Year 1

Autumn Term

Parent Maths Pack

Focus: Addition and Subtraction within 20

This pack includes:

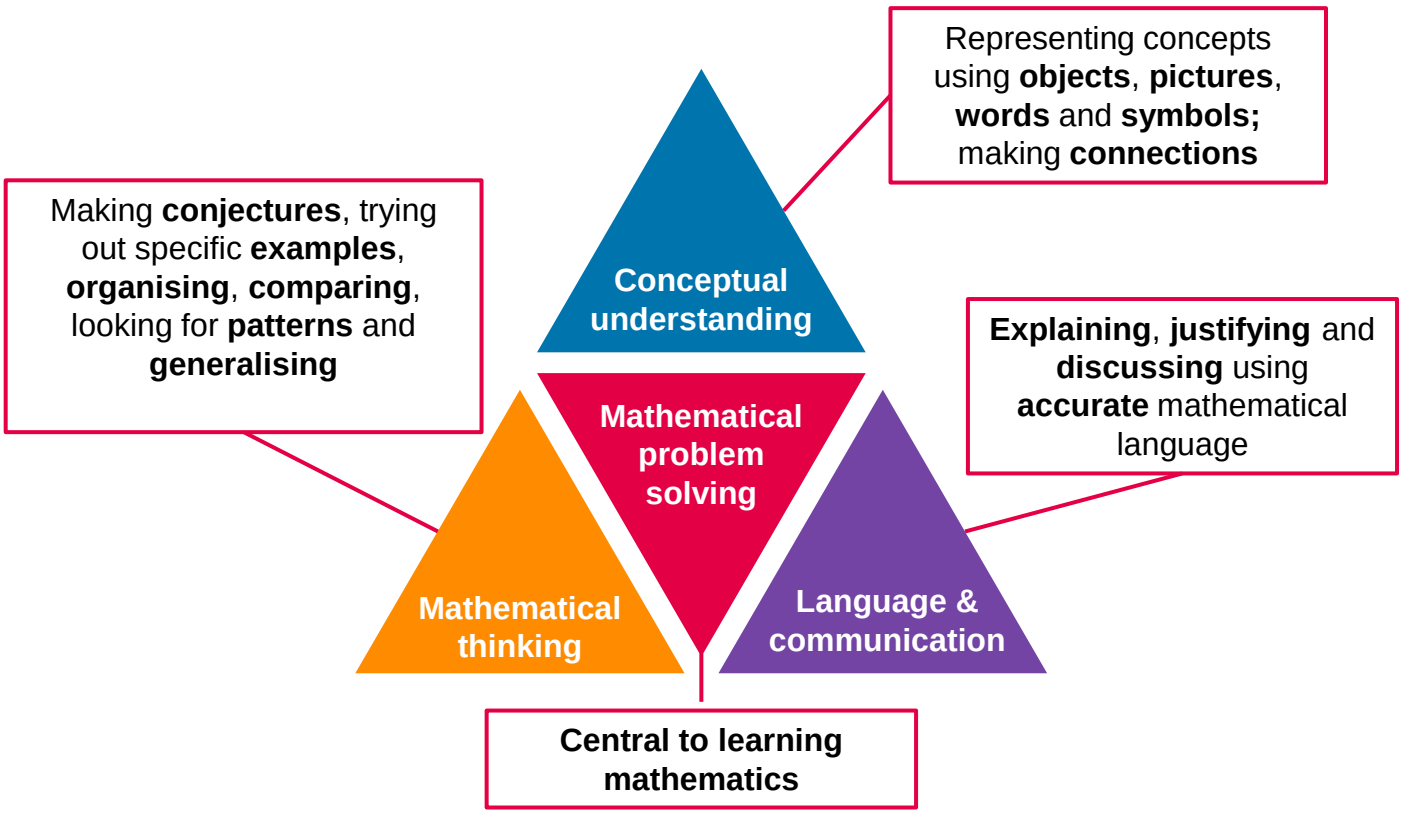
- An overview of Mathematics Mastery
- Key vocabulary
- Key representations for addition and subtraction
- Big Pictures
- Addition and subtraction games to play at home

Mathematics Mastery

Mathematics Mastery

What is 'Mastery'?

The 'mastery approach' to teaching mathematics is the underlying principle of Mathematics Mastery. Instead of learning mathematical procedures by rote, we want your child to build a deep understanding of concepts which will enable them to apply their learning in different situations. To achieve this we aim to develop pupils' **Conceptual Understanding, Mathematical Thinking** and **Language and Communication.** (See diagram below).



Success for all

At school we believe all pupils can achieve success in maths. We encourage pupils to have a 'growth mindset' – a belief that effort leads to success and that challenges are opportunities to learn.

Here are a few tips to encourage your children at home with maths:

- ✓ Talk to your children about everyday maths
- ✓ Play games with them
- ✓ Value mistakes as learning opportunities
- ✓ Recognise that there is more than one way to work things out.
- ✓ Praise children for effort over outcome.
- ✓ Avoid saying things like "I'm useless at maths".

Autumn focus: Addition and Subtraction within 20

Year 1 - Autumn Curriculum Map

Numbers to 10	Addition and subtraction within 10	Shape and patterns	Numbers to 20	Addition and subtraction within 20
• Represent, compare and explore numbers within 10 • One more and one less • Doubling and halving	• Represent and explain addition and subtraction • Commutativity • Addition and subtraction facts	• Identify, describe, sort and classify 2-D and 3-D shapes • Investigate repeating patterns • Use and follow instructional and positional language	• Identify, represent, compare and order numbers to 20 • Doubling and halving • One more and one less	• Represent and explain addition and subtraction strategies including 'Make Ten' • Use known facts to add and subtract

This term, one of our key focuses in Year 1 is addition and subtraction to 20. Below are some of the key small steps pupils will be learning about:

- Addition facts to 10 by combining amounts
- Subtraction facts to 10 by partitioning
- Explore related facts in addition and subtraction
- Using number bonds to add within 20
- Using the 'make ten' strategy to add within 20

Key vocabulary for Year 1 - addition and subtraction

Part **Whole** **Ones** **Tens**

Add/Addition **Subtract/Subtraction** **Is equal to** (=)

Equation - *a mathematical statement where two values are equal indicated by the = sign. E.g. 12 + 4 = 16 is an equation.*

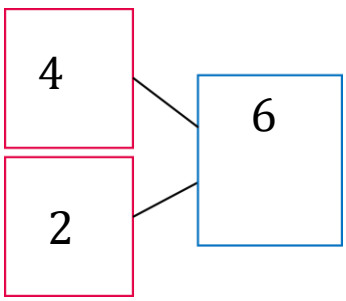
Make Ten strategy - *using known facts about number bonds to ten to help you calculate e.g. to work out 7 + 5, we can use 7 + 3 + 2.*

Number bonds - *pairs of numbers that add together to make a different number. E.g. One number bond to 8 is 3 and 5.*

Partition - *to split a number into two or more parts. E.g. we can partition 16 into 10 and 6.*

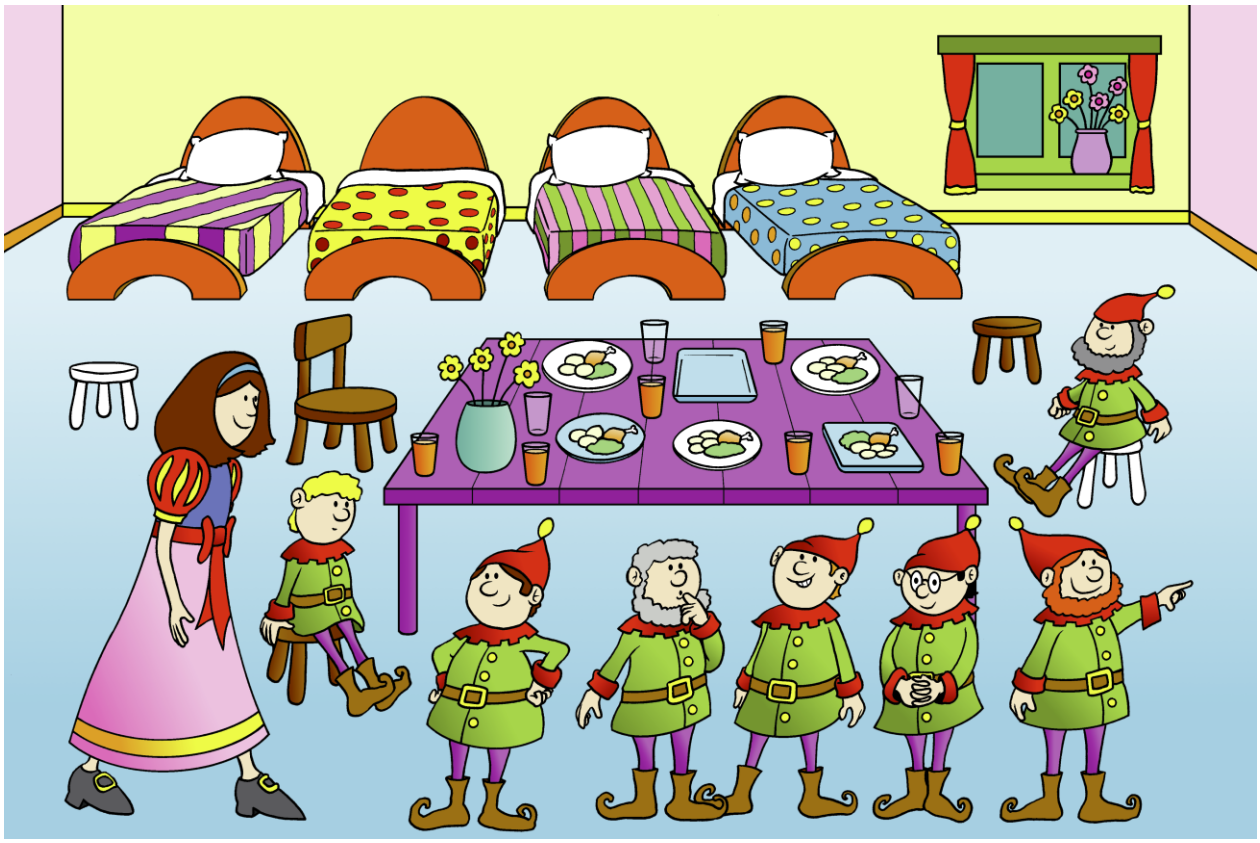
The part-whole model

When calculating pupils use the language of the parts and the whole. For example, "the parts are 4 and 2, the whole is 6". Pupils use the part whole model (right) alongside formal equations.



Big Pictures

What maths can you see? Discuss with your children at home using the key vocabulary from the previous page.

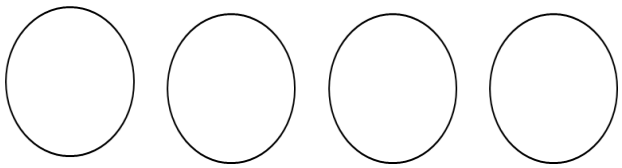


Try this at home – workshop games

Adding circles

For this game, you need dice, a pencil and paper.

- Each of you should draw four circles on your piece of paper.
- Write a different number between 2 and 12 in each circle.



- Roll two dice. (Or roll twice, if you only have one die). Add the two numbers.
- If the total is one of the numbers in your circles then you may cross it out.
- The first person to cross out all four circles wins.

Part Whole Add Is equal to

Grab bag Subtraction

Choose a number of things to work with, and put that many objects into a bag.

- You can use crayons, coins, beans, buttons, etc.
- Grab a handful of the items and count them. Ask your partner how many items are now left. *"I started with ___ items. I've taken out ___. How many are left?"*
- Write down the calculation.
- Encourage counting up or back, use manipulatives e.g. counters if you need to.
- You get a point for getting each calculation correct.
- Let your partner have a turn.

Part Whole Subtract Is equal to Partition

Try this at home – more ideas

Make your own bead string

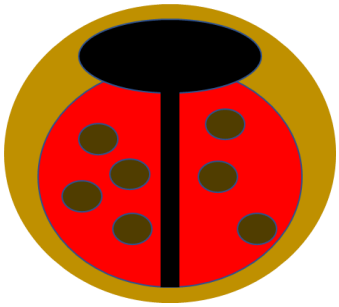
Try using dried pasta and string to make a 0-10 or 0 - 20 bead string. You can paint or dye the pasta different colours to expose different mathematical concepts. E.g. coloured groups of 2, 5 or 10.

Fact of the day/week

Have a 'fact of the day', e.g. 15 = 7 + 8. Pin this fact up around the house. Practise reading it in a quiet, loud, or squeaky voice. Ask your child over the day if they can recall the fact

Ladybird cookies

Use red and black icing to decorate biscuits like lady birds. Put one line down the middle and decorate the biscuits with chocolate buttons or chocolate chips on each side. Explore different number bonds. For example how many ways can we arrange the spots to make seven?



Dice games

Playing with dice can be a great way to support your children with number bonds. If you don't have a pair of dice, try these online dice:
https://www.random.org/dice/?num=2

Songs

Try singing this song with the actions to learn the number bonds to 10:
https://www.bbc.co.uk/teach/supermovers/ks1-maths-number-bonds-with-martin-dougan/zf6cpg8

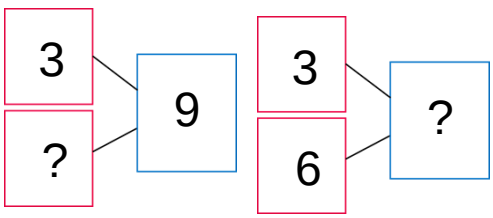
Daily practice: number bonds

Challenge your children with missing number problems verbally.

Example

"The whole is 9. One part is 3. What is the missing part?"

Or, " I think of a number, I subtract 3 and I am left with 6, what was my number?"



Questions to support thinking

- What do you think would happen if….
- What's the same? What's different?
- How do you know that?
- Can you see a pattern? What would come next?
- What else could go in this set? What couldn't?