 72$

What's the same and what is different about the three and six times table?

factor product

doubling

halving

© Crown Copyright 2019

Fluency - Key facts in Key Stage 2

FoxFederation

How do we teach maths?

FoxFederation

Fluency forms a key part of our teaching…but fluency is not just about speed.

It is about being **efficient, flexible and accurate.**

Mastery of times tables is a key focus of Key Stage 2.

Times Table - 12x12

144 facts

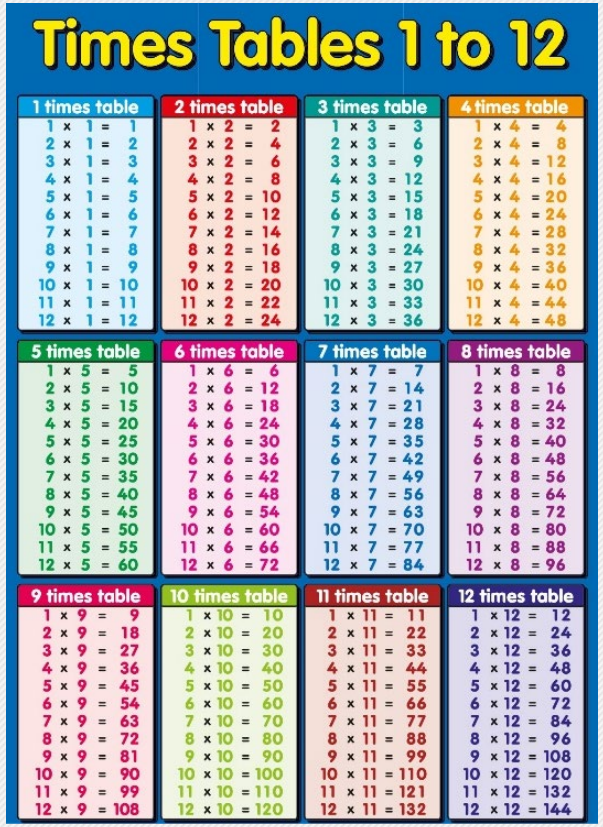
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
1	**1**	2	3	4	5	6	7	8	9	10	11	12
2	2	**4**	6	8	10	12	14	16	18	20	22	24
3	3	6	**9**	12	15	18	21	24	27	30	33	36
4	4	8	12	**16**	20	24	28	32	36	40	44	48
5	5	10	15	20	**25**	30	35	40	45	50	55	60
6	6	12	18	24	30	**36**	42	48	54	60	66	72
7	7	14	21	28	35	42	**49**	56	63	70	77	84
8	8	16	24	32	40	48	56	**64**	72	80	88	96
9	9	18	27	36	45	54	63	72	**81**	90	99	108
10	10	20	30	40	50	60	70	80	90	**100**	110	120
11	11	22	33	44	55	66	77	88	99	110	**121**	132
12	12	24	36	48	60	72	84	96	108	120	132	**144**

- Memorising facts
- Using and applying these facts.
- Making patterns and connections.
- Understanding mathematical laws.

Facts that children need to master

FoxFederation

Times tables



- Asking children to ‘memorise’ all of these facts will lead to cognitive overload.
- Children are unlikely to retain all this information.

How many facts do children have to learn?

FoxFederation

Times Table - 12x12

	1	2	3	4	5	6	7	8	9	10	11	12
1	**1**	2	3	4	5	6	7	8	9	10	11	12
2	2	**4**	6	8	10	12	14	16	18	20	22	24
3	3	6	**9**	12	15	18	21	24	27	30	33	36
4	4	8	12	**16**	20	24	28	32	36	40	44	48
5	5	10	15	20	**25**	30	35	40	45	50	55	60
6	6	12	18	24	30	**36**	42	48	54	60	66	72
7	7	14	21	28	35	42	**49**	56	63	70	77	84
8	8	16	24	32	40	48	56	**64**	72	80	88	96
9	9	18	27	36	45	54	63	72	**81**	90	99	108
10	10	20	30	40	50	60	70	80	90	**100**	110	120
11	11	22	33	44	55	66	77	88	99	110	**121**	132
12	12	24	36	48	60	72	84	96	108	120	132	**144**

144 facts

How many facts do children have to learn?

FoxFederation

Times Table - 12x12

	1	2	3	4	5	6	7	8	9	10	11	12
1	**1**	2	3	4	5	6	7	8	9	10	11	12
	4	6	8	10	12	14	16	18	20	22	24	
		9	12	15	18	21	24	27	30	33	36	
			16	20	24	28	32	36	40	44	48	
				25	30	35	40	45	50	55	60	
					36	42	48	54	60	66	72	
						49	56	63	70	77	84	
							64	72	80	88	96	
								81	90	99	108	
									100	110	120	
										121	132	
											144	

66 facts

commutative

$4 \times 6 = 24$

$6 \times 4 = 24$

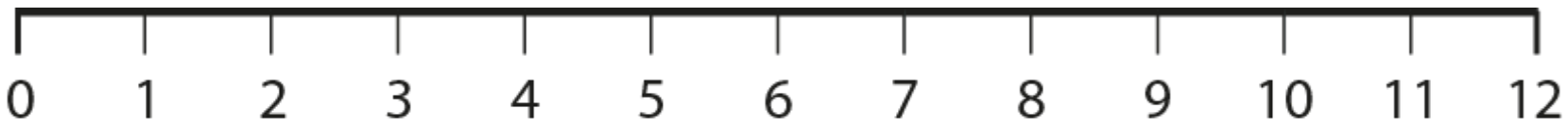
Fluency of times tables

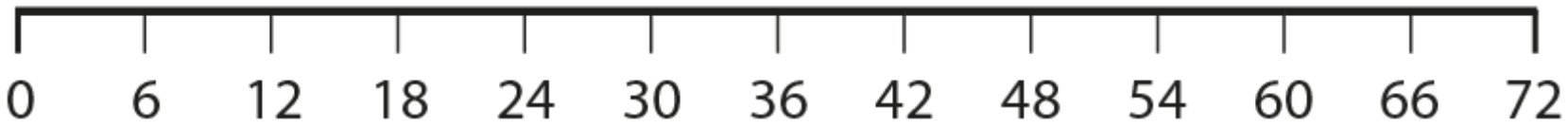
FoxFederation

NCETM
NATIONAL CENTRE FOR EXCELLENCE IN THE TEACHING OF MATHEMATICS

For embedded and deep learning of times tables they need to be more than rote learnt. This true fluency of number facts should be done through making connections between facts, spotting patterns alongside traditional conventional ways of teaching times tables.

LO : To explain the relationship between multiples of three and multiples of six





factor product

© Crown Copyright 2019

LO : To explain the relationship between multiples of three and multiples of six

What did you notice when we were all skip counting?

Number	**0**	1	2	**3**	4	5	**6**	7	8	**9**	10	11	**12**	13	14	**15**	16	17	**18**	19	20	**21**	22	23	**24**
Counting in 3s	✓			✓			✓			✓			✓			✓			✓			✓			✓
Counting in 6s	✓						✓						✓						✓						✓

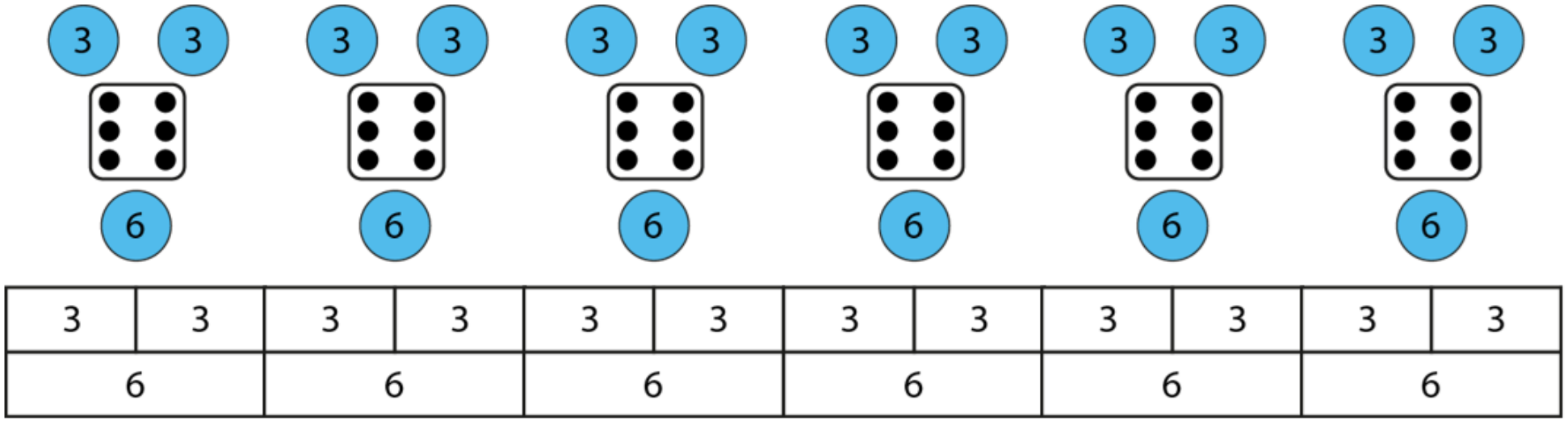
All of the numbers said by the sixes group are also said by the threes group.

Not all of the numbers said by the threes group are also said by the sixes group.

For every number said by the sixes group, the threes group says two numbers.

© Crown Copyright 2019

LO : To explain the relationship between multiples of three and multiples of six



For every _1_ group of six, there are _2_ groups of three.

groups of

© Crown Copyright 2019

LO : To explain the relationship between multiples of three and multiples of six

$0 \times 3 = 0$	$0 \times 6 = 0$
$1 \times 3 = 3$	$1 \times 6 = 6$
$2 \times 3 = 6$	$2 \times 6 = 12$
$3 \times 3 = 9$	$3 \times 6 = 18$
$4 \times 3 = 12$	$4 \times 6 = 24$
$5 \times 3 = 15$	$5 \times 6 = 30$
$6 \times 3 = 18$	$6 \times 6 = 36$
$7 \times 3 = 21$	$7 \times 6 = 42$
$8 \times 3 = 24$	$8 \times 6 = 48$
$9 \times 3 = 27$	$9 \times 6 = 54$
$10 \times 3 = 30$	$10 \times 6 = 60$
$11 \times 3 = 33$	$11 \times 6 = 66$
$12 \times 3 = 36$	$12 \times 6 = 72$

What's the same and what is different about the three and six times table?

factor product

doubling

halving

© Crown Copyright 2019

LO : To explain the relationship between multiples of three and multiples of six

$0 \times 3 = 0$	$0 \times 6 = 0$
$1 \times 3 = 3$	$1 \times 6 = 6$
$2 \times 3 = 6$	$2 \times 6 = 12$
$3 \times 3 = 9$	$3 \times 6 = 18$
$4 \times 3 = 12$	$4 \times 6 = 24$
$5 \times 3 = 15$	$5 \times 6 = 30$
$6 \times 3 = 18$	$6 \times 6 = 36$
$7 \times 3 = 21$	$7 \times 6 = 42$
$8 \times 3 = 24$	$8 \times 6 = 48$
$9 \times 3 = 27$	$9 \times 6 = 54$
$10 \times 3 = 30$	$10 \times 6 = 60$
$11 \times 3 = 33$	$11 \times 6 = 66$
$12 \times 3 = 36$	$12 \times 6 = 72$

Products in the six times table are also in the three times table

© Crown Copyright 2019

LO : To explain the relationship between multiples of three and multiples of six

Fill in the missing numbers

0	× 3 =	0	= 6 ×	0
2	× 3 =	6	= 6 ×	1
4	× 3 =	12	= 6 ×	2
6	× 3 =	18	= 6 ×	3
8	× 3 =	24	= 6 ×	4
10	× 3 =	30	= 6 ×	5
12	× 3 =	36	= 6 ×	6

factor product

What do you notice about the product of an even number and three?

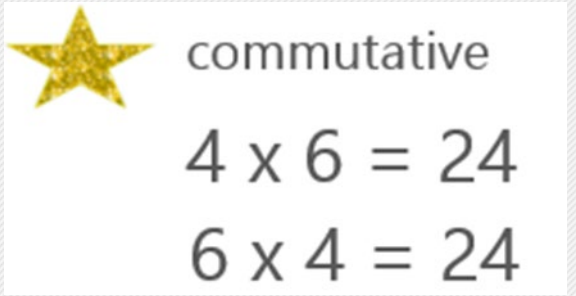
The product of an even number and three is a product in the six times table.

© Crown Copyright 2019

Fluency progression in times tables

FoxFederation

Year 2 - 2, 5 and 10s
Year 3 - 2, 4 and 8s
Year 4 - 3, 6 and 9…7…11 & 12



We are striving that only 6 facts have to be taught once the 3, 6 and 9 times tables have been taught.

Year 4 Multiplication Tables Check

FoxFederation

- The purpose of the MTC is to determine whether Year 4 pupils can recall their multiplication tables up to 12x12 fluently as outlined in the National Curriculum

- Takes place in June

What will it be like?

FoxFederation

- On screen check of 25 questions (computer/ipad).
- Your child will be able to answer 3 practice questions before taking the actual check.
- 6 seconds to answer each questions.
- It will take at most 5 minutes to complete.

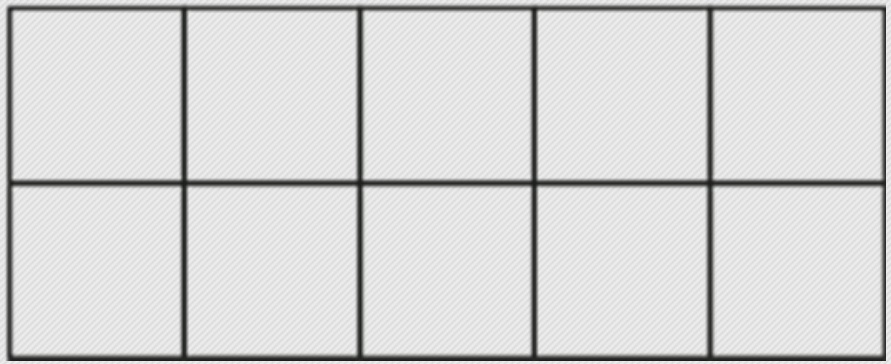
Timed practice through Sumdog. Can set the time to a longer amount and work your way down.

Key representation – tens frame

FoxFederation

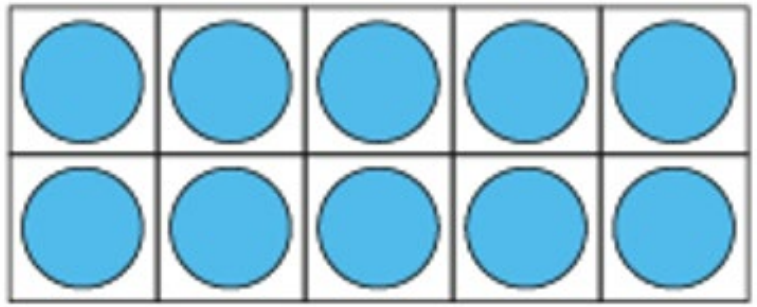
Tens frame

FoxFederation

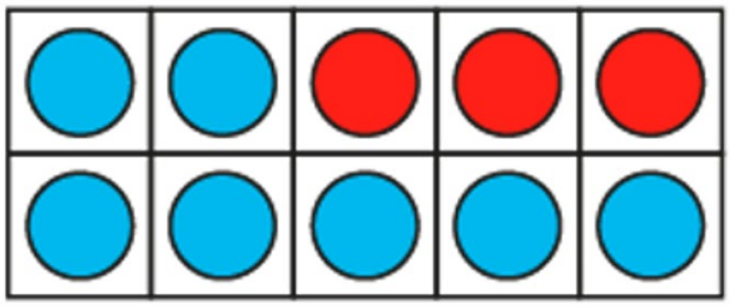


The tens frame Y1 to Y6 (some examples)

FoxFederation



Year 1

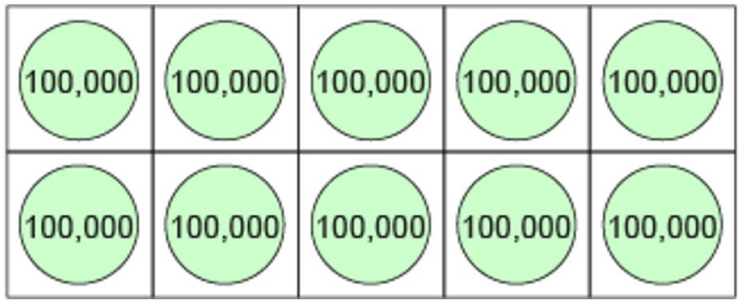


Year 2

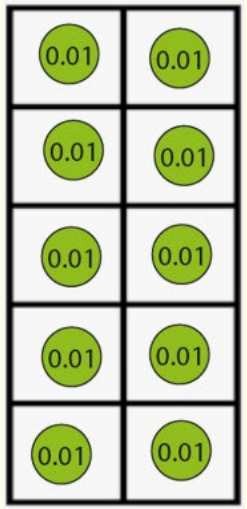
Year 3

Year 4

Year 5



Year 6



= 0.1 _____ hundredths are equivalent to one _____.

= 1 _____ tenths are equivalent to one _____.

© Crown Copyright 2017

Supporting at home

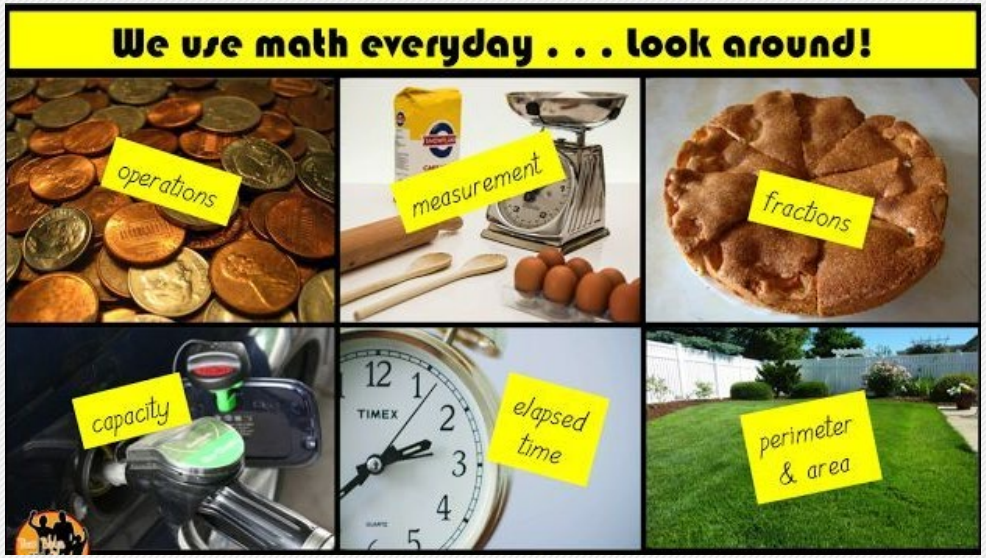
FoxFederation

How can you help?

FoxFederation

Maths skills can be developed at home by involving children in everyday activities such as baking or calculating time. This also develops their problem solving and reasoning skills!

Don’t underestimate yourself, or the power you have as a parent getting involved in your child’s learning!



How can you help?

FoxFederation

Positive mindset is very important!

You may find yourself from time to time saying ‘I was never good at Maths.’
Children will pick up and mirror this energy. We would advise parents to use positive language such as **‘It’s fine to make mistakes, we all do’** or **‘It’s ok that you find this tricky, let’s look through it together.’**

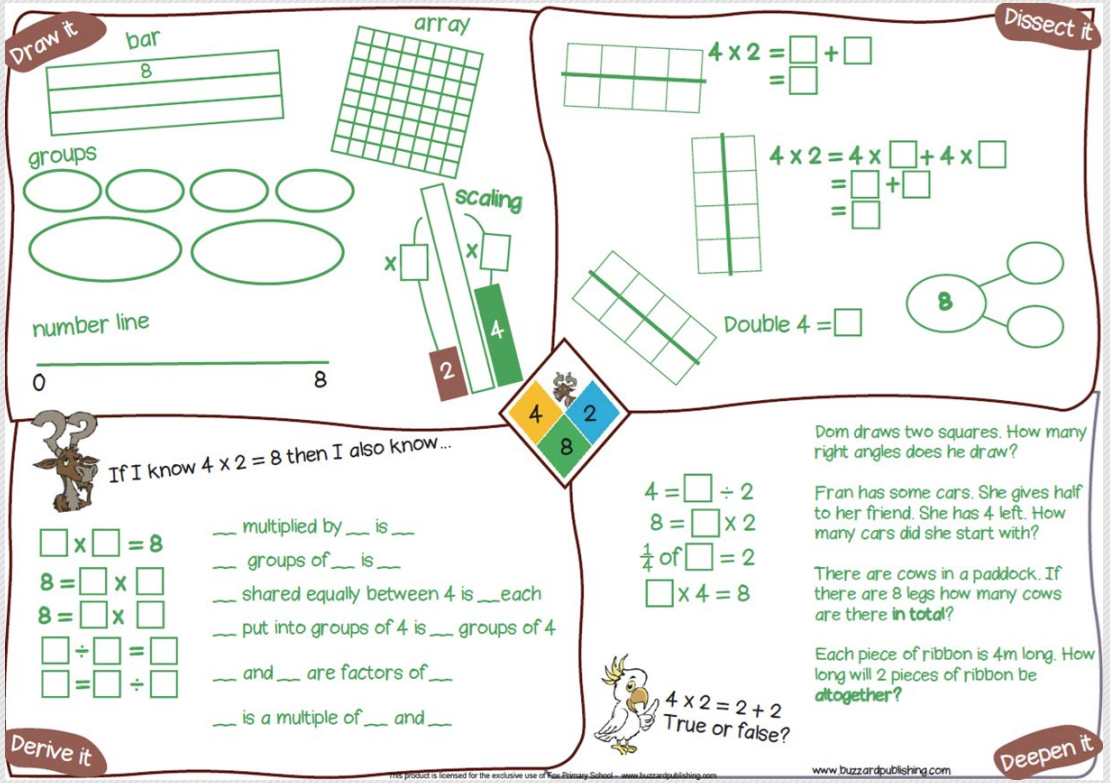
Positivity can go a long way to improving their attitude towards Maths!

How can you support fluency at home?

FoxFederation

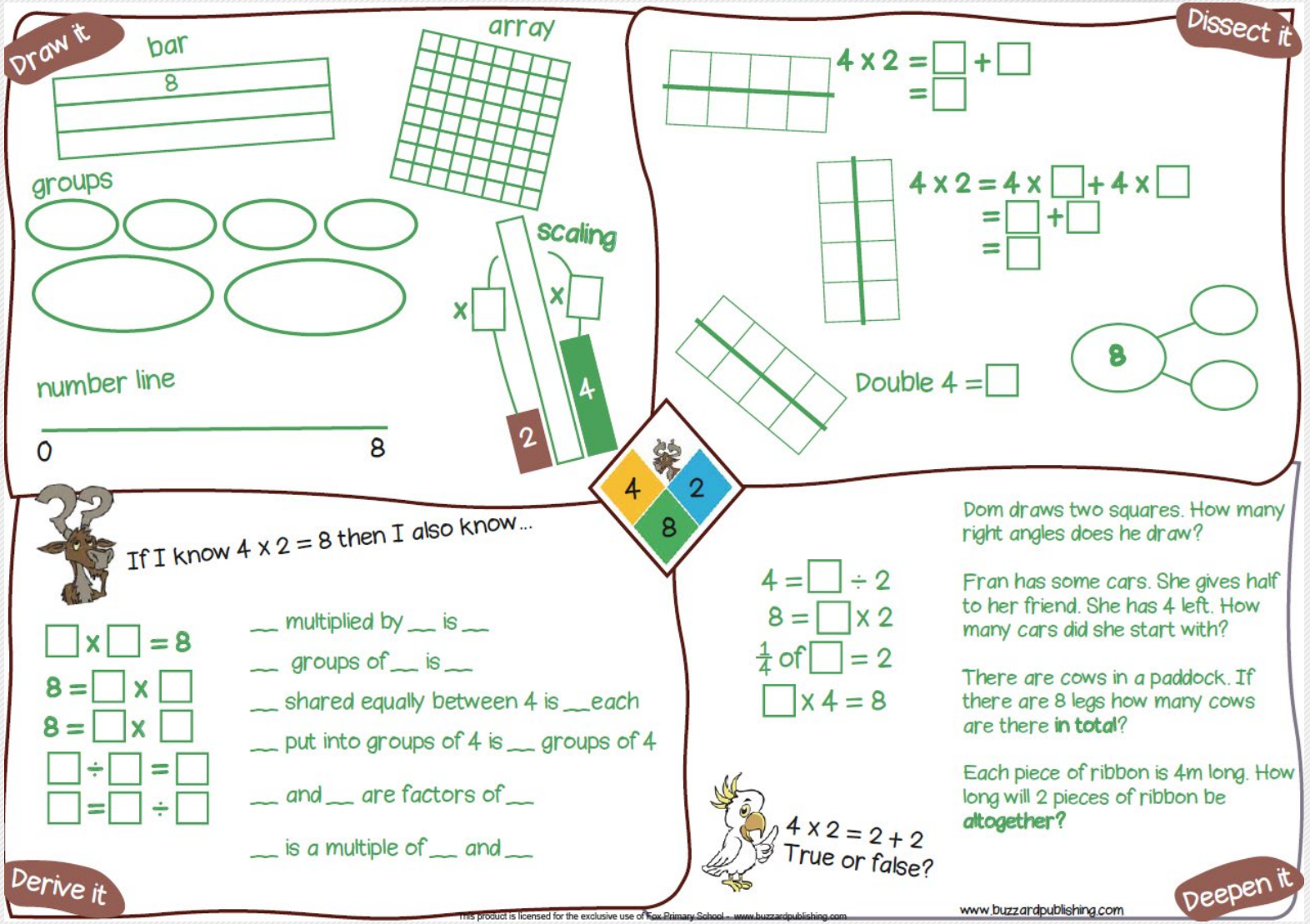
Lots of practise at home!

Short and regular (5 - 10 minutes per day)

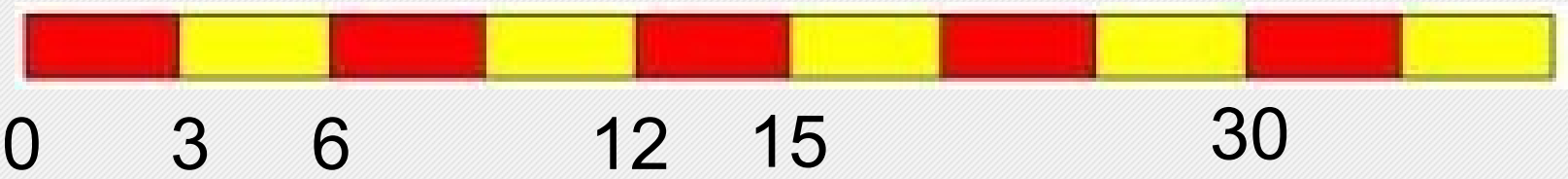


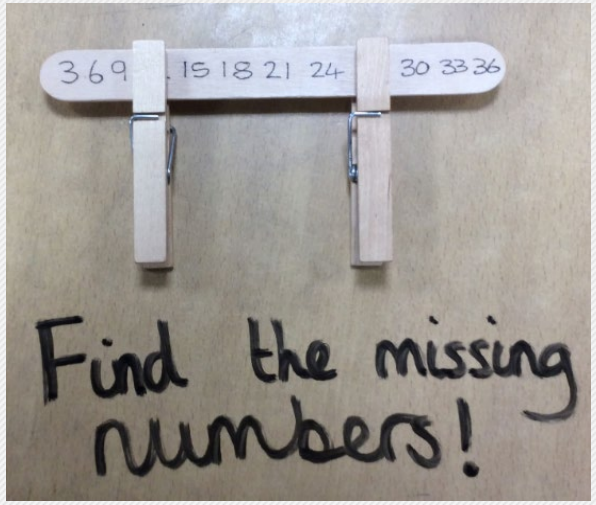
How can you support fluency at home?

FoxFederation



How can you support fluency at home?





0 x 3 = 0

1 x 3 = 3

2 x 3 = 6

3 x 3 =

4 x 3 =

5 x 3 = 15

6 x 3 =

7 x 3 =

8 x 3 =

9 x 3 =

10 x 3 = 30

11 x 3 =

12 x 3 =

How can you support fluency at home?

FoxFederation

Children are very good at practising certain things until they have mastered them. If they see it as meaningful, they will pay it the necessary attention…

How can you support fluency at home?

FoxFederation

Four in a row products

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

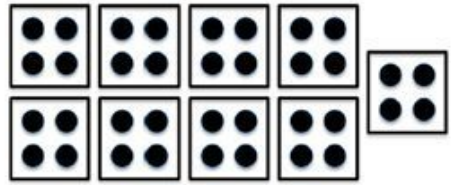
youcubed®

How can you support fluency at home?

FoxFederation

Maths Cards

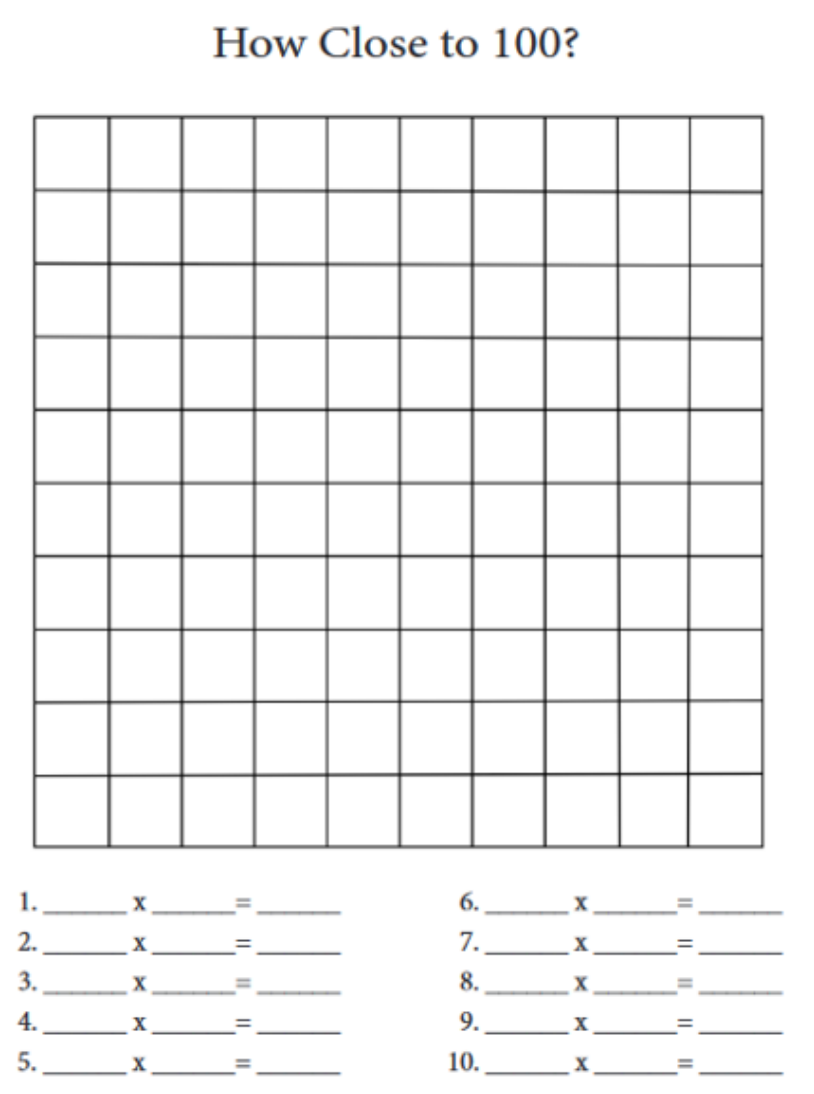
youcubed®

36	
9×4	4×9

How can you support fluency at home?

FoxFederation

How Close to 100



youcubed®

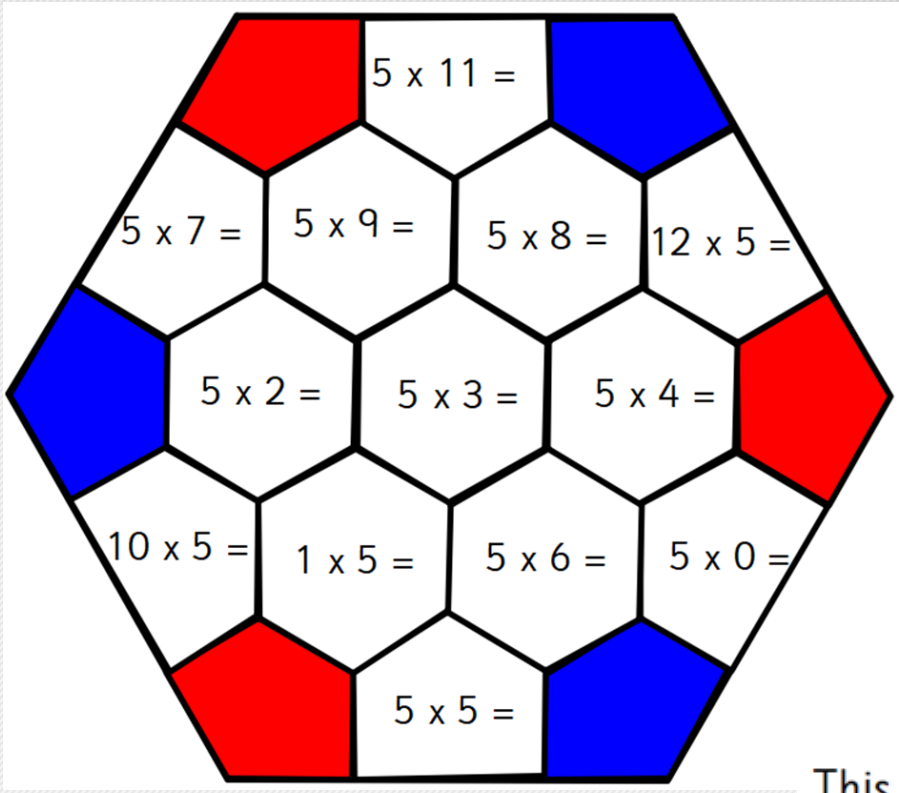
How can you support fluency at home?

FoxFederation

I see the factors that make the product ___.

How can you support fluency at home?

FoxFederation



Counter game

This is a game for two players. Each player has three counters, each set a different colour. Players choose to be red or blue and place one counter on each of their colours. Players take it in turns to move a counter by sliding it into an adjacent space or by jumping over their opponent's counter into an empty space. When a player lands on a calculation he/she must read and complete the calculation. The winner is the first player to get all three of his/her counters in a straight line.

How can you support fluency at home?

FoxFederation

FUNKEY MATHS®

Times tables can be fun!

The Funkey Maths cards come with full instructions: advice on how to start learning times tables, and ideas of fun maths games for primary school kids. Kids love playing with the Funkey Maths cards and they love the games. The whole family can join in. Helping your child succeed in maths really can be sociable and fun!

÷

44 ÷ 11 = 4
44 ÷ 4 = 11

x

4 x 11 = 44
11 x 4 = 44

Build for the future!

The Funkey Maths cards help children make richer connections between numbers, so they can master multiplication and division facts at the same time. This deepens mathematical understanding and develops the skills and confidence needed for future success in maths.

Apps and websites

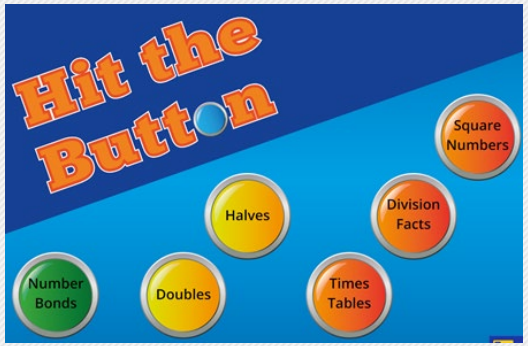
FoxFederation

Maths Seeds https://mathseeds.co.uk/

J2 Blast https://www.j2e.com/j2blast

youcubed®

https://www.youcubed.org/tasks/

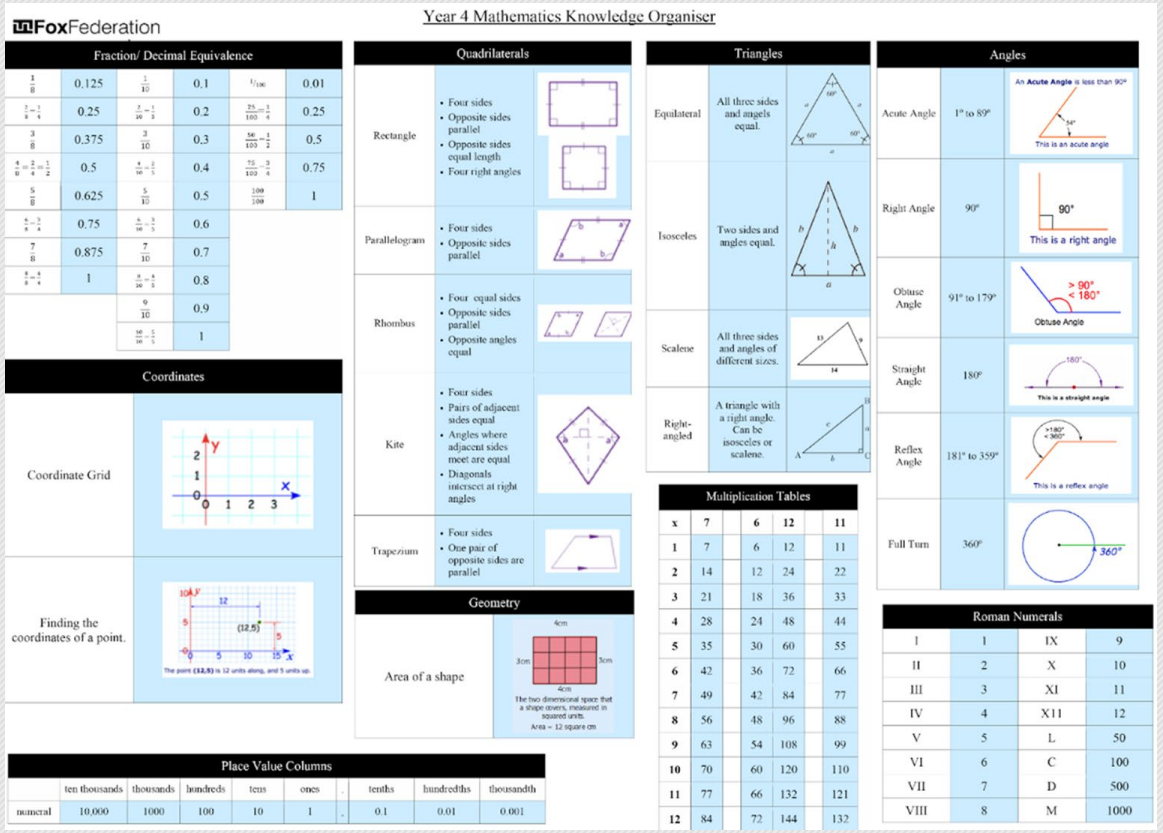


https://www.topmarks.co.uk/maths-games/hit-the-button

How can you support at home?

FoxFederation

Curriculum > Knowledge organisers



FoxFederation

Year 4 Mathematics Knowledge Organiser

Fraction/ Decimal Equivalence

1/8	0.125	1/10	0.1	1/100	0.01
2/8 = 1/4	0.25	2/10 = 1/5	0.2	25/100 = 1/4	0.25
3/8	0.375	3/10	0.3	50/100 = 1/2	0.5
4/8 = 2/4 = 1/2	0.5	4/10 = 2/5	0.4	75/100 = 3/4	0.75
5/8	0.625	5/10 = 1/2	0.5	100/100	1
6/8 = 3/4	0.75	6/10 = 3/5	0.6		
7/8	0.875	7/10	0.7		
8/8 = 4/4	1	8/10 = 4/5	0.8		
		9/10	0.9		
		10/10 = 1/1	1		

Quadrilaterals

Rectangle	• Four sides • Opposite sides parallel • Opposite sides equal length • Four right angles
Parallelogram	• Four sides • Opposite sides parallel
Rhombus	• Four equal sides • Opposite sides parallel • Opposite angles equal
Kite	• Four sides • Pairs of adjacent sides equal • Angles where adjacent sides meet are equal • Diagonals intersect at right angles
Trapezium	• Four sides • One pair of opposite sides are parallel

Triangles

Equilateral	All three sides and angels equal.
Isosceles	Two sides and angles equal.
Scalene	All three sides and angles of different sizes.
Right-angled	A triangle with a right angle. Can be isosceles or scalene.

Angles

Acute Angle	1° to 89°	An Acute Angle is less than 90°
Right Angle	90°	90° This is a right angle
Obtuse Angle	91° to 179°	> 90° < 180° Obtuse Angle
Straight Angle	180°	180° This is a straight angle
Reflex Angle	181° to 359°	>180° <360° This is a reflex angle
Full Turn	360°	360°

Coordinates

Coordinate Grid

Finding the coordinates of a point.

Geometry

Area of a shape

The two dimensional space that a shape covers, measured in squared units.
Area = 12 square cm

Multiplication Tables

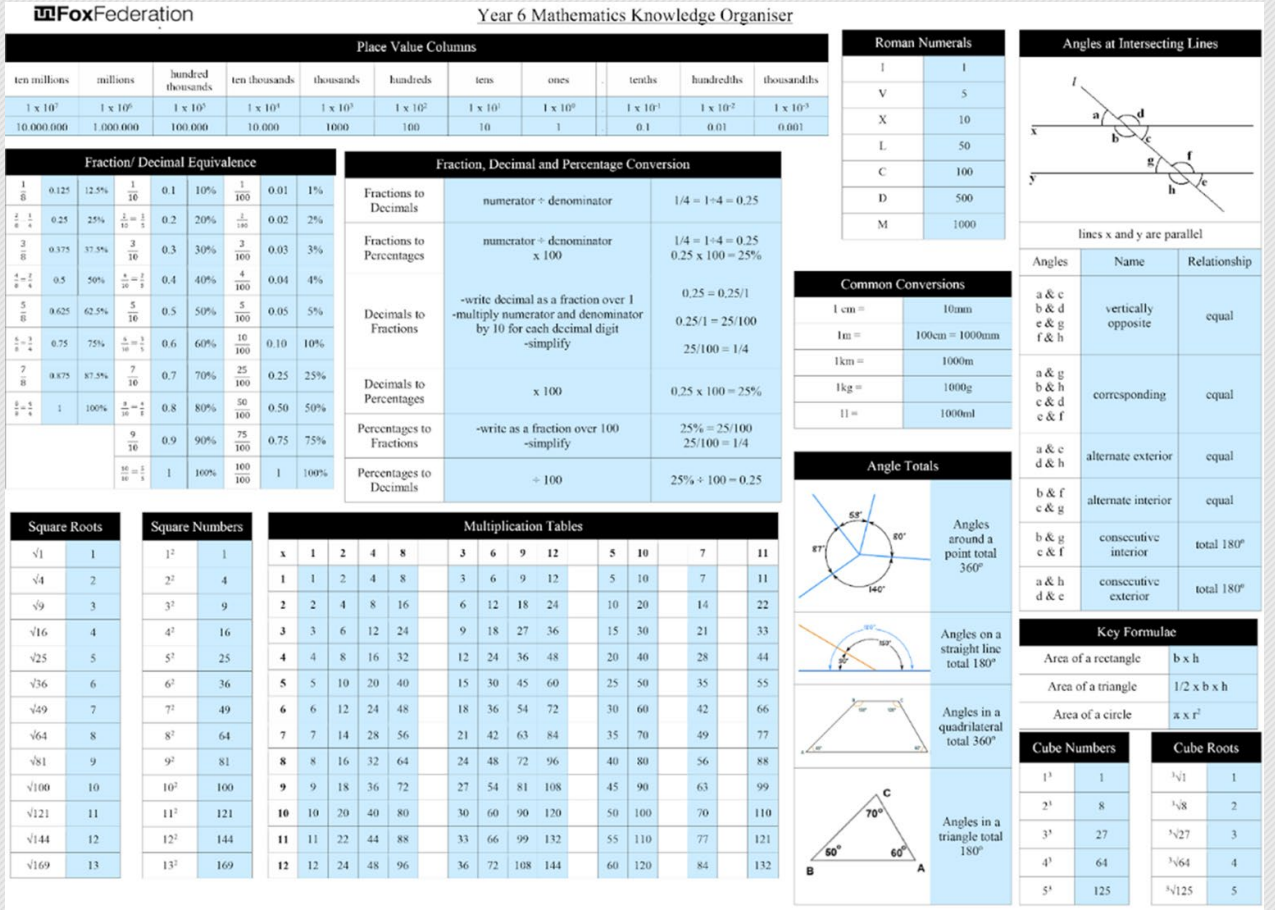
x	7	6	12	11
1	7	6	12	11
2	14	12	24	22
3	21	18	36	33
4	28	24	48	44
5	35	30	60	55
6	42	36	72	66
7	49	42	84	77
8	56	48	96	88
9	63	54	108	99
10	70	60	120	110
11	77	66	132	121
12	84	72	144	132

Roman Numerals

I	1	IX	9
II	2	X	10
III	3	XI	11
IV	4	X11	12
V	5	L	50
VI	6	C	100
VII	7	D	500
VIII	8	M	1000

Place Value Columns

	ten thousands	thousands	hundreds	tens	ones	.	tenths	hundredths	thousandth
numeral	10,000	1000	100	10	1	.	0.1	0.01	0.001



FoxFederation

Year 6 Mathematics Knowledge Organiser

Place Value Columns

ten millions	millions	hundred thousands	ten thousands	thousands	hundreds	tens	ones	.	tenths	hundredths	thousandths
1 x 10^7	1 x 10^6	1 x 10^5	1 x 10^4	1 x 10^3	1 x 10^2	1 x 10^1	1 x 10^0		1 x 10^{-1}	1 x 10^{-2}	1 x 10^{-3}
10,000,000	1,000,000	100,000	10,000	1000	100	10	1		0.1	0.01	0.001

Fraction/ Decimal Equivalence

1/8	0.125	12.5%	1/10	0.1	10%	1/100	0.01	1%
2/8 = 1/4	0.25	25%	2/10 = 1/5	0.2	20%	2/100	0.02	2%
3/8	0.375	37.5%	3/10	0.3	30%	3/100	0.03	3%
4/8 = 2/4 = 1/2	0.5	50%	4/10 = 2/5	0.4	40%	4/100	0.04	4%
5/8	0.625	62.5%	5/10 = 1/2	0.5	50%	5/100	0.05	5%
6/8 = 3/4	0.75	75%	6/10 = 3/5	0.6	60%	10/100	0.10	10%
7/8	0.875	87.5%	7/10	0.7	70%	25/100	0.25	25%
8/8 = 4/4	1	100%	8/10 = 4/5	0.8	80%	50/100	0.50	50%
			9/10	0.9	90%	75/100	0.75	75%
			10/10 = 1/1	1	100%	100/100	1	100%

Fraction, Decimal and Percentage Conversion

Fractions to Decimals	numerator ÷ denominator	1/4 = 1÷4 = 0.25
Fractions to Percentages	numerator ÷ denominator x 100	1/4 = 1÷4 = 0.25 0.25 x 100 = 25%
Decimals to Fractions	-write decimal as a fraction over 1 -multiply numerator and denominator by 10 for each decimal digit -simplify	0.25 = 0.25/1 0.25/1 = 25/100 25/100 = 1/4
Decimals to Percentages	x 100	0.25 x 100 = 25%
Percentages to Fractions	-write as a fraction over 100 -simplify	25% = 25/100 25/100 = 1/4
Percentages to Decimals	÷ 100	25% ÷ 100 = 0.25

Roman Numerals

I	1
V	5
X	10
L	50
C	100
D	500
M	1000

Common Conversions

1 cm =	10mm
1m =	100cm = 1000mm
1km =	1000m
1kg =	1000g
1l =	1000ml

Angles at Intersecting Lines

lines x and y are parallel

Angles	Name	Relationship
a & c b & d e & g f & h	vertically opposite	equal
a & g b & h c & d e & f	corresponding	equal
a & e d & h	alternate exterior	equal
b & f c & g	alternate interior	equal
b & g c & f	consecutive interior	total 180°
a & h d & e	consecutive exterior	total 180°

Angle Totals

Angles around a point total 360°	58° 80° 87° 140°
Angles on a straight line total 180°	30° 150°
Angles in a quadrilateral total 360°	
Angles in a triangle total 180°	C 70° 60° 60° B A

Key Formulae

Area of a rectangle	b x h
Area of a triangle	1/2 x b x h
Area of a circle	π x r^2

Square Roots

√1	1
√4	2
√9	3
√16	4
√25	5
√36	6
√49	7
√64	8
√81	9
√100	10
√121	11
√144	12
√169	13

Square Numbers

1^2	1
2^2	4
3^2	9
4^2	16
5^2	25
6^2	36
7^2	49
8^2	64
9^2	81
10^2	100
11^2	121
12^2	144
13^2	169

Multiplication Tables

x	1	2	4	8	3	6	9	12	5	10	7	11
1	1	2	4	8	3	6	9	12	5	10	7	11
2	2	4	8	16	6	12	18	24	10	20	14	22
3	3	6	12	24	9	18	27	36	15	30	21	33
4	4	8	16	32	12	24	36	48	20	40	28	44
5	5	10	20	40	15	30	45	60	25	50	35	55
6	6	12	24	48	18	36	54	72	30	60	42	66
7	7	14	28	56	21	42	63	84	35	70	49	77
8	8	16	32	64	24	48	72	96	40	80	56	88
9	9	18	36	72	27	54	81	108	45	90	63	99
10	10	20	40	80	30	60	90	120	50	100	70	110
11	11	22	44	88	33	66	99	132	55	110	77	121
12	12	24	48	96	36	72	108	144	60	120	84	132

Cube Numbers

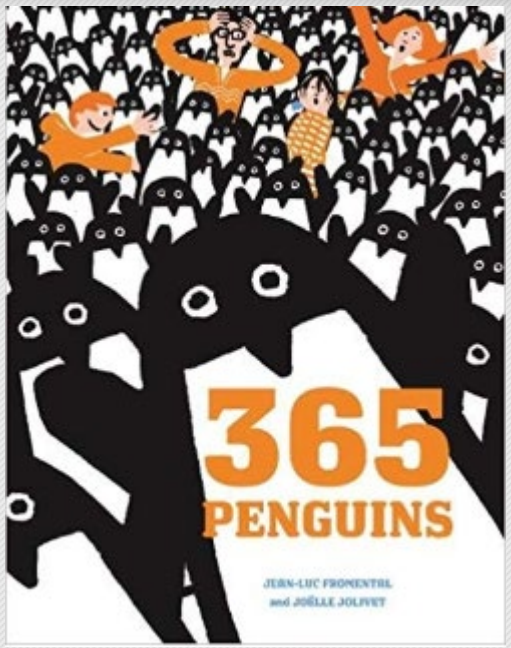
1^3	1
2^3	8
3^3	27
4^3	64
5^3	125

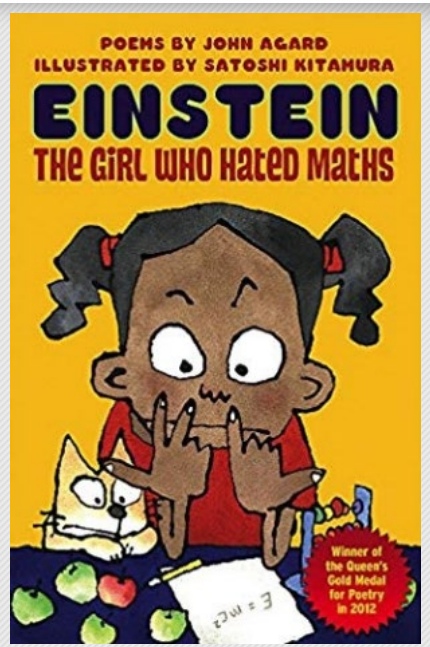
Cube Roots

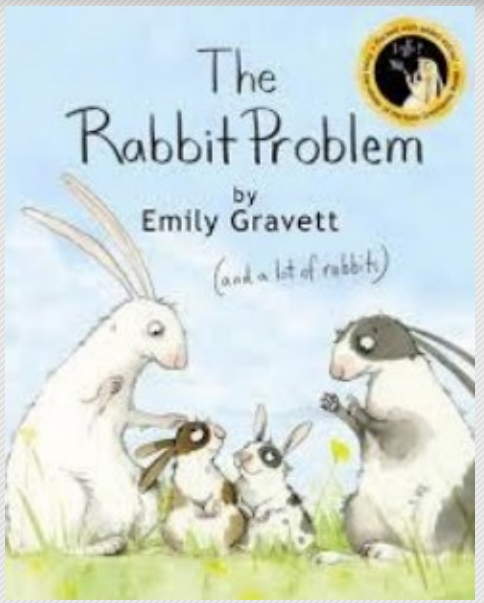
$\sqrt[3]{1}$	1
$\sqrt[3]{8}$	2
$\sqrt[3]{27}$	3
$\sqrt[3]{64}$	4
$\sqrt[3]{125}$	5

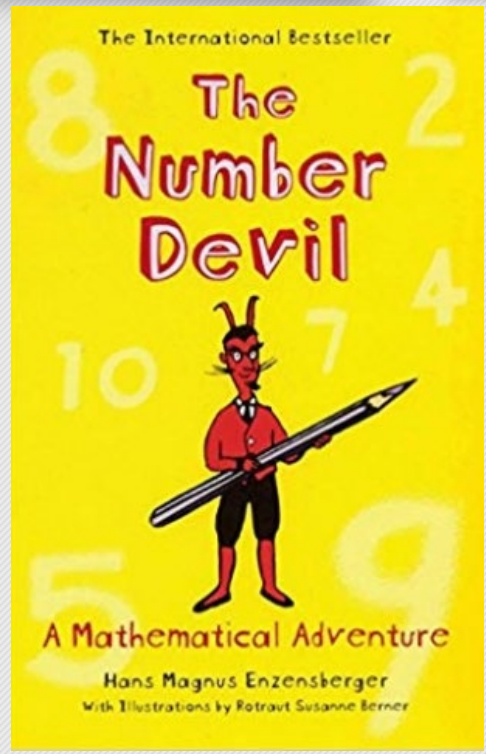
Maths books

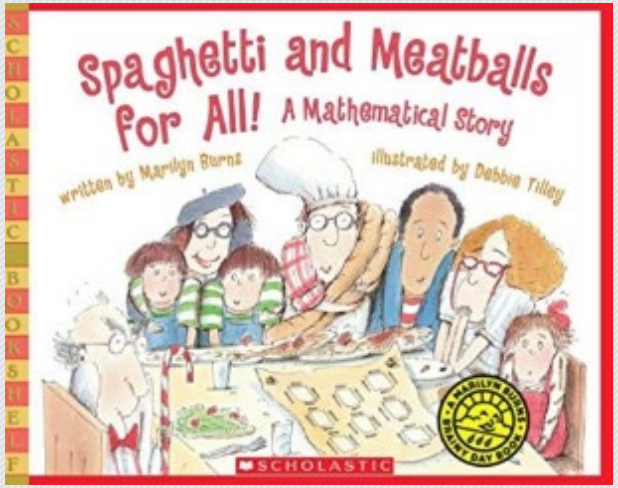
FoxFederation

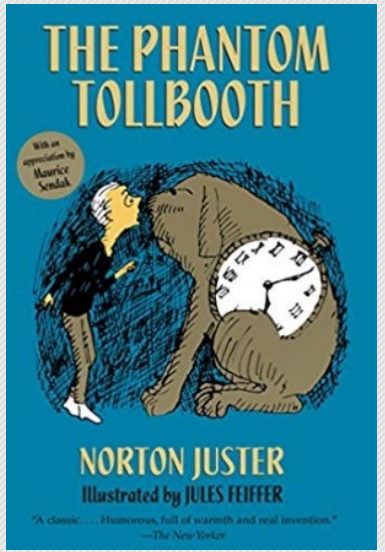








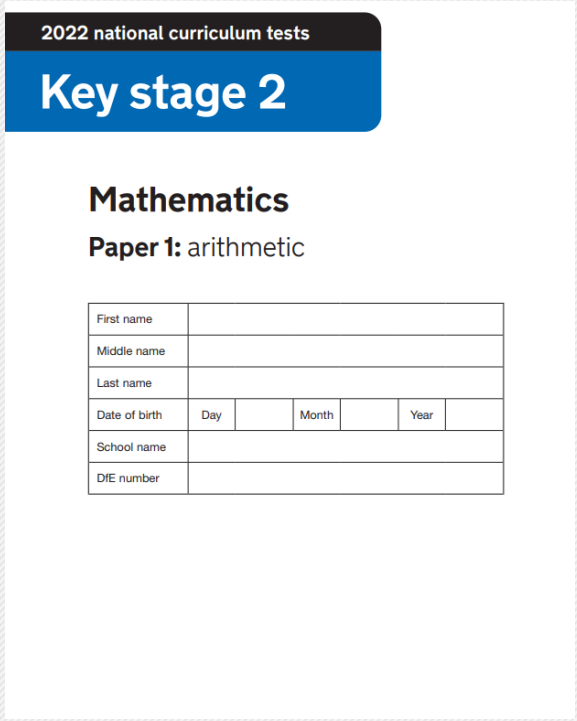




KS2 SATs (Year 6)

FoxFederation

In May, the children will take the Key Stage 2 SATs.

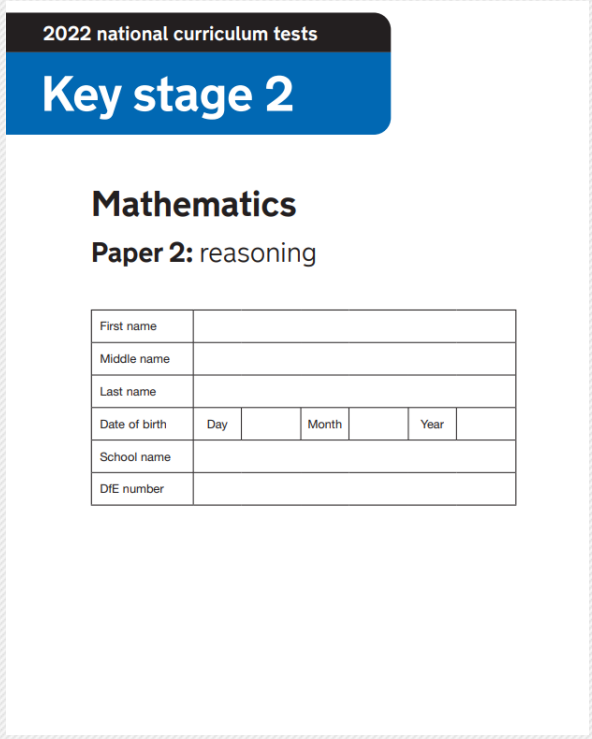

2022 national curriculum tests

Key stage 2

Mathematics

Paper 1: arithmetic

First name						
Middle name						
Last name						
Date of birth	Day		Month		Year	
School name						
DfE number						

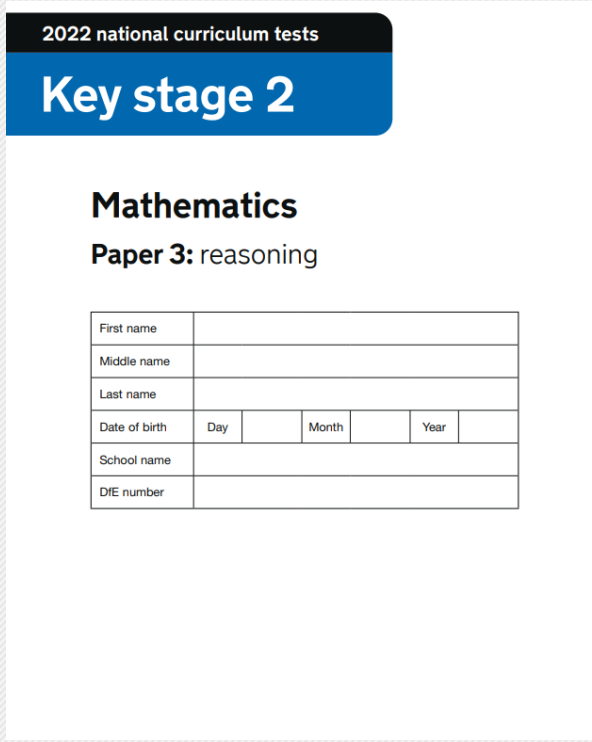

2022 national curriculum tests

Key stage 2

Mathematics

Paper 2: reasoning

First name						
Middle name						
Last name						
Date of birth	Day		Month		Year	
School name						
DfE number						


2022 national curriculum tests

Key stage 2

Mathematics

Paper 3: reasoning

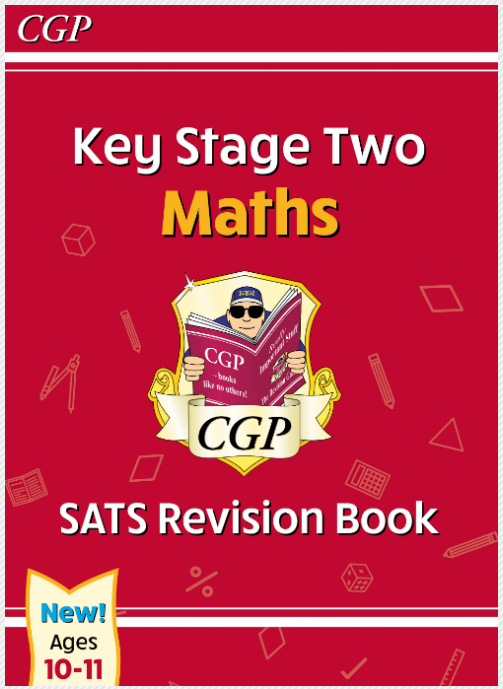
First name						
Middle name						
Last name						
Date of birth	Day		Month		Year	
School name						
DfE number						

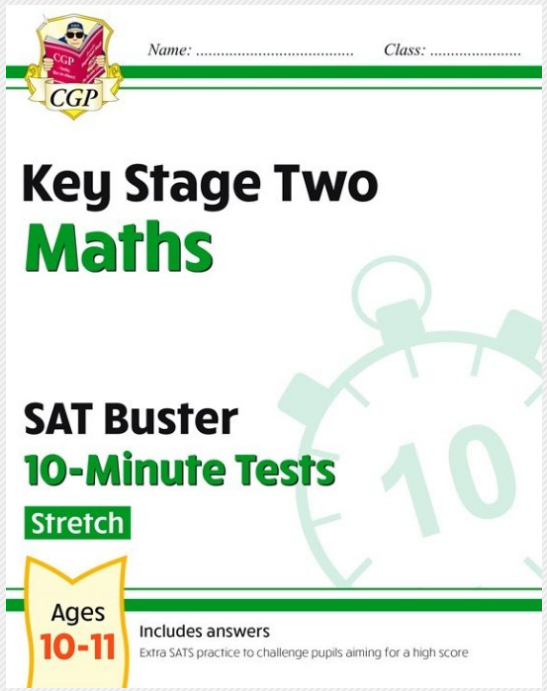
Tuesday 9th May to Friday 12th May.

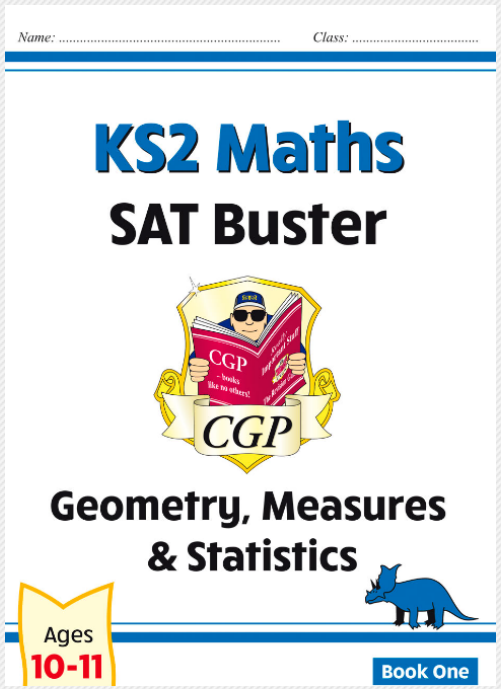
KS2 SATs (Year 6) – How to prepare

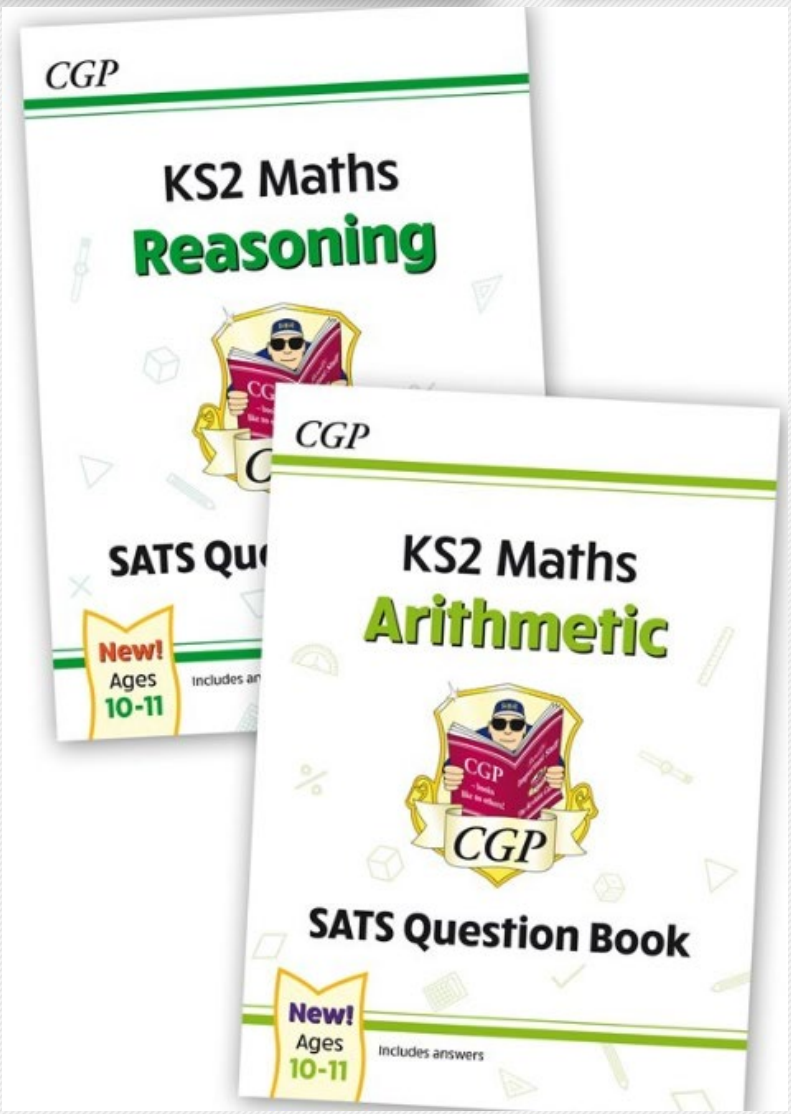
FoxFederation

Daily practice in CGP books.









How can you support fluency at home?

FoxFederation

Supporting maths at home

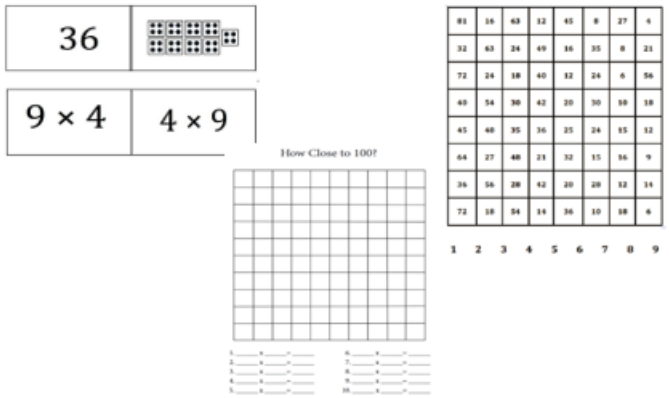
Useful online resources:

- Sumdog
- Nrich Maths - Can locate challenges appropriate for 7-11 years
  https://nrich.maths.org/9084
- Top Marks Maths Games -
  https://www.topmarks.co.uk/Search.aspx?Subject=16
- J2 Blast
  https://www.j2e.com/j2blast
- You cubed
  https://www.youcubed.org/tasks/
- Maths Seeds
  https://mathseeds.co.uk/

Suggested games and resources:

- Any boardgame game including numbers or counting
- Uno (used as timestable factors to make their product

- Games ideas on Youcubed (e.g four in a row products,



Maths based books:

https://nrich.maths.org/14113

https://nrich.maths.org/14116

https://nrich.maths.org/14119

How can you support maths at home?

Calculating - Opportunities to discuss multiplication and division facts

- Laying the table - "We each have a knife, a fork and a spoon, but _____ is also coming to dinner, how many pieces of cutlery will now be on the table"
- Corresponding division facts to multiplication tables…."There are 4 biscuits - you and share them equally/halve them - how many will we get each?"
- Play games which include numbers (card games, memory games like pairs, board games etc.)
- Shoes (other things in pairs) to develop two times tables - "There are 6 pairs of shoes, how many shoes are there altogether?"
- Can also do this for things in other times tables…. "There are 6 people in this room how many fingers are there altogether?"
- Monthly calendar - how many days are left in this month? How many days are left until ___'s birthday?

Geometry:

- Look for shapes in the home, name them, compare their properties, "I know that's a rectangle because it has two pairs of equal sides".
- Discuss weight/mass through cooking and baking.
- Helping to measure things, family member's heights, discussing whether it would more appropriate to measure things in mm, cm, metres, km
- Talk about positioning/orientation of objects - under, over, on top of, below, next to, opposite to, behind, left to, right to etc. and playing games like Battleships so children have to use positional language.
- Have a monthly calendar to cross off days, discuss today's date.

How can you support maths in the environment (walking home, in the park and in the shops?

- So we saw 2 red cars and 3 blue cars. "What percentage of the the cars were blue?"
- "I see four buses, how many wheels are there on those buses altogether?"
- "There are 8 cars parked there. If a quarter of them leave, how many will be left?"
- In shops, show children money, how you are paying. "If I pay with this, how much change will I get?"…. "If I paid for this using only 20 pence pieces, how many coins would I need?"