

## Unit II

### Position and direction



In this unit we will ...

- ↘ Describe movement
- ↘ Describe turns
- ↘ Make patterns by turning shapes

We will use shapes to make patterns. Can you say which shape has made a half turn?



#### KEY LANGUAGE

There is some key language that children will need to know as part of the learning in this unit:

- quarter turn, half turn, three-quarter turn, whole turn
- clockwise, anticlockwise
- forwards, backwards
- left, right
- up, down
- turn
- middle
- position
- pattern
- above, below
- top, bottom
- between
- cube, cylinder
- circle, semicircle
- triangle, rectangle, square

#### STRUCTURES AND REPRESENTATIONS

Using a circle divided into quarters can help the children to visualise quarter, half and three-quarter turns around a point. Using the image of a clock face can help reinforce the direction of clockwise and anticlockwise turns. Curved arrows can also be used to illustrate the direction and fraction of a turn.

# Unit 12

## Problem solving and efficient methods



In this unit we will ...

- ✂ Compare ways of calculating
- ✂ Use mental addition and subtraction
- ✂ Look for the most efficient way to solve a problem
- ✂ Use number facts to solve problems
- ✂ Solve word problems using all four operations

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

We will use a 100 square to help us. What is 22 more than 46?



### KEY LANGUAGE

There is some key language that children will need to know as part of the learning in this unit:

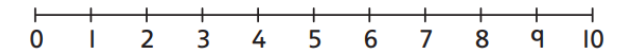
- part, whole, part-whole
- add, addition, more than, +
- subtract, subtraction, difference, change, take away, less than, -
- divide, division, share, ÷
- multiply, multiplication, lots of, ×
- altogether, groups of, total, sum, total cost
- representation, bar model, efficient

### STRUCTURES AND REPRESENTATIONS

**Bar model:** This model is crucial for this unit as it represents the questions and problems that children are presented with and enables them to identify what operation is required to solve different stages of the problem.

40	
17	?

**Number line:** This model helps children work in an efficient way, such as counting in steps of 10 rather than 1.



**100 square:** This model helps children see the links between numbers and again helps children work in a more efficient way.

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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

## Unit 13

### Time



In this unit we will ...

- ⚡ Tell the time to the hour, the half hour and quarter hour
- ⚡ Tell the time to five minutes
- ⚡ Find start and end times
- ⚡ Find out how long something lasts
- ⚡ Compare amounts of time

Do you remember which is the hour hand and which is the minute hand?



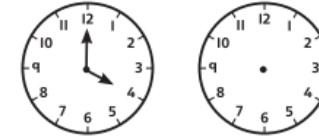
### KEY LANGUAGE

There is some key language that children will need to know as part of the learning in this unit:

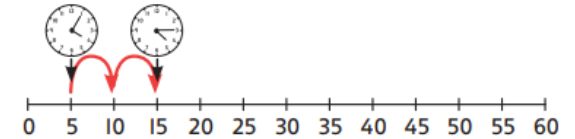
- hands, face, hour, minute, analogue
- o'clock, past, to, half past, quarter past, quarter to, quarter of an hour
- almost, same, units, last, convert, how long, left, passed, shorter, longer, fastest, slowest
- five, ten, fifteen, twenty, twenty-five, thirty, thirty-five, forty, forty-five, fifty, fifty-five, sixty
- 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60
- time, start time, end time, duration, time taken, finish, forwards, backwards, twice
- 24 hours, day, daytime, night time, around the clock, am, pm
- midday, midnight, morning, afternoon

### STRUCTURES AND REPRESENTATIONS

**Clock tool:** Pictures of clock faces are used regularly to represent times. They are used for demonstration purposes and also as the basis of problems to solve. When presented with a clock face with no hands, children will be encouraged to complete these representations to demonstrate their understanding.



**Number line:** This model helps children visualise the order of numbers. It can help them count on and back from a given starting point and help them identify patterns within the count. In this unit the number line will be used to represent minutes within an hour and so will go from 0 to 60.



# Unit 14

## Weight, volume and temperature



- In this unit we will ...
- ⚡ Compare and measure mass
  - ⚡ Compare and measure volume
  - ⚡ Measure temperature
  - ⚡ Read a thermometer

We will use < and > to compare. Which would you use to complete this sentence?

Watermelon  apple



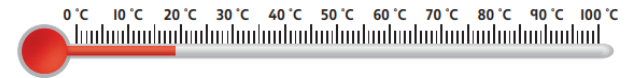
### KEY LANGUAGE

There is some key language that children will need to know as part of the learning in this unit:

- balance, comparing, estimating, reasoning, accurately, total, scale, interval
- 100s, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1,000
- mass, weight, grams (g), kilograms (kg), kilos
- volume, capacity, millilitres (ml), litres (l)
- temperature, thermometer, degrees Celsius (°C)
- more than, (>), less than (<), identical (=), divide (÷)
- heavier, heaviest, lighter, lightest
- greater, greatest, least, smaller, smallest, full, half, three-quarters, quarter, nearest to, X times as much
- hotter, hottest, warmer, warmest, colder, coldest, cooler, coolest

### STRUCTURES AND REPRESENTATIONS

**Number line:** This model helps children to understand and use different scales on a variety of measuring equipment. Draw children's attention to how a scale is effectively a number line in 'disguise'.



**Base 10 equipment:** This model is useful for helping children to compare and order different measures, and also for when numbers over 100 are introduced for the first time.

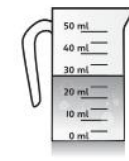
$$10 \text{ g} + 25 \text{ g} = 35 \text{ g}$$



#### Balance scales



#### Measuring jugs



#### Weighing scales



#### Thermometers

