TELFORD INFANT SCHOOL
LOVING LEARNING

Every child to be an inquisitive, resilient and successful learner who is eager for their next challenge.

Maths in Year 1

November 2019

Aims of this session

- To provide an insight into our mastery approach to mathematics and how it works in school.

- To give ideas for supporting maths at home and keeping it fun.

What does it mean to master something?

What does it mean to master something?

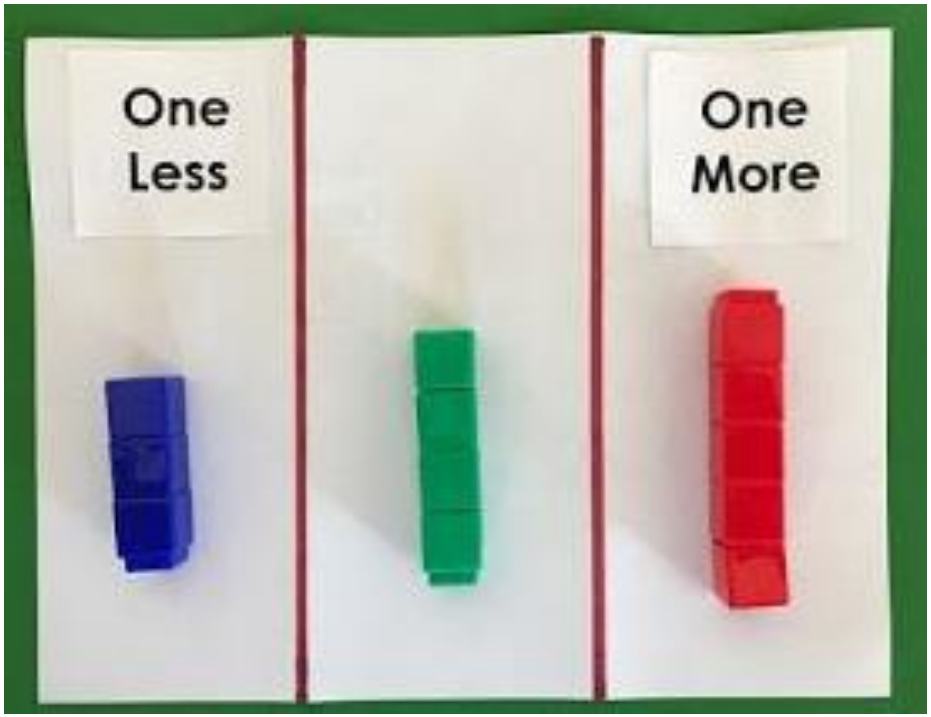
- I know how to do it.
- It becomes automatic and I don’t need to think about it (like riding a bike).
- I’m really good at doing it.
- I can show someone else how to do it.

Mastering maths also means…

- It is achievable for all
- Learning is deep and sustainable
- This builds a firm foundation for new learning
- Children can reason about a concept and make connections
- Children are fluent – with concepts and different methods

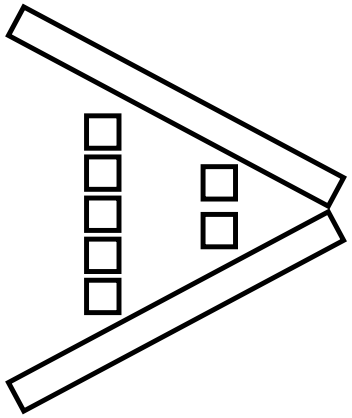
Key concepts

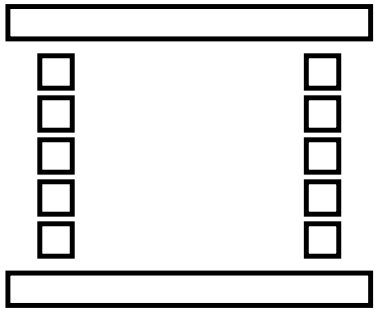
- Relative size of numbers

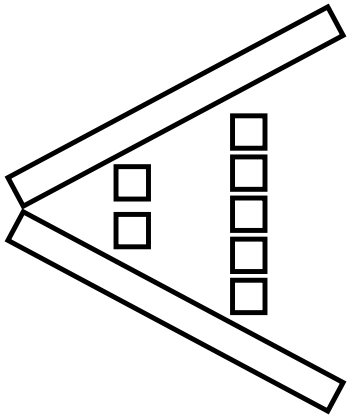


Key concepts

- Comparing numbers

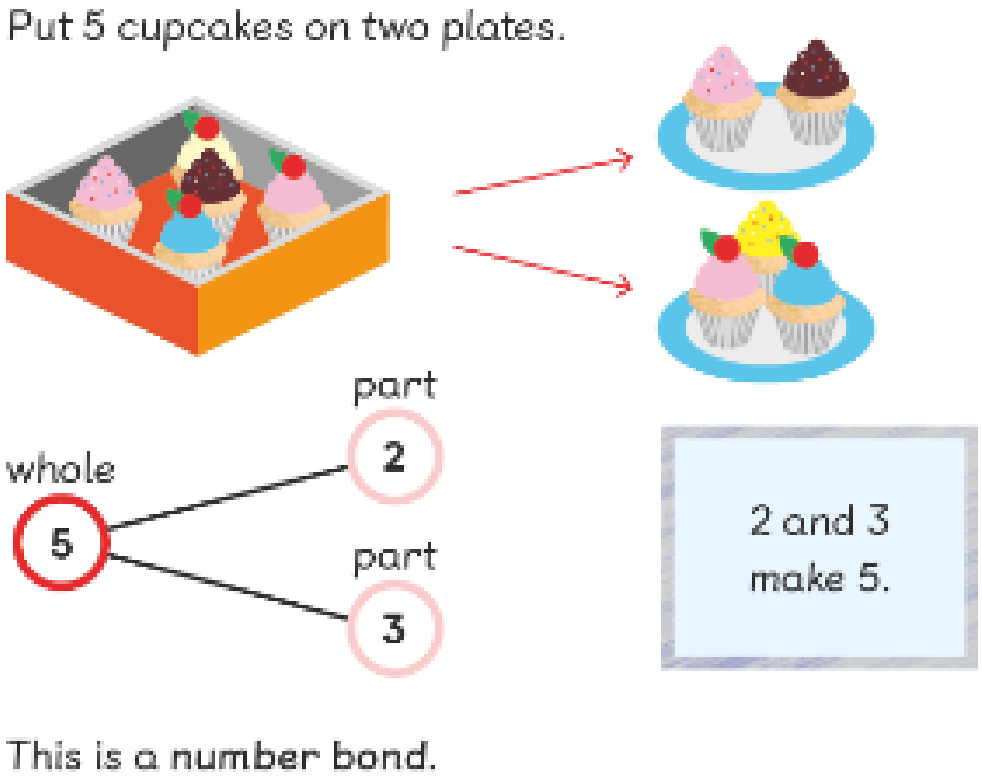






Key concepts

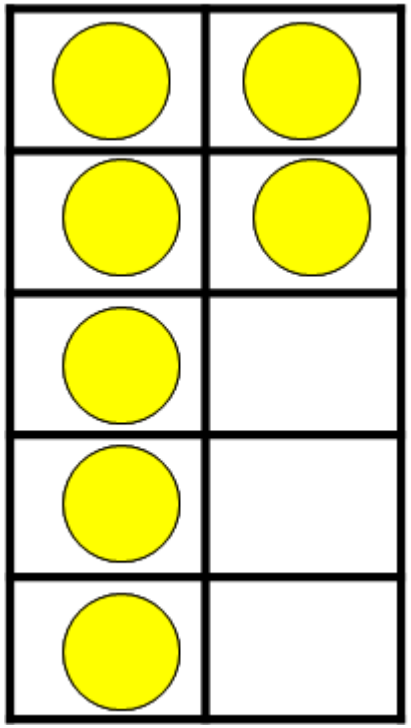
- Structure of numbers



Key concepts

- Knowing number pairs / bonds

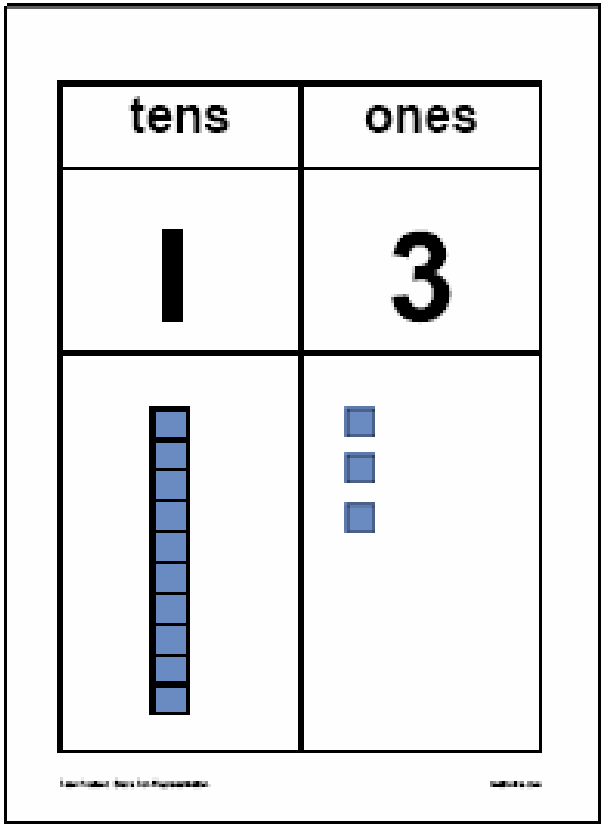
Seeing pattern and structure is important in a mastery curriculum



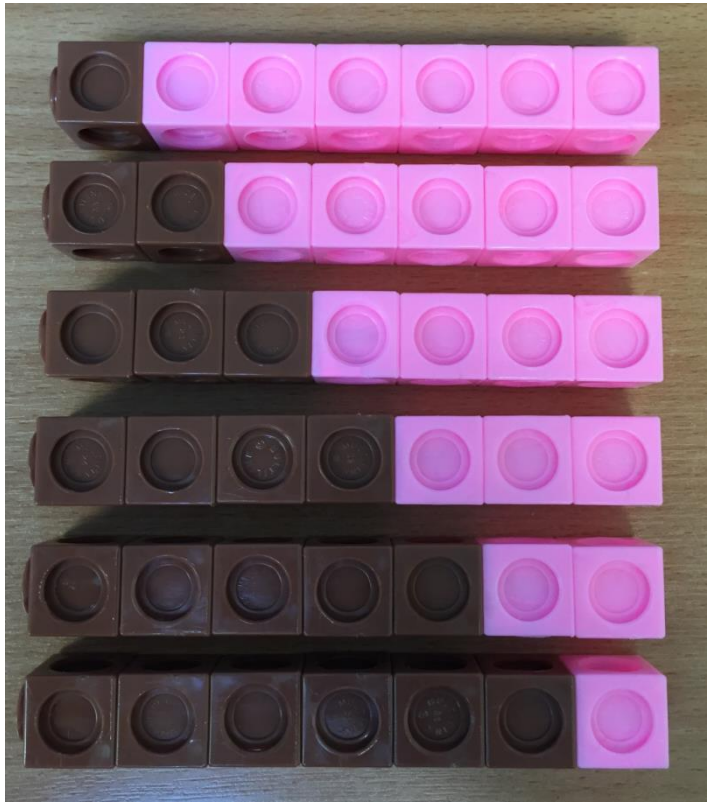
6 + 1= 7
5 + 2 = 7
4 + 3 = 7
3 + 4 = 7
2 + 5 = 7
1 + 6 = 7
0 + 7 = 7

Key concepts

- Place value

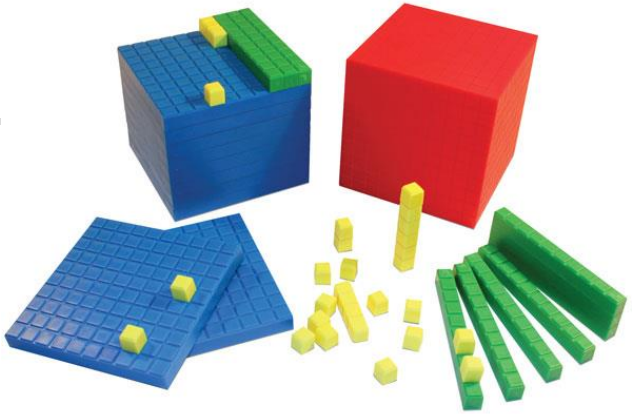


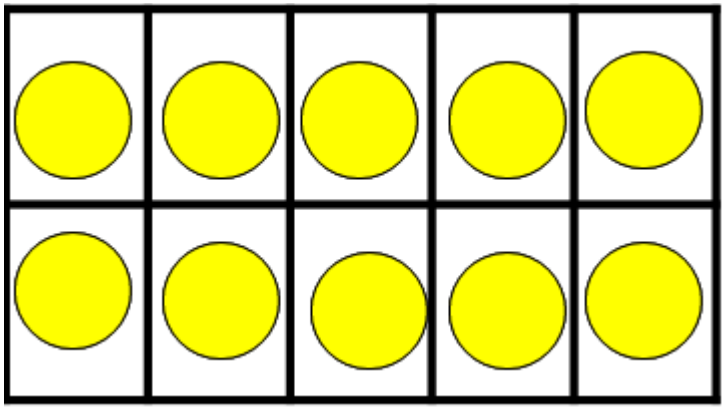
Representations

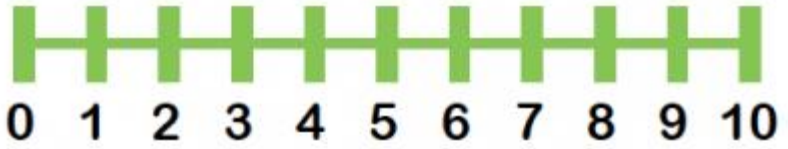


Representations

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







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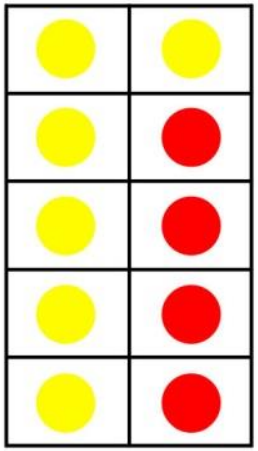
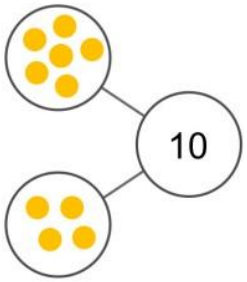


6 + 4 = 10
4 + 6 = 10
10 – 4 = 6
10 – 6 = 4

Tens Frame



6 + 4 = 10
4 + 6 = 10
10 – 4 = 6
10 – 6 = 4

Part Whole Model

10	
6	4

6 + 4 = 10
4 + 6 = 10
10 – 4 = 6
10 – 6 = 4

Bar Model

Paving the way for later learning

10	
6	4

6 + 4 = 10

4 + 6 = 10

10 – 6 = 4

10 – 4 = 6

62	
34	28

34 + 28 = 62

28 + 34 = 62

62 – 34 = 28

62 – 28 = 34

6.2	
3.4	2.8

3.4 + 2.8 = 6.2

2.8 + 3.4 = 6.2

6.2 – 3.4 = 2.8

6.2 – 2.8 = 3.4

Teaching for mastery

- High expectations for every child.
- Fewer topics covered in greater depth.
- Number sense and place value come first.
- Problem solving is central.
- Challenge is provided through deep and rich problems, rather than accelerating on to new content or higher numbers.

How we challenge

All children will be able to…

Complete:

19		21	22		

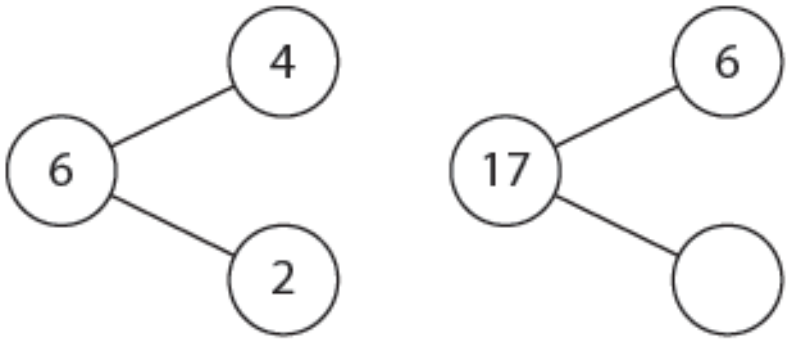
Some children will explore the concept in greater depth…

Use two of the digit cards to make a number greater than 50.
Use two of the digit cards to make a number less than 30.
Use two of the digit cards to make an odd/even number.
Use two of the digit cards to make a number between 47 and 59.

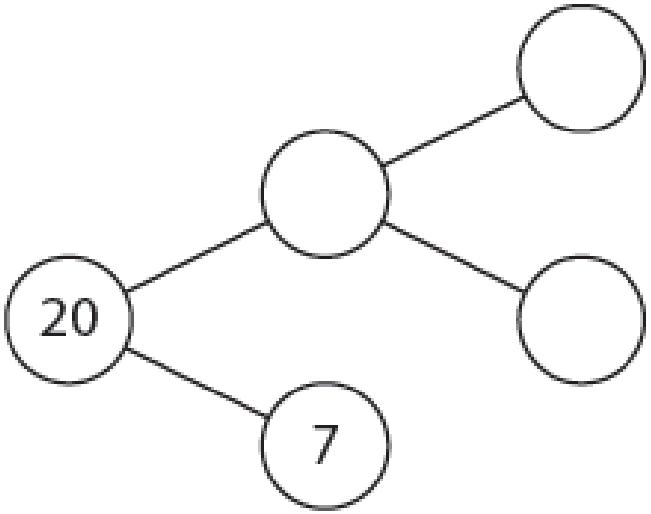
How we challenge

All children will be able to…

Complete:



Some children will explore the concept in greater depth…



Now create a similar diagram.

Can you extend your diagram?

How we challenge

All children will be able to…

I can see 10 wheels. How many bicycles?

Some children will explore the concept in greater depth…

Using only 2p, 5p and 10p coins, can you show 20p?

In how many different ways can you do this?

Are you sure you have got them all?

Explain how you know.

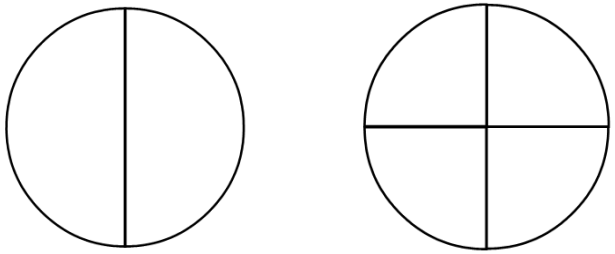
Questioning

- _____ thinks that, _____. Do you agree? Explain your answer.
- What is the same and what is different?
- Can you spot the mistake? Explain why it is incorrect.
- Is it always true, sometimes true or never true that_____?

Maths talk

- Full sentences instead of one-word answers.
- I say, you say, you say, you say, we all say.
- Sentence stems used in relation to different examples, eg:

  "The whole is divided into ( ) equal parts, each part is ( ) of the whole."



How you can support at home

Maths is all around us. Look for maths problems you can solve together, making connections between what your child has been learning at school and the world around them.

- **Find numbers in the environment**
- **Follow a recipe**
- **Talk about time**
  especially days of the week, months of the year etc
- **Go shopping**
- **Plan an outing**


Supporting your child's learning:
Maths in Reception, Year 1 and Year 2

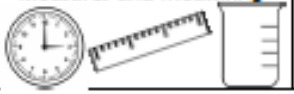
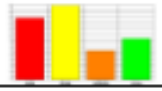
At Telford Infant School our aim is to make maths exciting, practical and relevant, to ensure that all our pupils develop as confident and independent mathematicians. We aim to develop:

Fluency	Reasoning	Problem-solving
Remembering and recalling number facts quickly. These include number bonds (pairs of numbers that make a given total), times tables, doubles and halves.	Seeing patterns, choosing appropriate strategies and being able to explain why.	Understanding when and how to use maths to tackle everyday problems and puzzles.

The aspects we focus on in Reception are:

Counting, ordering and recognising numbers 	Counting on and counting back +1 -1	Doubling, halving and sharing 
Shape 	Space 	Measures and measuring 

The aspects we focus on in Year 1 and Year 2 are:

Number and place value 	Addition and subtraction 	Multiplication and division 	Fractions 
Measures and measuring 	Geometry 	Statistics 	


Serious Learning, Serious Play, Serious Fun

Children become confident mathematicians by regularly talking about, playing with and experiencing numbers, counting, shapes and measurements in their everyday lives. Here are some ways that you can support your child with this at home.

1. Count anything and everything:


climbing stairs

walk for 20, skip for 20

counting small objects
Can you put 6 carrots in the bag?
help with the shopping

2. Sort things into groups:


cutlery

socks

cars
Which colour do you have most of?

3. Look for numbers, patterns and shapes when you are out and about:


door numbering
Which number will be next? Is it odd or even?

shapes all around

4. Sing songs: *"Ten green bottles"* *"Five fat sausages"* *"Five little speckled frogs"* *"Ten in the bed..."*

Find the biggest coin.

5. Handle coins, look for prices and pay for things:


Serious Learning, Serious Play, Serious Fun

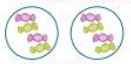
6. Talk about time:


units of time


using a digital clock to read minutes

reading hours on a clockface

7. Group and share objects:


share between 2 people

how many groups of 3?
There are 5 of us here. If we have 2 biscuits each, how many will we eat altogether?

8. Using halves and quarters:

Is there a different way you could cut the sandwich into quarters?

cutting food

filling things half-way

9. Measure things:


weight

height

capacity

10. Play games:



Serious Learning, Serious Play, Serious Fun