Year ①

Small Steps Guidance and Examples

Block 3: Length & Height

White Rose Maths

Year 1 – Yearly Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value (within 10)				Number: Addition and Subtraction (within 10)				Geometry: Shape	Number: Place Value (within 20)		Consolidation
Spring	Number: Addition and Subtraction (within 20)				Number: Place Value (within 50) (Multiples of 2, 5 and 10 to be included)			Measurement: Length and Height		Measurement: Weight and Volume		Consolidation
Summer	Number: Multiplication and Division (Reinforce multiples of 2, 5 and 10 to be included)			Number: Fractions		Geometry: position and direction	Number: Place Value (within 100)		Measurement: money	Time		Consolidation

Overview

Small Steps

Compare lengths and heights

Measure length (1)

Measure length (2)

NC Objectives

Measurement: Length and Height
Measure and begin to record lengths and heights.

Compare, describe and solve practical problems for: lengths and heights (for example, long/short, longer/shorter, tall/short, double/half)

Compare Lengths & Heights

Notes and Guidance

Children use and understand the language of length such as long, short, longer, shorter, tall, small, taller, smaller etc. They recognise this language will change depending on what type of length they are describing and comparing.

They will understand that height is a type of length. Children should also be exposed to lengths that are equal to one another.

Mathematical Talk

Which person is taller/shorter?
Which pencil is shorter/longer?

Are we measuring the height or length of something?
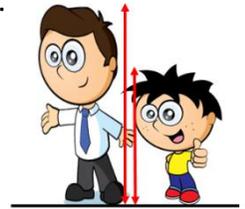What is the same? What is different?

How can we describe the height of the houses?
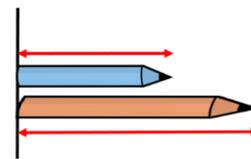
Varied Fluency

1 Use the words **taller** and **shorter** in the sentence stems to compare the height of the man and the boy.

The man is [   ] than the boy.

The boy is [   ] than the man.

2 Use the words **longer** and **smaller** in the sentence stems to compare the length of the blue pencil and the orange pencil.

The blue pencil is [   ] than the orange pencil.

The orange pencil is [   ] than the blue pencil.

3 Choose the correct work from the word bank to create your own sentence to compare the height of the two houses.

longer	taller	higher
long	equal	smaller
shorter	small	same

Compare Lengths & Heights

Reasoning and Problem Solving

Some children are comparing the height of the woman and the boy.

Demi

The woman is tall than the boy.

Neve

The boy is short than the woman.

Harpreet

The woman is longer than the boy.

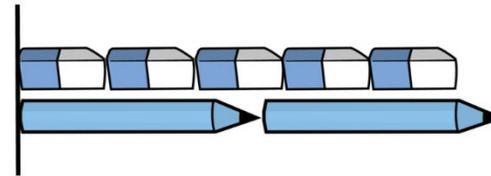Can you improve their sentences to make them more accurate?

Possible answer:
Demi – the woman is **taller** than the boy.
Neve – the boy is **shorter** than the woman.
Harpreet – the woman is **taller** than the boy.
Taller is a better word than longer because we are comparing height.

How many sentences can you write to compare the erasers and the pencils?

Using classroom equipment, can you find an object which is longer than your rubber but shorter than your pencil?

Can you find a friend who is shorter than you but taller than your other friend?

Possible answer:
Two pencils are longer than five rubbers.
One pencil is shorter than three rubbers.
Etc.

Children could explore other items and situations where they are asked to compare more than two objects.

Measure Length (1)

Notes and Guidance

Children use non-standard units such as cubes, hands and straws to measure length and height.

They recognise that different non-standard units are more suitable for measuring the length and height of different objects.

They need to understand that non-standard units should be exactly in line with the object to get an accurate measurement.

Mathematical Talk

What other things could you use to measure how long a pencil is?

Would you use the same piece of equipment to measure the length of the classroom? Why?

What could you use to measure how tall you are?

How much longer is the pencil than the rubber?
How much shorter is the rubber than the pencil?

Varied Fluency

1   Use cubes to measure the length of objects around your classroom. Write sentence for each object.

The pencil is ☐ cubes long.
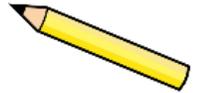
The ☐ is ☐ cubes long.

2   Tom is 5 sticks tall.
Choose a suitable piece of equipment to measure how tall your friend is.
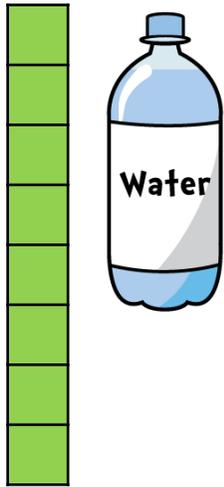
3   Which is longer – the pencil or the rubber?

The ☐ is longer than the ☐

Choose a piece of equipment to work out how much longer the object is.

Measure Length (1)

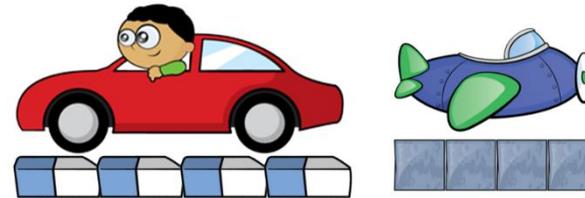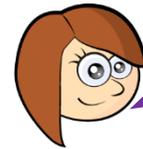## Reasoning and Problem Solving

True or false?

The water bottle is 8 cubes tall.
Explain your answer.

False because the cubes should be level with the bottom of the water bottle.
The water bottle is 5 cubes tall.

Sally measures the length of two toys.

She says,

The toys are the same length.

Do you agree with Sally?
Explain your answer.

Sally is wrong. Both toys are 4 units long, but the rubber and the cubes are different lengths so the toys are not the same length.

Measure Length (2)

Notes and Guidance

Children build on prior knowledge of measuring length and height using non-standard units and apply this to measuring using a ruler.

They should be able to understand that objects can vary in length and size, so a standard unit of measurement is required.

It is important that children know to measure from 0 cm.

Mathematical Talk

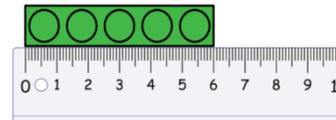What do the numbers on the ruler mean? (1 cm etc)

Where should we place the end of the object to start measuring?

Does the ruler look like anything else we have used? (number line)

Can you count how many cm the _____ measures?

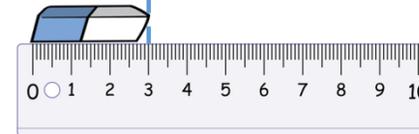How does using a ruler help us to compare objects?

Varied Fluency
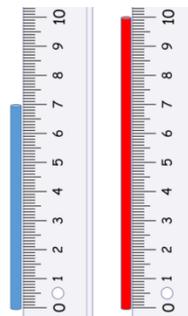
1 How long is the building block?

The building block is [ ] cm long.

2 What is the length of the rubber?

The rubber measures [ ] cm.

3 Which straw is the tallest?

The blue straw is [ ] cm tall.
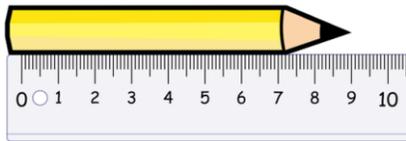
The red straw is [ ] cm tall.

The [ ] straw is the tallest.

The [ ] straw is the shortest.

Measure Length (2)

Reasoning and Problem Solving

Chris measures the length of the pencil.

He says,

> The length of the pencil is 9 cm.

Do you agree with Chris?
Explain why.

Chris is wrong because he has started measuring from the end of the ruler not from 0
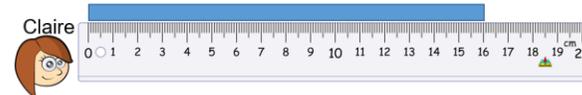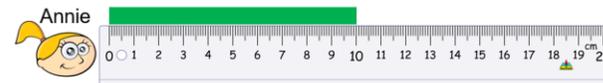
Annie, Jack and Claire are comparing ribbons that they have.

Unfortunately, Jack has misplaced his ribbon.

He says,

> My ribbon is shorter than Claire's, but longer than Annie's.

What length could Jack's ribbon be?

Possible answers:

11 cm
12 cm
13 cm
14 cm
15 cm