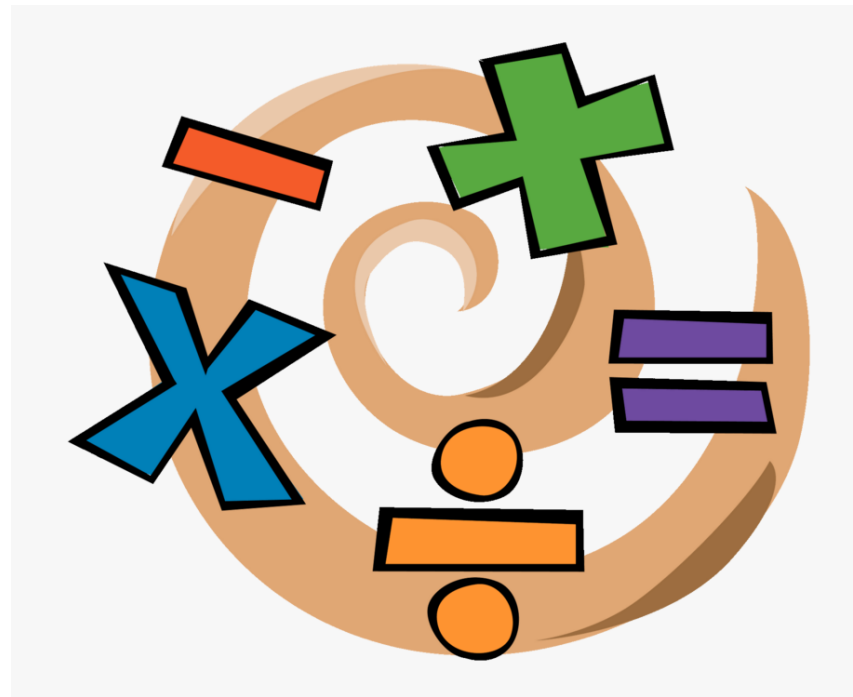# Year 1 Maths

Dear Parents/Carers,

Welcome to this guide to Maths in Year 1. In this booklet you will find knowledge organisers for every Maths topic covered in Year 1 and then some extracts from our calculation policy showing the methods taught. The knowledge organisers include the key vocabulary the children will come across in each topic as well as the key objectives taught and models and images used.

We hope you find these useful and that they will help show you what is being taught in school this year.

Year 1 Team

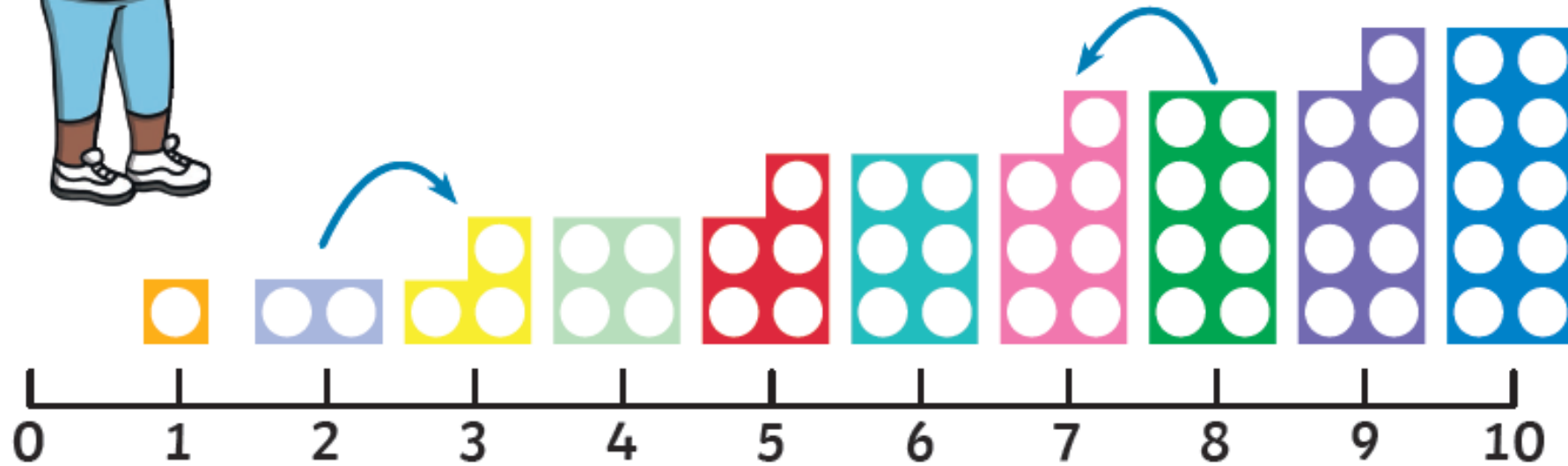# Number and Place Value

One More and One Less

One more than two is three.

One less than eight is seven.

0 1 2 3 4 5 6 7 8 9 10

Number and Place Value

Ordering

1st
first

2nd
second

3rd
third

4th
fourth
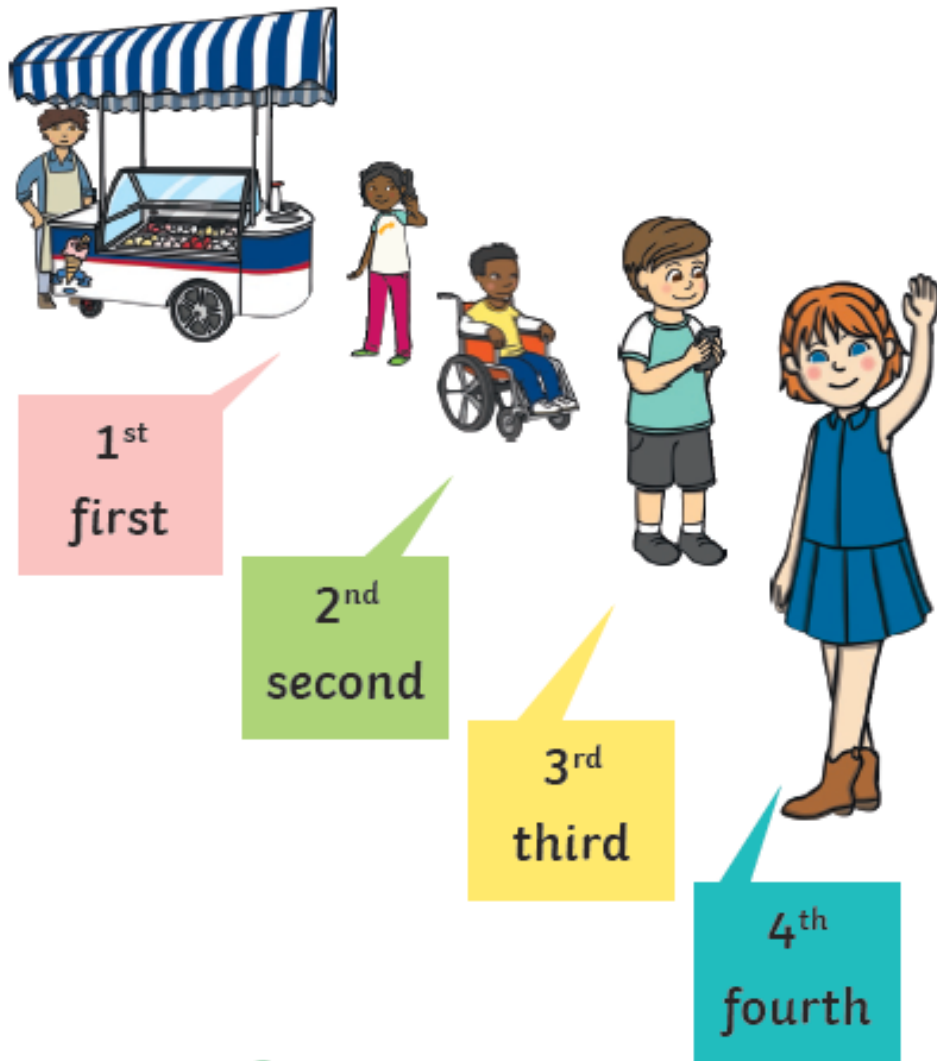
Comparing

5 = 5

equals
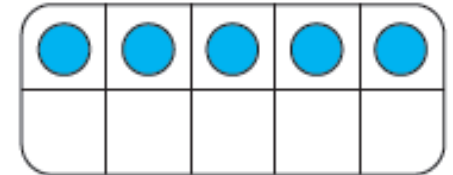
4 < 7

less than
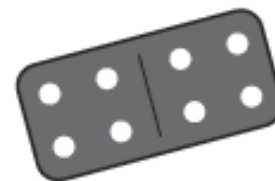
8 > 2

greater than

two

Lewis has the **most**.

Olive has the **fewest**.

Number and Place Value to 20

Key Vocabulary

one	
two	
three	
four	
five	
six	
seven	
eight	
nine	
ten	
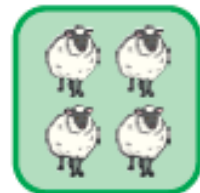
least

smallest

most

greatest

first   second   third

Key Vocabulary

eleven	
twelve	
thirteen	
fourteen	
fifteen	
sixteen	
seventeen	
eighteen	
nineteen	
twenty	
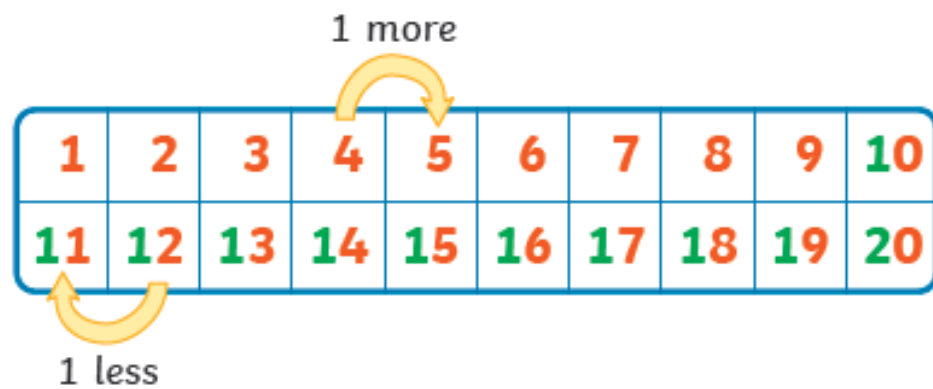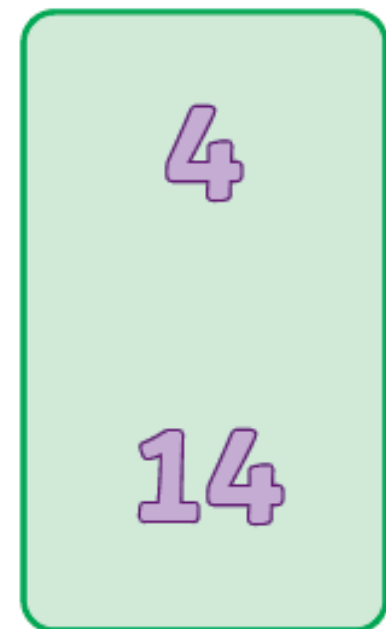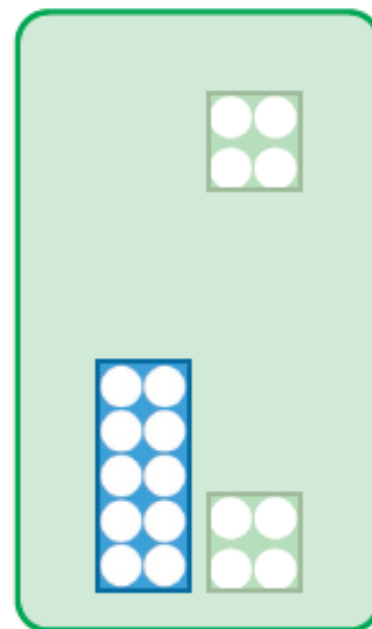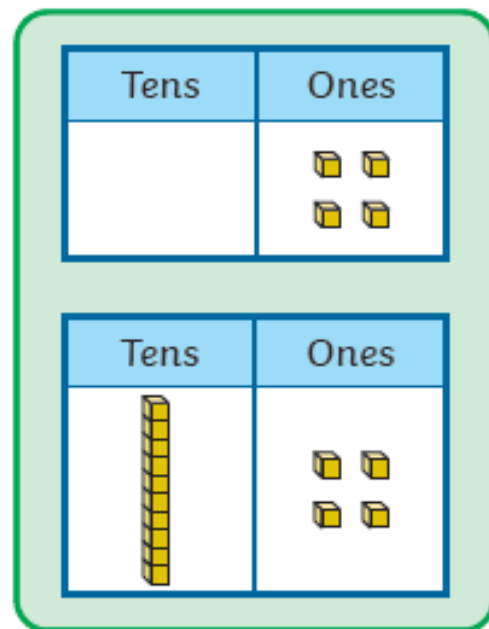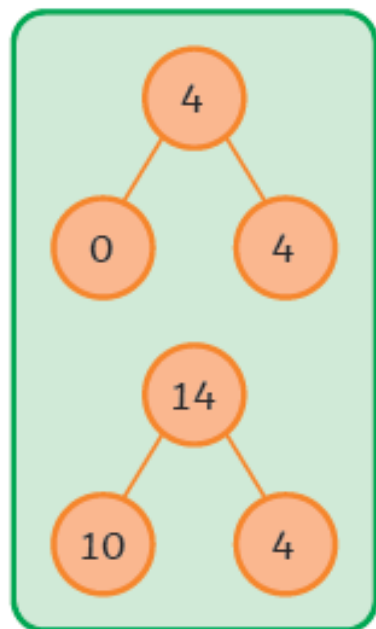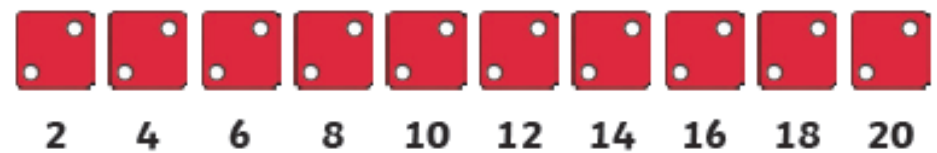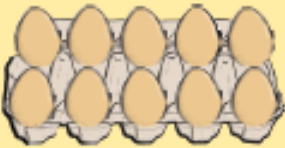
1 more

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |

1 less

Counting in Twos

| 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 |

4
0   4

14
10   4

Tens	Ones

Tens	Ones

4

14

Number and Place Value to 50

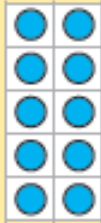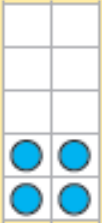| 1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

One more than 43 is 44
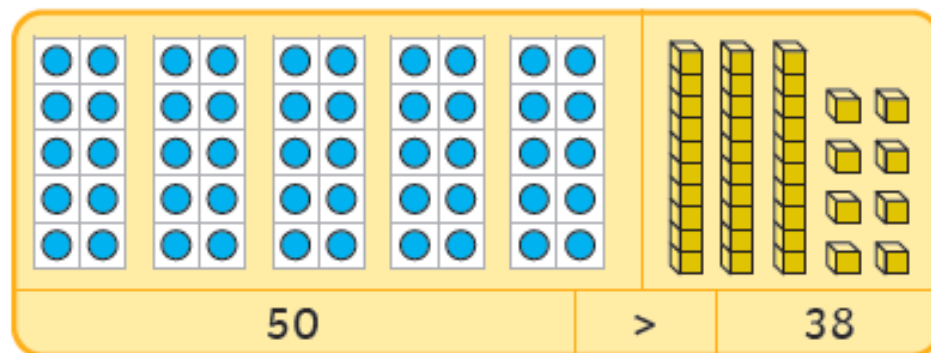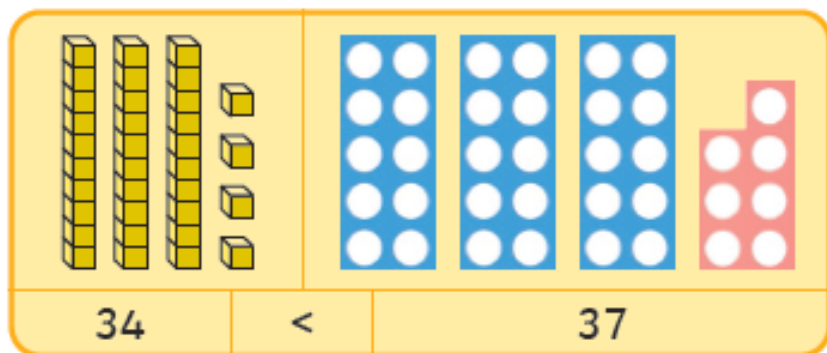
49 is one less than 50

10	20	21, 22, 23

10	20	30	31, 32, 33, 34

twinkl visit twinkl.com

Number and Place Value to 50

Counting in Fives

5   10   15   20   25   30   35   40   45   50

Comparing Numbers

34 < 37

50 > 38

< is less than

= is equal to

> is more than

25 = 25

Counting to 100

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

One more than 92 is 93.   **One less** than 100 is 99.

Partitioning

64 has **6** tens and **4** ones

Tens	Ones
6	4

Number and Place Value within 100
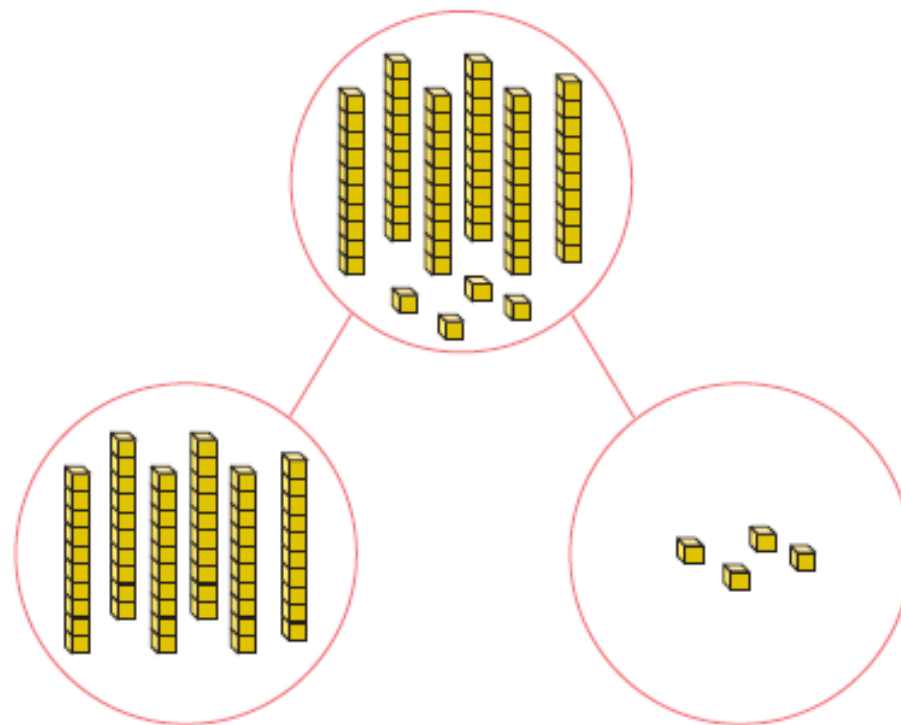
Comparing Numbers

$>$
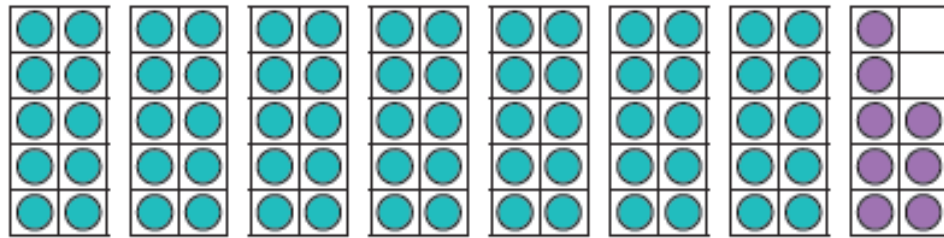
Tens	Ones

$<$
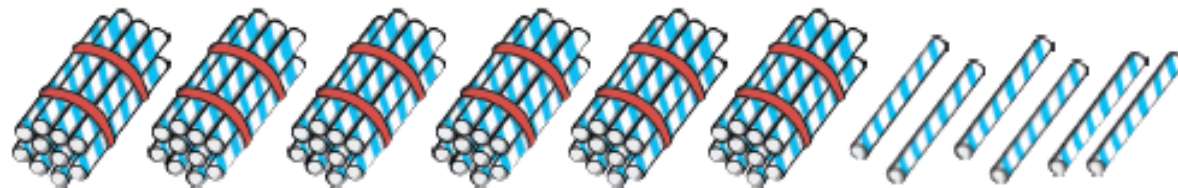
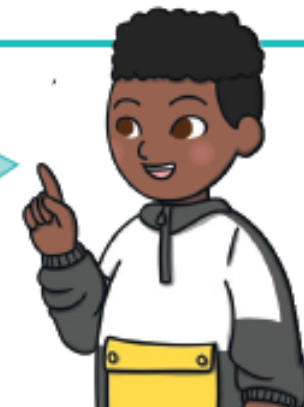$=$ sixty-six

Ordering Numbers

smallest to greatest ⟶ 55, 67, 89, 91, 100

greatest to smallest ⟶ 99, 82, 73, 68, 50

< is less than

= is equal to

> is more than

Addition and Subtraction

Counting On and Counting Back

0 1 2 3 4 5 6 7 8 9 10

4

0 1 2 3 4 5 6 7 8 9 10

Counting on

4 + 3 = 7

0 1 2 3 4 5 6 7 8 9 10

4 5 6

7 - 3 = 4

Counting back

twinkl visit twinkl.com

Addition and Subtraction
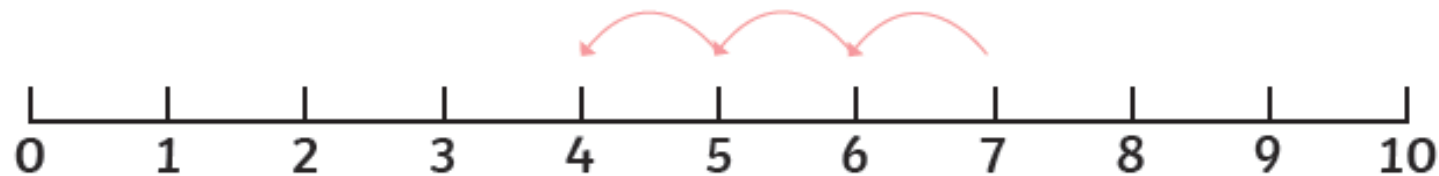
Knowledge Organiser

Number Bonds

5 – 0 = 5 ●●●●● 5 + 0 = 5

5 – 1 = 4 ●●●●● 4 + 1 = 5

5 – 2 = 3 ●●●●● 3 + 2 = 5

5 – 3 = 2 ●●●●● 2 + 3 = 5

5 – 4 = 1 ●●●●● 1 + 4 = 5

5 – 5 = 0 ●●●●● 0 + 5 = 5

3 + 2 = 5

5 = 1 + 4

5

twinkl visit twinkl.com

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
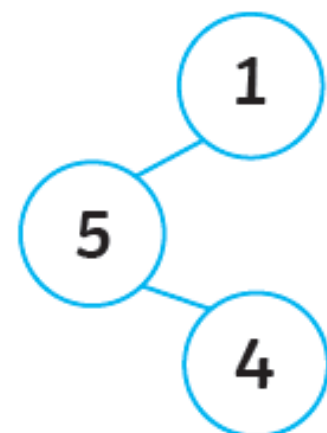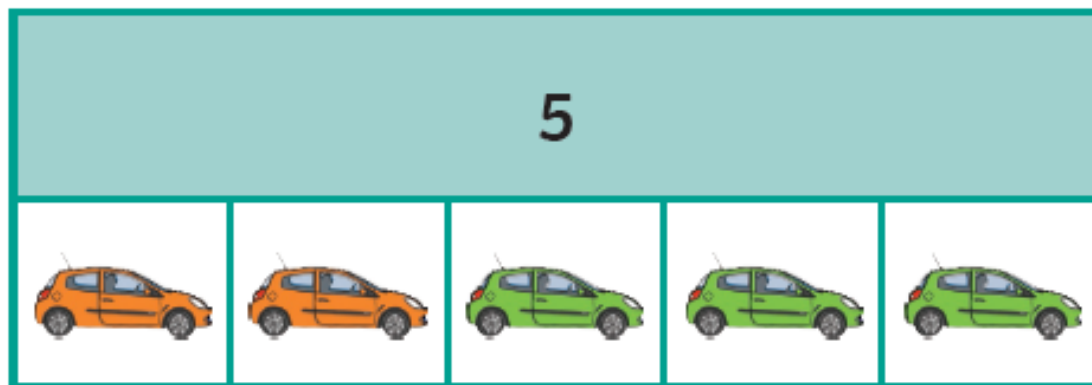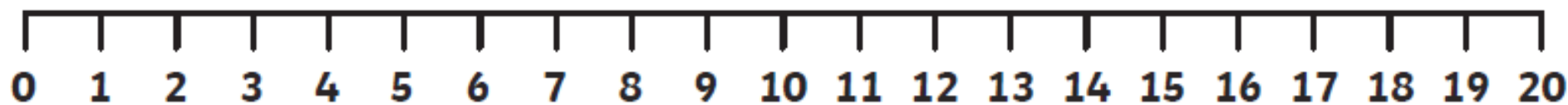
Number Bonds

4 + 6 = 10

10 – 6 = 4

4 + 6 < 14 + 6

14 = 20 – 6

14 + 6 = 20

20 – 6 = 14
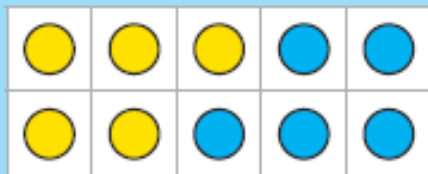
5 + 5 = 10

10 – 5 = 5

20 – 5 > 20 – 6

15 + 5 = 20

20 – 5 = 15

Addition and Subtraction

First

Then

Now

First

Then

Now
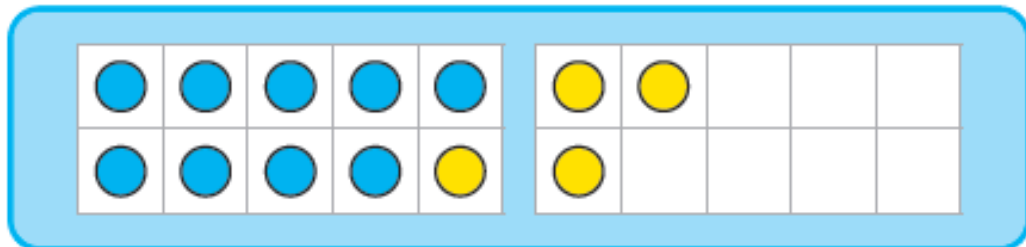
I partitioned 4 into 1 and 3.

9 + 1 = 10

10 + 3 = 13
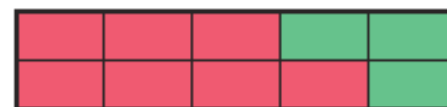
I partitioned 5 into 2 and 3.
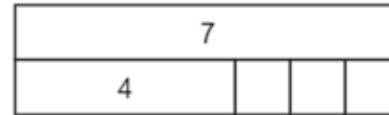
12 - 2 = 10

10 - 3 = 7

twinkl visit twinkl.com

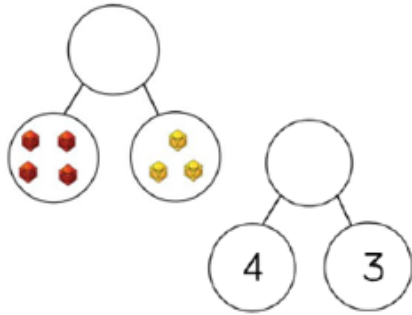# Written Methods and Visuals

	Skill: Add 1-digit numbers within 10	Year: 1

$4 + 3 = 7$

7			
4			

7	
4	3

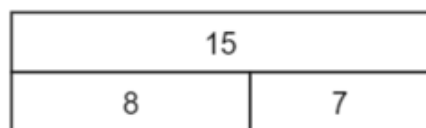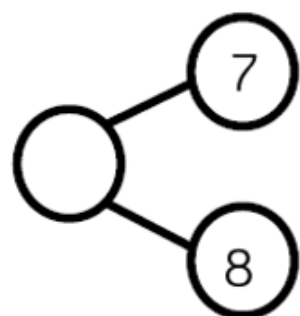| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
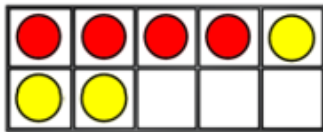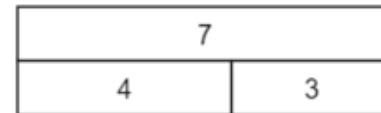
- When adding numbers to 10 children can explore both aggregation and augmentation

- The part-whole model, bar model, numicon and ten frame support aggregation

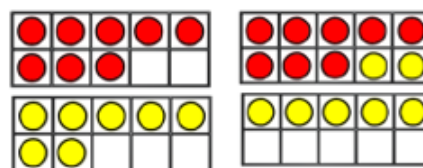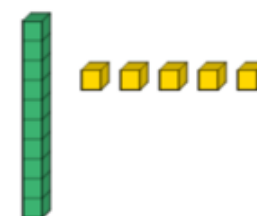- The bar model, ten frame and number track all support augmentation
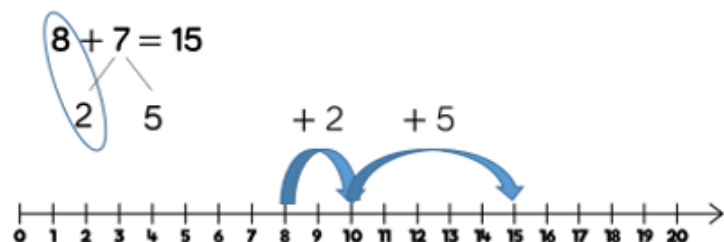
Skill: Add 1 and 2-digit numbers to 20	Year: 1/2

7

8

15	
8	7

$$8 + 7 = 15$$

8 + 7 = 15

2   5

+2   +5

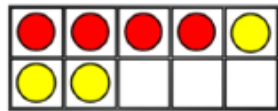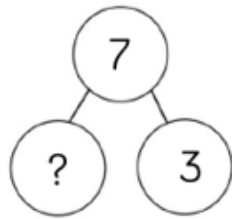0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

8 + 7 = 15

2   5

- When adding 1-digit numbers that cross 10, it is important to highlight ten ones equalling one ten.

- Different manipulatives can be used to represent this exchange. Use concrete resources alongside number lines to support children in understanding how to partition their jumps.
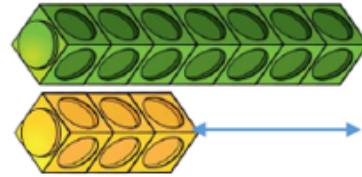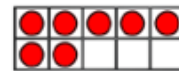
	Skill: Subtract 1-digit numbers within 10	Year: 1

7

? 3

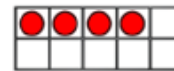$7 - 3 = 4$

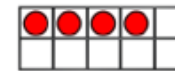First   Then   Now

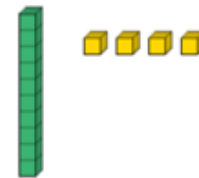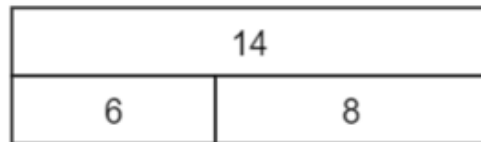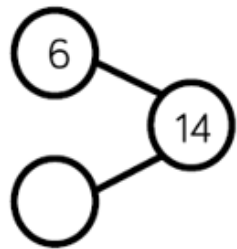| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

7	
3	4

- Part-whole models, bar models, ten frames & numicon support partitioning.

- Ten frames, number tracks, single bar models support reduction.

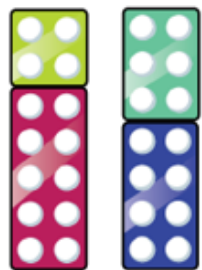- Cubes and bar models can support finding the difference.

$$14 - 6 = 8$$

14

6	8

$$14 - 6 = 8$$

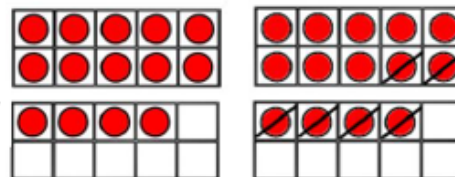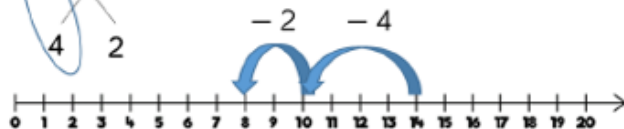| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |

14 − 6 = 8
4   2

− 2   − 4

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

14 − 6 = 8
4   2

- When subtracting 1-digit numbers that cross 10, it is important to highlight ten ones equalling one ten.

- Children should be encouraged to find the number bond when partitioning the subtracted number. Ten frames, numicon and number lines are particularly useful for this.

Multiplication and Divsion
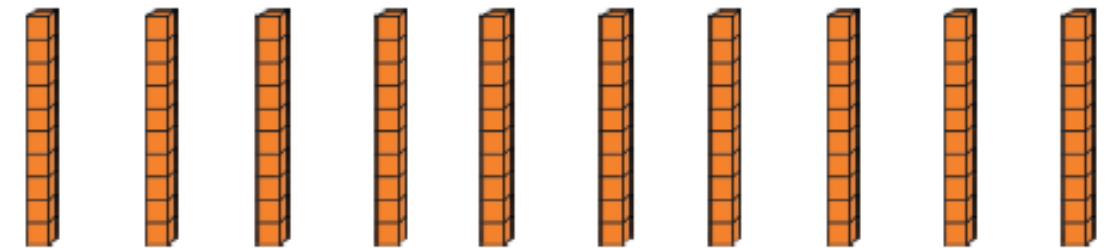
Count in 2s

2 4 6 8 10

Counting in 5s

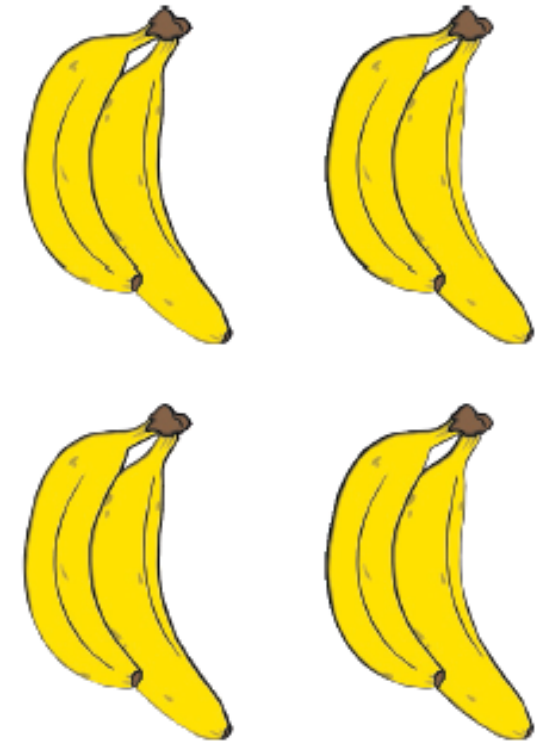5 10 15 20 25 30 35 40 45 50 55 60

Count in 10s

10 20 30 40 50 60 70 80 90 100

Make Equal Groups

There are 4 equal groups of 2 bananas.

Multiplication and Division

Add Equal Groups
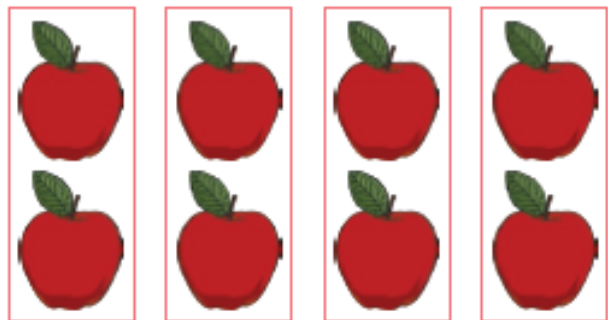
2 + 2 + 2 + 2 = 8 apples

Make Arrays

4 rows of 5 = 20 cookies

5 columns of 4 = 20 cookies
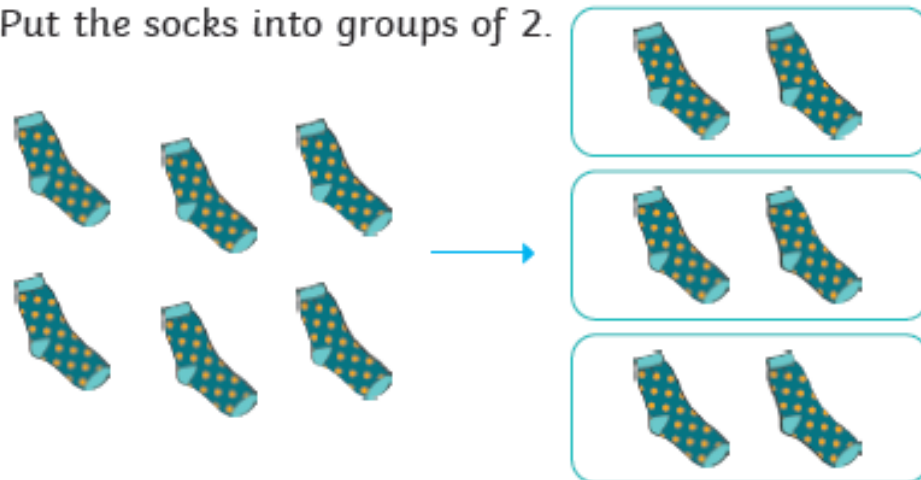
Make Doubles

double 1 is 2   1 + 1 = 2

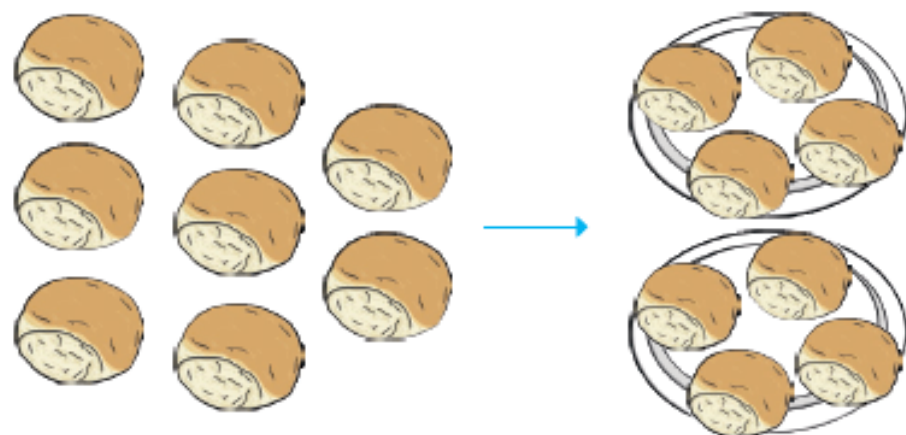double 5 is 10   5 + 5 = 10

Group Equally

Put the socks into groups of 2.

Share Equally

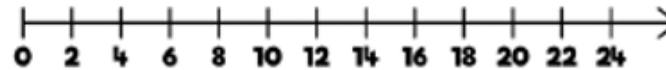Share the buns equally between the 2 plates.
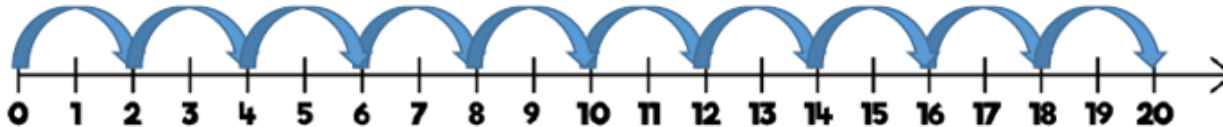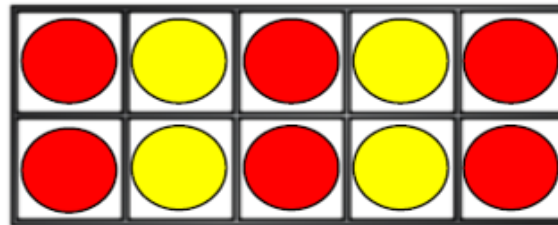
Written Methods and Visuals

	Skill: 2 times table	Year: 1/2

- Encourage daily counting in multiples both forwards and backwards. This can be support using a number line, counting stick or hundred square.

- Look for patterns in the two times table, using concrete manipulatives to support. Notice how all the numbers are even and there is a pattern in the ones.

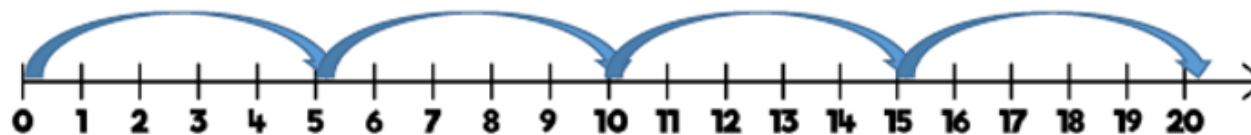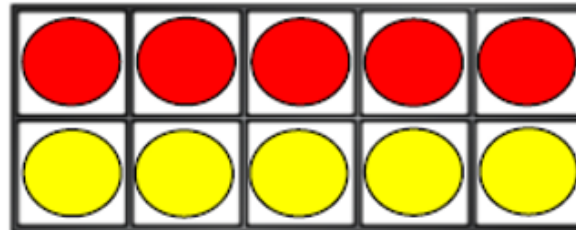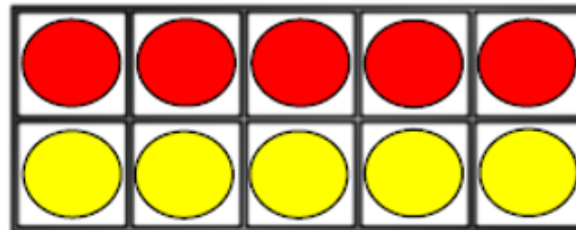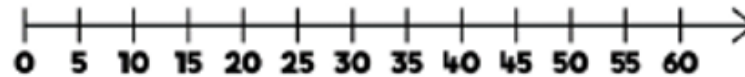- Use different models to develop fluency.

| | | | | Skill: 5 times table | | | | | Year: 1/2 |

- Encourage daily counting in multiples both forwards and backwards. This can be support using a number line, counting stick or hundred square.

- Look for patterns in the five times table, using concrete manipulatives to support. Notice the pattern in the ones as well as highlighting the odd, even, odd, even pattern.

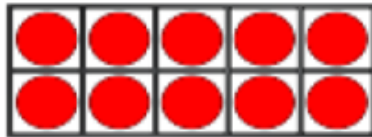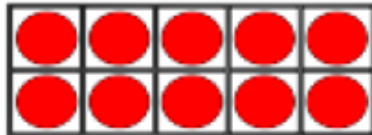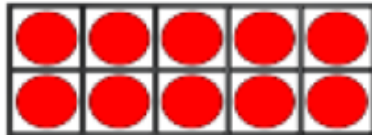|		Skill: 10 times table		Year: 1/2

- Encourage daily counting in multiples both forwards and backwards. This can be support using a number line, counting stick or hundred square.

- Look for patterns in the ten times table, using concrete manipulatives to support. Notice the patterns in the digits – the ones are always o and the tens increase by 1 each time.

| Skill: Solve 1-step problems using multiplication | Year: 1/2 |

One bag holds 5 apples.
How many apples do 4 bags hold?
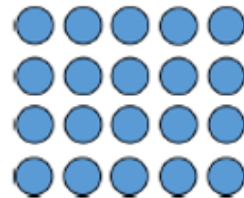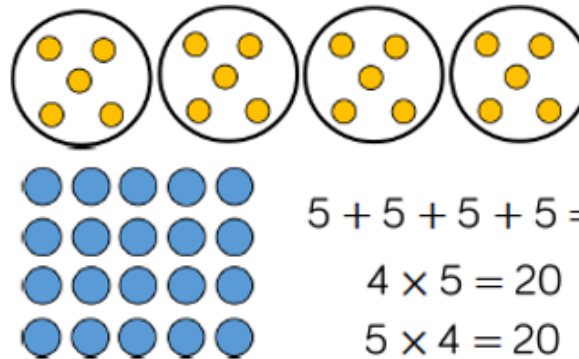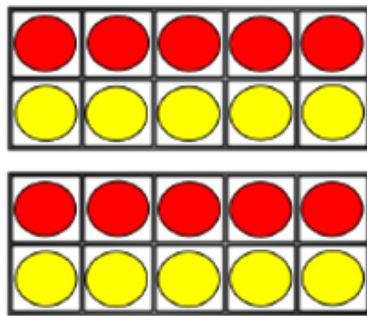
$5 + 5 + 5 + 5 = 20$

$4 \times 5 = 20$

$5 \times 4 = 20$

- Children represent multiplication as repeated addition in many different ways.

- In Year 1, children use concrete and pictorial representations to solve problems. They are not expected to record multiplication formally.

- In Year 2, children are introduced to the multiplication symbol.

| Skill: Solve 1-step problems using division (sharing) | Year: 1/2 |

20

| ? | ? | ? | ? | ? |

There are 20 apples altogether.
They are shared equally between 5 bags.
How many apples are in each bag?

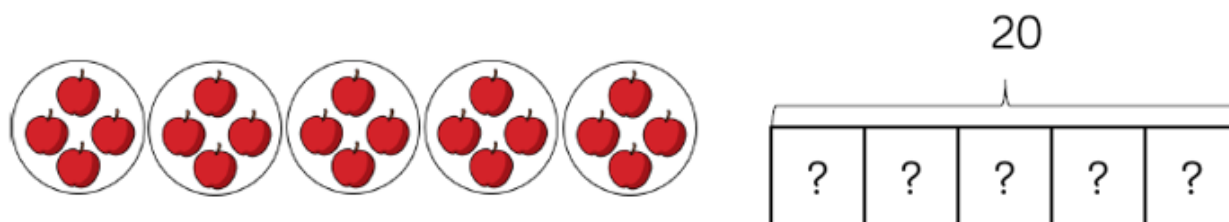$20 \div 5 = 4$

- Children solve problems by sharing amounts into equal groups.

- In Year 1, children use concrete and pictorial representations to solve problems. They are not expected to record division formally.

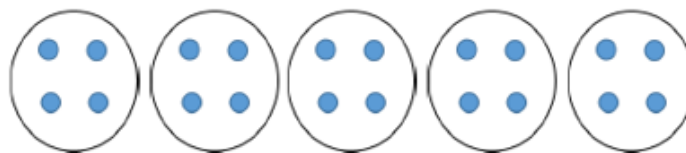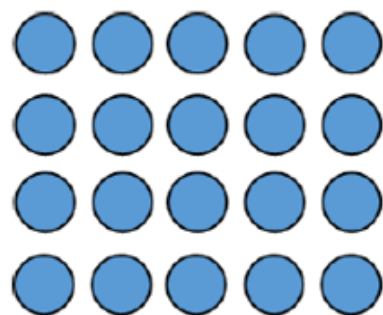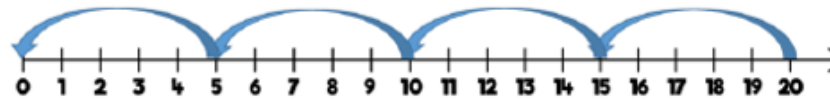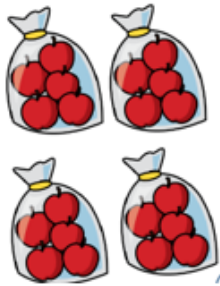- In Year 2, children are introduced to the division suymbol.

Skill: Solve 1-step problems using division (grouping)	Year: 1/2

There are 20 apples altogether.
They are put in bags of 5.
How many bags are there?
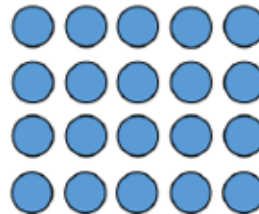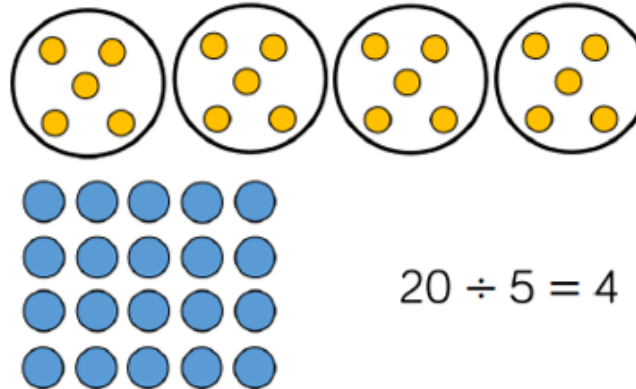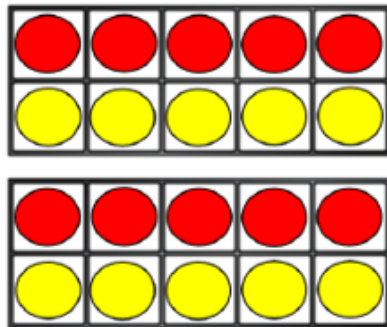
$20 \div 5 = 4$

- Children solve problems by grouping and counting the number of groups. Grouping encourages children to count in multiples and links to repeated subtraction on a number line. They can use concrete representations in fixed groups such as number shapes which helps to show the link between multiplication and division.

Fractions

Half of a Shape

These objects and shapes are split in **half**.
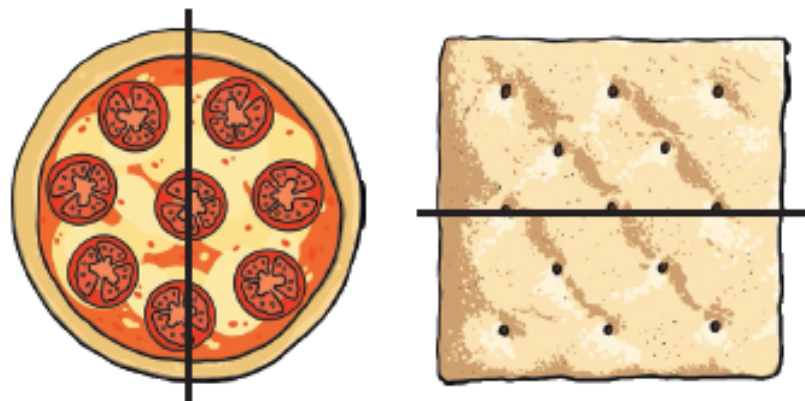
Each whole has **2 equal parts**.

Half of a Group

There are 8 balls. Half of 8 is 4.

There are 10 balloons. Half of 10 is 5.

Half of a Shape

These objects and shapes are split in **half**.
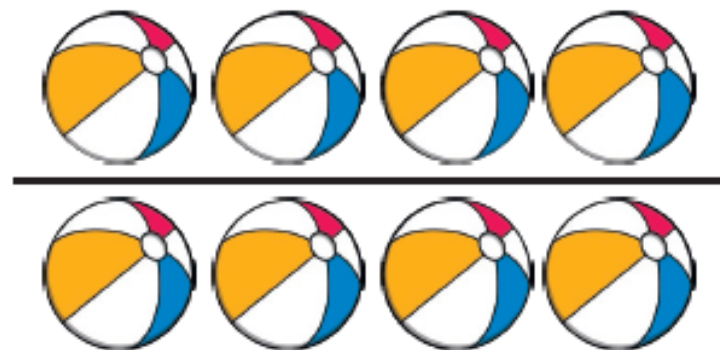
Each whole has **2 equal parts**.

Half of a Group

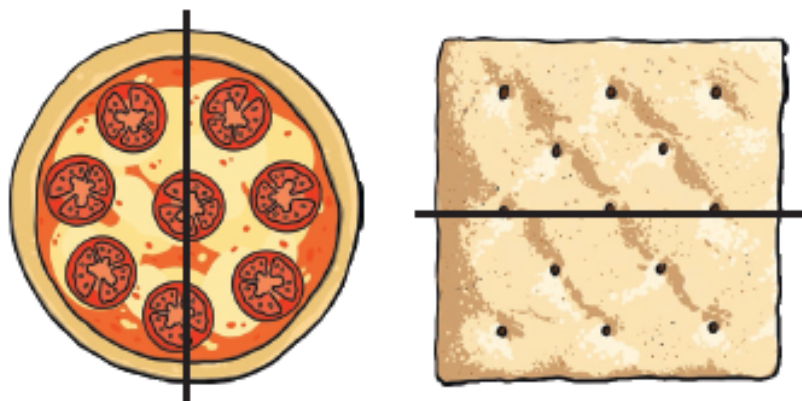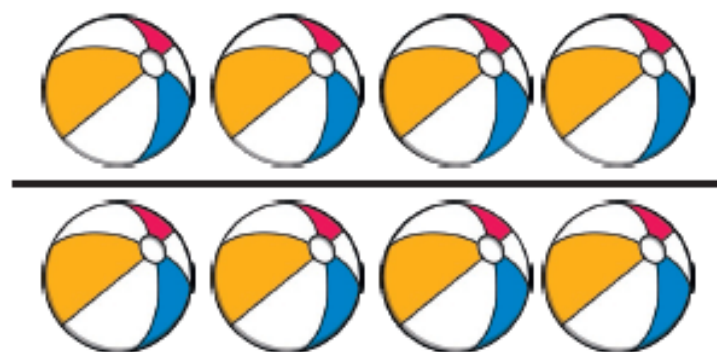There are 8 balls. Half of 8 is 4.

There are 10 balloons. Half of 10 is 5.

Time

Time — Knowledge Organiser

Before and After

before ← → after

first — next — finally

First, I brush my teeth.

Next, I look at a book.

Finally, I go to sleep.

I brush my teeth before I look at a book.

I go to sleep after I look at a book.

Days of the Week

Days of the Week
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday

Months of the Year

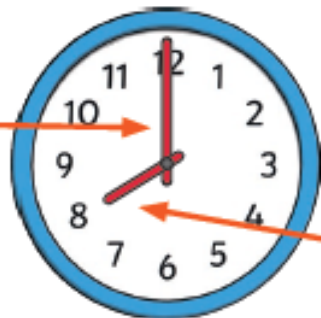| Months of the Year |
| --- |
| January |
| February |
| March |
| April |
| May |
| June |
| July |
| August |
| September |
| October |
| November |
| December |

Time | **Knowledge Organiser**

Telling the Time

The **long hand** is the **minute hand**.

The **short hand** is the **hour hand**.

The time is **8 o'clock**.

Telling the Time to the Hour

At the hour, the **minute hand** points to 12.

3 o'clock | **6 o'clock** | **9 o'clock**

The **hour hand** points to the hour.

Telling the Time to the Half Hour

At half past, the **minute hand** is half way round the clock pointing to the 6.

half past 1 | **half past 11** | **half past 7**

The hour hand will be halfway between one hour and the next.

Comparing Time

A cheetah is faster than a snail.

A bike is slower than a car.

4 o'clock is **earlier** than half past 4.

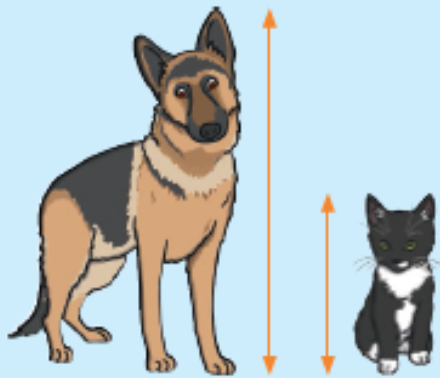Half past 4 is **later** than 4 o'clock.

Length and Height

Height

The dog is **taller** than the cat.

The cat is **shorter** than the dog.

tallest .... shortest

Length

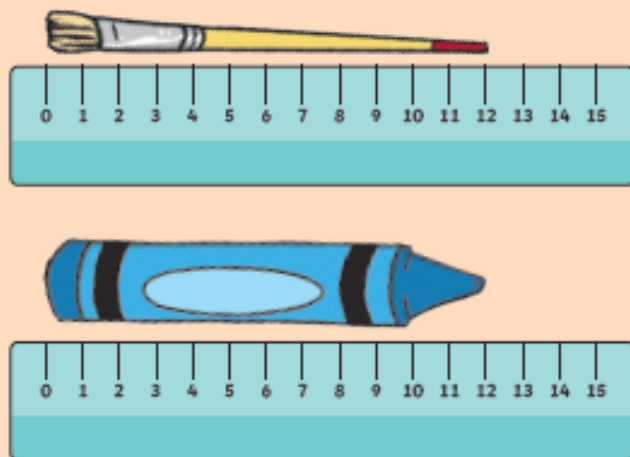The car is **shorter** than the train.

The train is **longer** than the car.

shortest

longest

Length and Height

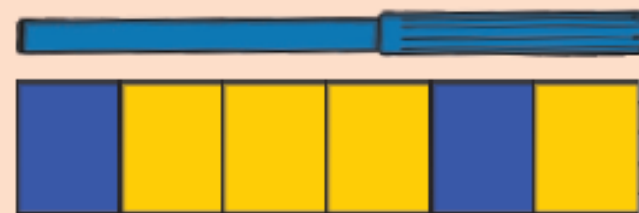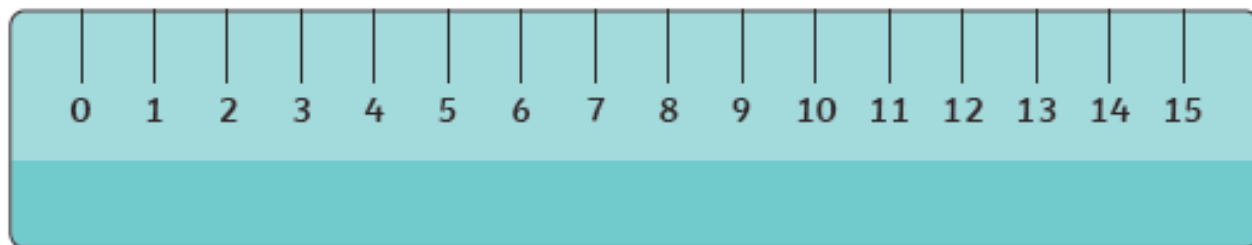| The same length.	The same height.	This pen is 6 cubes long.
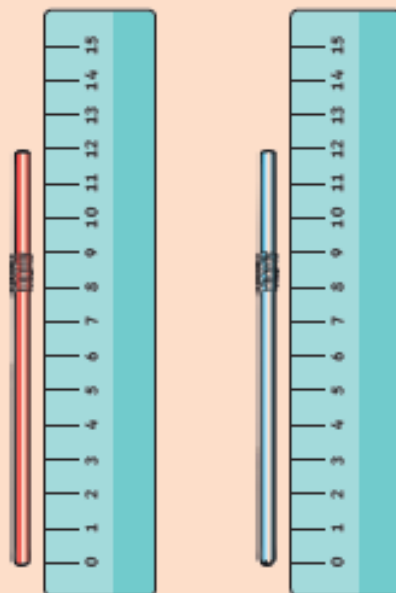
This ruler is to scale.
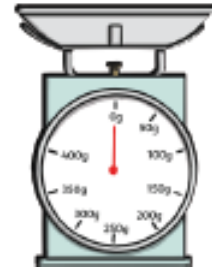
Weight and Volume

Weight and Mass

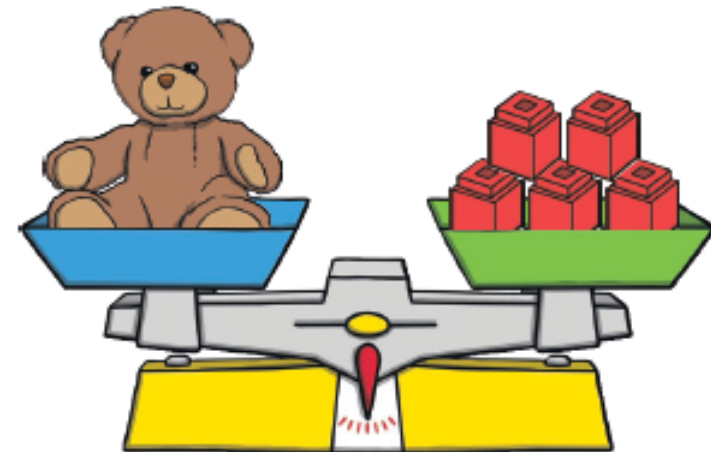We can use different types of scales to measure mass.

Compare Mass

The duck is **heavier** than the ball.

The ball is **lighter** than the duck.

Measure Mass

The teddy **weighs** the same as 5 cubes.

They are **balanced**.

Weight and Volume

Capacity and Volume

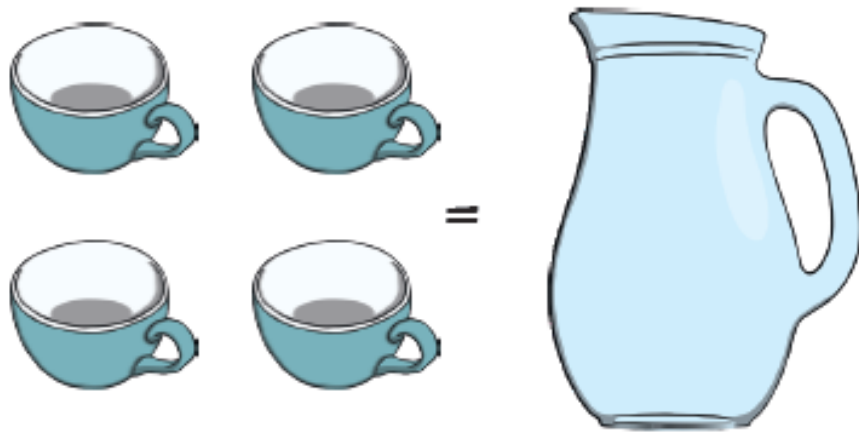We can use different containers to measure volume.

Capacity is the total amount of liquid a container can hold.
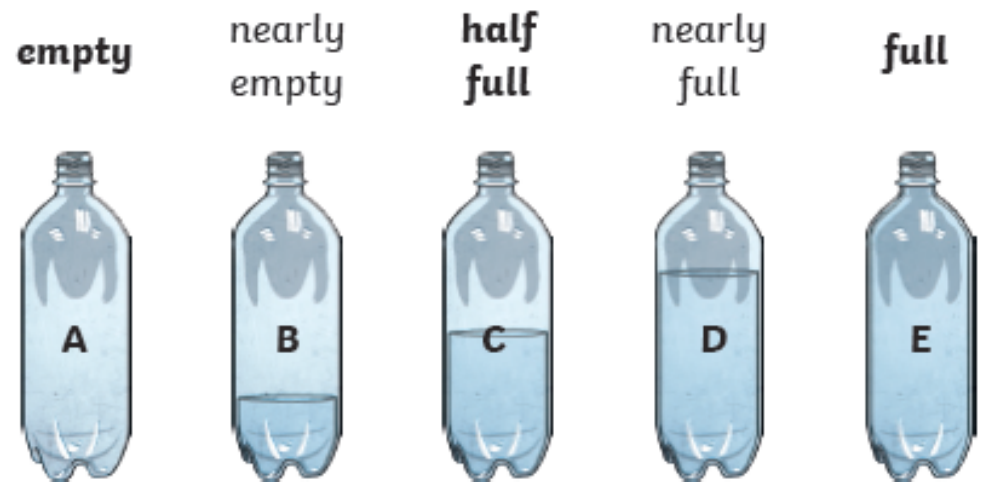
Volume is the amount of liquid that is in the container. This can vary.

Measure Capacity

It takes 4 cups to fill this jug.

=

Compare Capacity

empty | nearly empty | **half full** | nearly full | **full**

A | B | C | D | E

B has more water than A. D has less water than E.

Position and Direction

Describing Movement
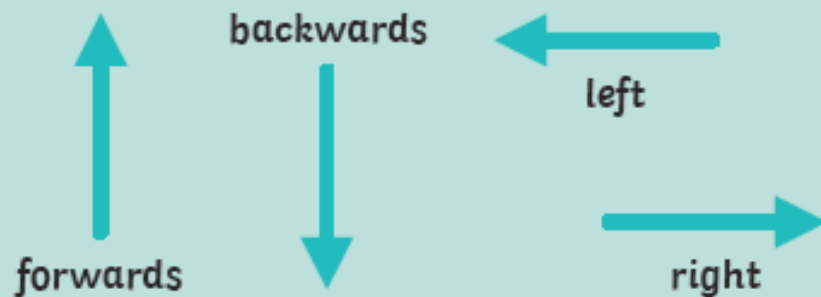
quarter turn

half turn

three-quarter turn

full turn

backwards
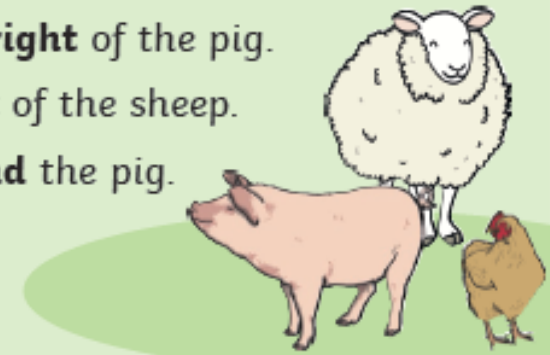
forwards

left

right

Describing Position

The pig is to the **left** of the hen.

The hen is to the **right** of the pig.

The pig is in **front** of the sheep.

The sheep is **behind** the pig.

The duck is **below** the doll.

The car is **above** the doll.

The car is on the **top** shelf.

The doll is on the **middle** shelf.

The duck is on the **bottom** shelf.

The doll is **between** the car and the duck.