Key Ideas for Year 5

Supporting your child in maths

- read, write, order and compare numbers to at least 1 million and numbers with up to three decimal places, determine the value of each digit
- interpret negative numbers in context, counting forwards and backwards
- round any number up to a million to a power of 10 and decimals with two decimal places to the nearest whole or tenth
- add and subtract whole numbers with more than four-digits, including using formal written methods
- identify prime numbers to 100 and recall those to 19, awareness of prime factors and non-prime numbers
- short multiplication and division of four-digit by a one-digit and long multiplication of four-digit by two-digit number
- multiply and divide whole numbers and those involving decimals by 10, 100 and 1000
- compare, order, add and subtract fractions whose denominators are all multiples of the same number
- understand that per cent relates to "number of parts per 100", and write percentages as a fraction with denominator 100, and as a decimal
- multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams
- convert different units of metric measures;
- understand and use equivalences between metric and imperial units
- calculate the perimeter of composite rectilinear and the area of rectangles using standard units
- given angles and measure them in degrees (°) including acute, obtuse and reflex angles
- distinguish between regular and irregular polygons based on reasoning about equal sides and angles
- **solve number problems and practical problems involving these ideas**

A booklet for year 5 parents

Help your child with mathematics

Fun activities to do at home

How much?

♦ While shopping, point out an item costing less than £1.

♦ Ask your child to work out in their head the cost of 3 items.

♦ Ask them to guess first.
   See how close they come.

♦ If you see any items labelled, for example, '2 for £3.50', ask them to work out the cost of 1 item for you, and to explain how they got the answer.

Times tables

Say together the six times table forwards, then backwards. Ask your child questions, such as:

Nine sixes?	How many sixes in 42?
Six times four?	Forty-eight divided by six?
Three multiplied by six?	Six times what equals sixty?

Repeat with the seven, eight and nine times tables.

Decimal number plates

♦ Each choose a car number plate with three digits.

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♦ Choose two of the digits, e.g. 4 and 6. Make the smallest and largest numbers you can, each with 1 decimal places, e.g. 4.6 and 6.4.
♦ Now find the difference between the two decimal numbers, e.g. 6.4 – 4.6 = 1.8.
♦ Whoever makes the biggest difference scores 10 points.
♦ The person with the most points wins.

Play the game again, but this time score 10 points for the smallest difference, or 10 points for the biggest total.

Finding areas and perimeters

Perimeter = distance around the edge of a shape
Area of a rectangle = length x breadth (width)

♦ Collect 5 or 6 used envelopes of different sizes.
♦ Ask your child to estimate the perimeter of each one to the nearest centimetre. Write the estimate on the back.
♦ Now measure. Write the estimate next to the measurement.
♦ How close did your child get?
♦ Now estimate then work out the area of each envelope.
♦ Were perimeters or areas easier to estimate? Why?

You could do something similar using an old newspaper, e.g.

♦ Work out which page has the biggest area used for photographs.
♦ Choose a page and work out the total area of news stories or adverts on that page.

Tables

Make a times-table grid like this.

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

♦ Shade in all the tables facts that your child knows, probably the 1s, 2s, 3s, 4s, 5s and 10s.
♦ Some facts appear twice, e.g. 7 x 3 and 3 x 7, so cross out one of each.
♦ Are you surprised how few facts are left?
♦ There might only be 10 facts to learn. So take one fact a day and make up a silly rhyme together to help your child to learn it, e.g. *nine sevens are sixty-three, let's have lots of chips for tea!*

Telephone challenges

♦ Challenge your child to find numbers in the telephone directory where the digits add up to 42.
♦ Find as many as possible in 10 minutes.
♦ On another day, see if they can beat their previous total.

Telephone: 01264 738 281

Target 1000

♦ Roll a dice 6 times.
♦ Use the six digits to make two three-digit numbers.
♦ Add the two numbers together.
♦ How close to 1000 can you get?
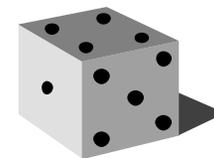
Line it up

You need a ruler marked in centimetres and millimetres.

♦ Use the ruler to draw 10 different straight lines on a piece of paper.

♦ Ask your child to estimate the length of each line and write the estimate on the line.

♦ Now give them the ruler and ask them to measure each line to the nearest millimetre.

♦ Ask them to write the measurement next to the estimate, and work out the difference.

♦ A difference of 5 millimetres or less scores 10 points. A difference of 1 centimetre or less scores 5 points.

♦ How close to 100 points can she get?

My estimate 8.5 cm

Guess my number

♦ Choose a number between 0 and 1 with one decimal place, e.g. 0.6.

♦ Challenge your child to ask you questions to guess your number. You may only answer 'Yes' or 'No'. For example, he could ask questions like 'Is it less than a half?'

♦ See if he can guess your number in fewer than 5 questions.

♦ Now let your child choose a mystery number for you to guess.

Extend the game by choosing a number with one decimal place between 1 and 10, e.g. 3.6. You may need more questions!

Times tables

Ask your child a different times-table fact every day,

e.g. *What is 6 times 8? Can you use this to work out 12 x 8?*

and: *What is 48 divided by 6?*

Car numbers

♦ Try reading a car number as a measurement in centimetres, then converting it to metres, e.g. 456cm, which is 4.56m, or 4m and 56cm.

♦ Try this with car numbers that have zeros in them, e.g. 307cm, which is 3.07m or 3m and 7cm; 370cm, which is 3.7m, or 3m and 70cm. These are harder!

♦ Choose a car number.

♦ You may add or subtract 10, 20, 30, 40, 50, 60, 70, 80 or 90.

♦ Try to get as close as possible to 555.

♦ Who can get closest during a week?

Dicey subtractions

♦ Take turns to roll a dice twice.

♦ Fill in the missing boxes.

$$400\square - 399\square$$
e.g. $4002 - 3994$
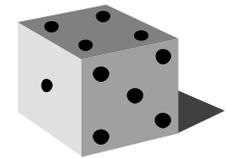
♦ Count on from the smaller to the larger number, e.g *3995, 3996, 3997, 3998, 3999, 4000, 4001, 4002.*

♦ You counted on 8, so you score 8 points.

♦ Keep a running total of your score.

♦ The first to get 50 or more points wins.

Dicey division

For this game you need a 1–100 board
(a snakes and ladders board will do),
a dice and 20 coins or counters.

♦ Take turns.

♦ Choose a two-digit number. Roll a dice. If you roll 1, roll again.

♦ If your two-digit number divides exactly by the dice number, put a coin on your chosen two-digit number. Otherwise, miss that turn.

♦ The first to get 10 counters on the board wins.