



Concrete – Pictorial – Abstract

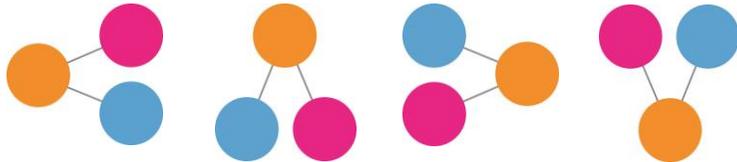
Concrete: Things you can pick up and move, for example dice, counters, shells, pebbles, straws.

Pictorial: A picture to represent mathematics, such as a calculation (printed in books or drawn).

Abstract: Numbers (1, 2, 3, 4) and symbols (+, -, x, ÷, <, >, =).

Part whole model

If you know two values, you can always find the third.



Vocabulary

Find lots of different words to say the same thing, for example add, more, increase, plus.

Problem solving

Problem solving usually involves the bar model. Encourage children to answer questions using full sentences. The bar model is usually used when solving problems.

How you can help:

Ask your child what they know about a particular number. For example, here are some facts about 12:

- It is an even number.
- It comes after 11 and before 13.
- I can write it in numbers and words.
- I can make it using 1 ten and 2 ones.
- It is a 2-digit number.
- It is 2 more than 10 and 3 fewer than 15.
- The sum of 7 and 5 is 12.
- 5 fewer than 17 is 12.
- It has 6 factors.
- It is half of 24 (a third of 36, a quarter of 48, a tenth of 120).
- It is double 6.
- It is the product of: 3×4 , 4×3 , 2×6 , 6×2 , 1×12 , 12×1 .
- The sum of the digits in 12 is 3.

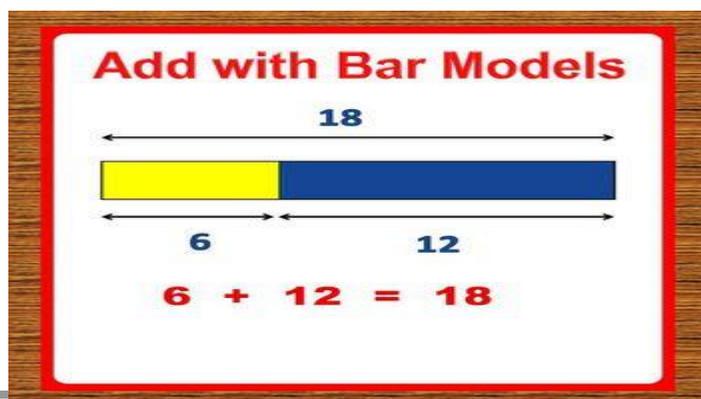
Encourage your child to answer word problems using full sentences, and encourage them to draw pictures and models to answer questions.

Talk about maths with your child in everyday situations, such as a shopping trip or a trip to the park.



Bar modelling

- Read the problem.
- Write a sentence for the answer, leaving a gap where the answer will go.
- Think about what is being asked and which model supports the question.
- Draw the bars.
- Partition or 'chunk' the bars and note which section represents the answer.
- Discuss the question and think about what is being asked.
- Write the answer in the sentence and check that the answer makes sense.
- Is there another way to draw the model and represent the question?
- What further questions could you ask using the model as a prompt?



Notes

- In Year 2, the children begin to learn their 2x, 3x, 4x, 5x and 10x tables. Food can be a very motivating way of learning their times tables and the corresponding division facts!
 - For example, sweets can be grouped and counted, children can count the biscuits in a packet in twos as they put them in the biscuit barrel, chunks on a bar of chocolate can be counted in pairs, and so on. Pose questions such as; There are five people in our family. If we have 2 biscuits each, how many will we eat altogether? I have 15 sweets. If I share them between you and your two friends, how many will you get each?
- Money can also be very motivating! The real stuff is the best! Give your children a jar of coins to sort by the different value coins.
 - ☑ Find the biggest coin. Is it worth the most?
 - ☑ Find the smallest coin. Is it worth the least?
 - ☑ Put them in order of value.
 - ☑ Use 2p, 5p and 10p coins to support learning the times tables.
- Practise fractions by cutting pizza or sandwiches into halves and quarters. Is there a different way that I could cut my sandwich into quarters?



1 – 10 Times Tables Chart

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

- Play 'I'm thinking of a Number'. Begin by giving clues such as "My number is more than 50 but less than 100; it is an odd number; It is two more than 37, etc"

As your child becomes more confident, they can try to find out by asking questions eg. Is it odd or even? A multiple of 5? More or less than 30?
etc

This can be done anywhere! Driving in the car, walking to school...

- Look at the three digits on a car's number plate (928).
 - What's the largest/ smallest number you can make? (982/ 289)
 - What is the total if you add the numbers together? Count up in tens – 928, 938, 948...

- Encourage your child to explain how they calculated a problem. Remember that they may use a variety of methods to solve a problem – there is no right or wrong way so long as they calculate the answer correctly in the end!