



Maths

Addition and Subtraction

Need a coherently planned sequence of lessons to complement this resource?

Lesson Breakdown

Below is our suggestion for the most coherent and progressive sequence to teach this area of Planit Maths steps on the White Rose Maths scheme of learning although we have not aimed to mirror the exact order in which the resources are presented.

Recall and Use Facts (1): Number Facts up to 10

This computer game themed lesson is designed to help children secure their understanding of number pairs. Children use a range of methods to investigate and check their understanding. This lesson includes differentiated activity sheets and mastery cards to help children.

NC Statement: Recall and use facts up to 20 fluently and derive and use related facts up to 100.

Lesson Aim: To recall and use number facts up to 10.

Recall and Use Facts (2): Number Facts up to 20

This lesson teaches children to use familiar number facts to solve and create number pairs. Children use a range of methods to investigate and check their understanding. This lesson includes differentiated activity sheets and mastery cards to help children develop fluency.

NC Statement: Recall and use facts up to 20 fluently and derive and use related facts up to 100.

Lesson Aim: To recall and use number facts up to 20.

Solve Problems (1): Using Different Representations to Solve Problems

Children learn to solve addition and subtraction problems using concrete objects and pictorial representations, including those involving numbers, quantities and measures, applying their increasing knowledge of mental and written methods. This lesson includes Diving into Mastery activity cards with fluency reasoning.

NC Statement: Solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures, applying their increasing knowledge of mental and written methods.

Lesson Aim: To solve addition and subtraction problems using objects, pictures and models.

Introduction

In this unit, children will learn to recall and use addition and subtraction facts. They use a variety of different models, images and equipment to build their number sense, enabling them to use facts flexibly. They learn different strategies to help them add and subtract numbers efficiently, explaining their methods with concrete resources or jottings. Methods include: adding a unit to a ten, adding three single-digit numbers and adding and subtracting multiples of ten leading to pairs of two-digit numbers. They find the difference between numbers and reason about when it is quicker to find the difference or take away. They build up their understanding of commutativity and inverse relationships, using these to solve increasingly complex missing number problems. They apply their learning to problem-solving, and are able to ask questions, explain their choices and demonstrate their methods.

Resources

In addition to your standard maths resources, you will need:

- digital cameras

Assessment Statements

By the end of this unit:

children working towards the expected level will be able to:

- recall and use at least four out of six number facts to ten and derive their associated subtraction facts;
- add and subtract two-digit numbers and ones, and two-digit numbers and tens, where no regrouping is required;
- explain their addition and subtraction methods verbally, in pictures or using apparatus;
- understand that two numbers can be added in any order and the answer will be the same.

children working at the expected level will be able to:

- recall number facts to add and within ten and subtraction facts. Use these to derive number facts to add and within 20 and 100;
- add and subtract within 100: a two-digit number and ones, a two-digit number and tens, two two-digit numbers;
- add three one-digit numbers using efficient methods;
- understand that addition is commutative and subtraction is not, and explain what this means;
- use the inverse relationship between addition and subtraction to solve problems and check calculations;
- solve addition and subtraction problems in context of quantities and measures, using pictures and mentally.

Addition and Subtraction

Maths | Year 2 | Steps to Progression Overview

The aim of this overview is to support teachers using Planit Maths to show the most coherent and progressive sequence to teach each area of maths. We also want to fully support teachers who use the White Rose Maths scheme of learning to make full use of the resources available within Planit Maths. Wherever possible, lesson packs have been matched to each of the small steps on the White Rose Maths scheme of learning.

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			Number: Addition and Subtraction				Measurement: Money		Number: Multiplication and Division		
Spring	Number: Multiplication and Division		Statistics		Geometry: Properties of Shape			Number: Fractions		Measurement: Length and Height	Consolidation	
Summer	Position and Direction		Problem Solving and Efficient Methods		Measurement: Time		Measurement: Mass, Capacity and Temperature		Investigations			

See our [Addition and Subtraction Steps to Progression](#) document.

Twinkl Planit is our award-winning scheme of work with over 4000 resources.



Using Different Representations to Solve Problems



Aim

- To solve addition and subtraction problems using equipment and models.

Success Criteria

- I can use equipment to solve a problem.
- I can use a model to solve a problem.
- I can choose a representation to help me solve a problem.

Remember It



Each of you will be given a number card. You will then be given a target number to make. Form a group of 3 or 4 children, where you can add and/or subtract your numbers to make the target number. Good luck!

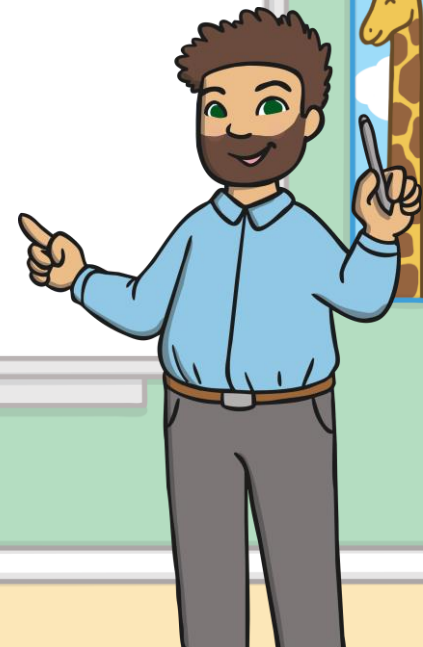
We made a group of 3.
To make 15, we could do
 $10 + 7 - 2$.

15

10

7

2



Remember It



Find a way of making...



Remember It



Find a way of making...



Remember It



Find a way of making...



Remember It



Find a way of making...



A Day Out



Ben and Cho are very excited.
They have won a day out to the Great North Show.

There's so much to do that they can't decide what to start with!



A Day Out



How much does Ben have to spend now?



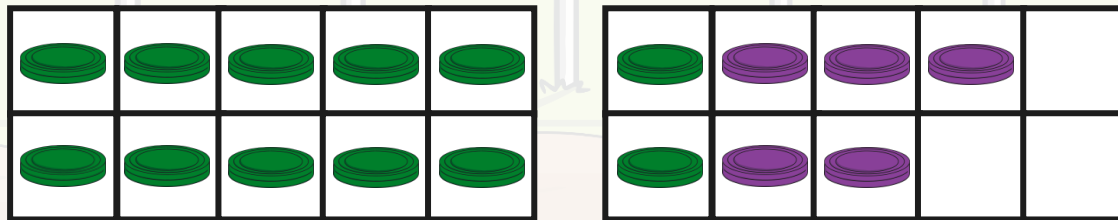
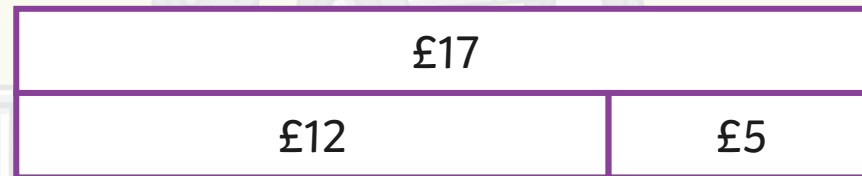
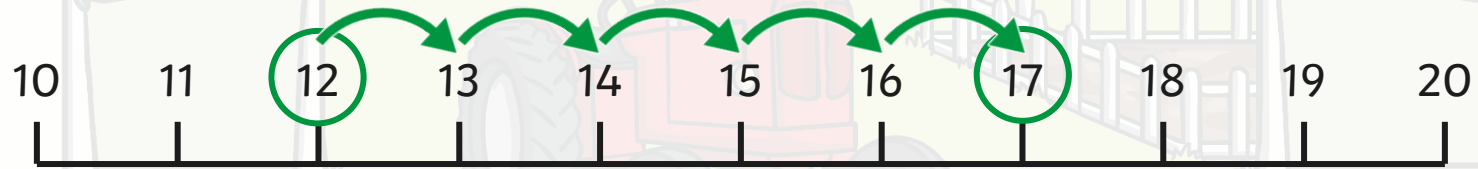
A Day Out



Ben has been given some more money so we're adding.

$$£12 + £5 = ?$$

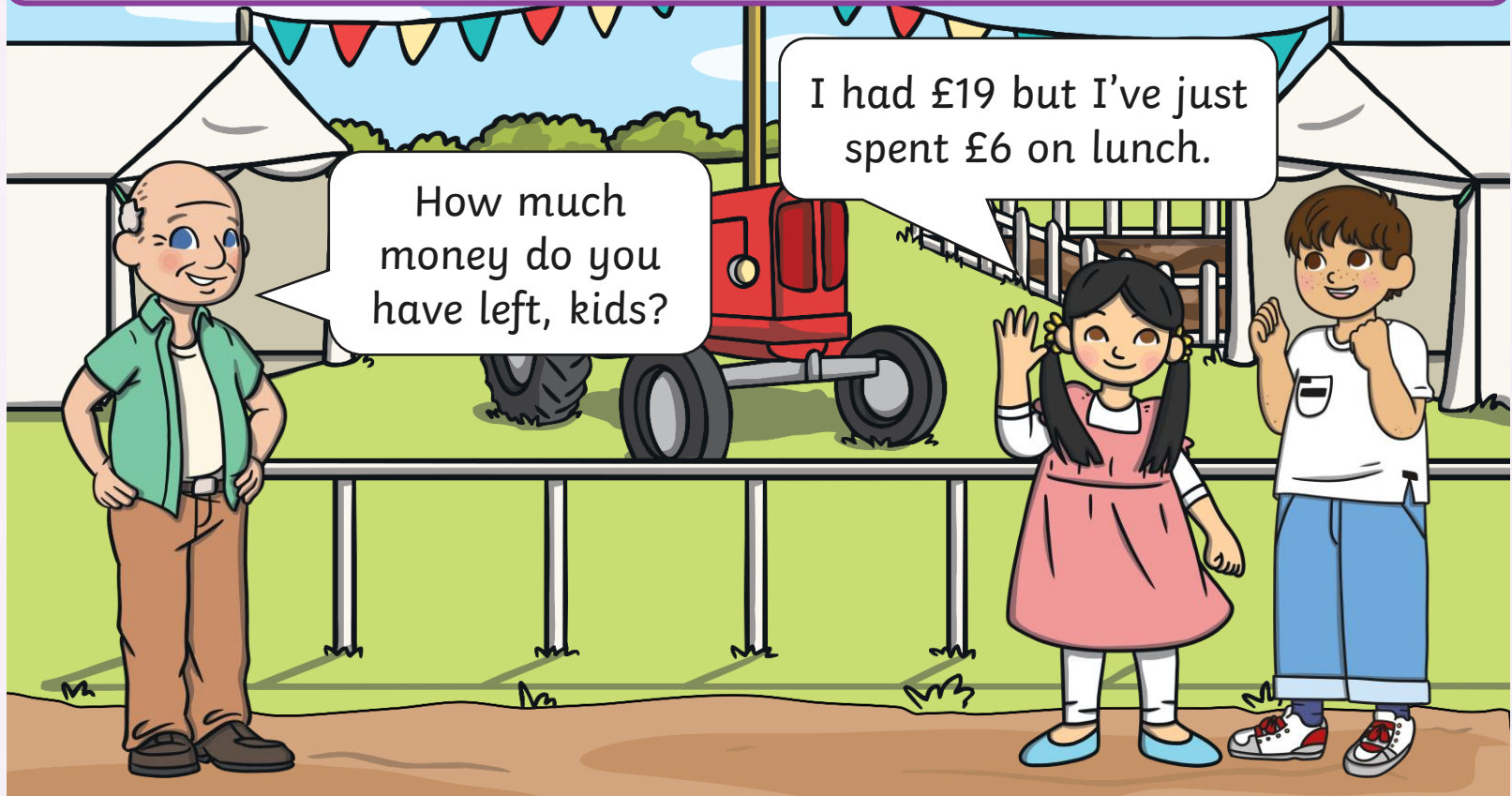
We could use equipment.



A Day Out



How much does Cho have to spend now?



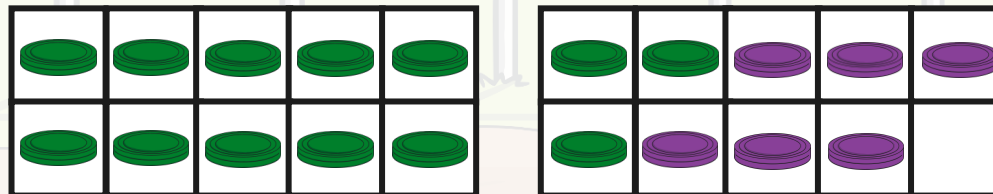
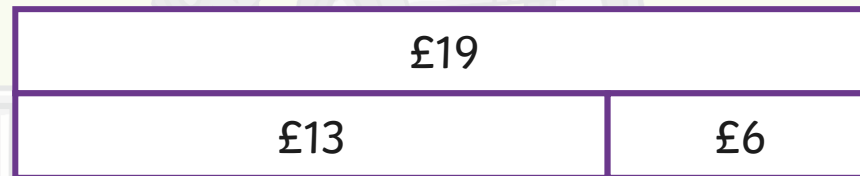
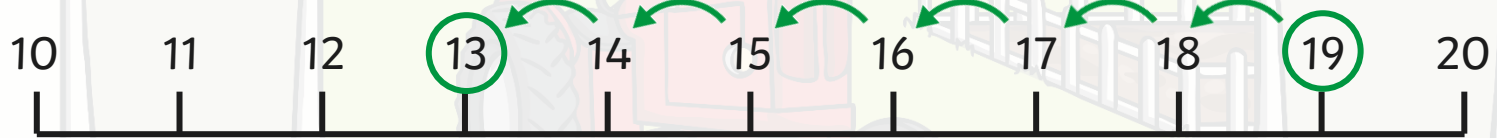
A Day Out



Cho has spent some money so we're subtracting.

$$£19 - £6 = ?$$

We could use equipment.



Bouncy Castle



Cho and Ben went down the slide on the bouncy castle 18 times altogether. Cho went down 15 times. How many goes did Ben have?



Bouncy Castle

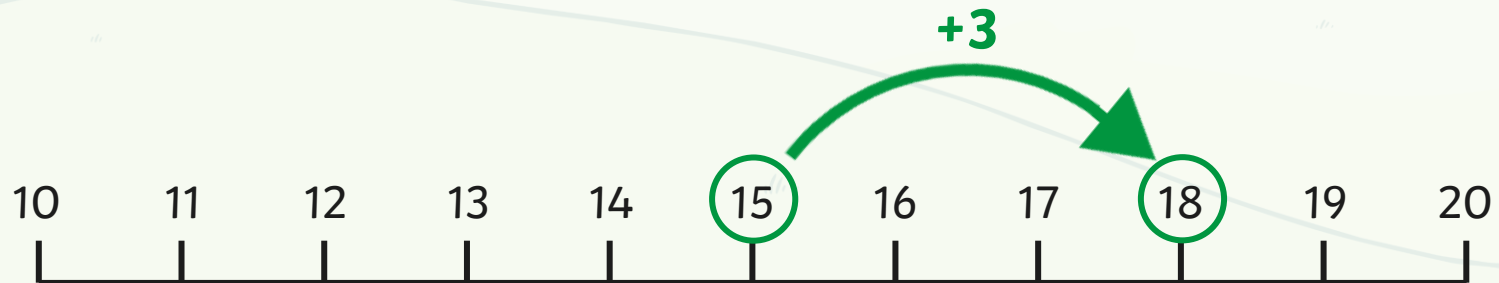


Cho and Ben went down the slide on the bouncy castle 18 times. Cho went down 15 times. How many goes did Ben have?

We don't know how many turns Ben had. How could we work it out?

18	
15	?

We could use a number line.



Bouncy Castle

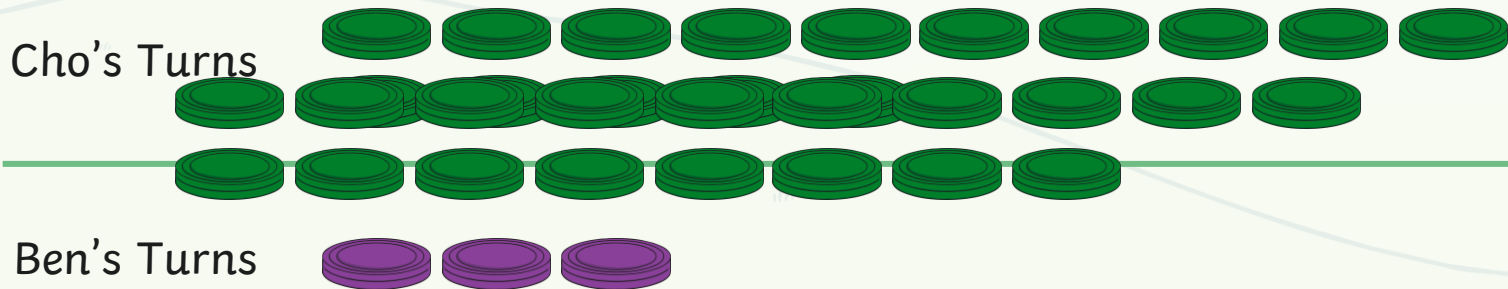


Cho and Ben went down the slide on the bouncy castle 18 times. Cho went down 15 times. How many goes did Ben have?

We don't know how many turns Ben had. How could we work it out?

18	
15	?

We could use equipment.



Bouncy Castle

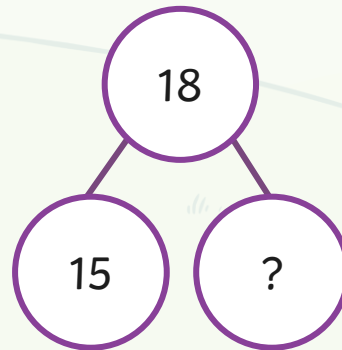


Cho and Ben went down the slide on the bouncy castle 18 times.
Cho went down 15 times. How many goes did Ben have?

We don't know how many turns Ben had. How could we work it out?

18	
15	?

We could draw a picture.



Bouncy Castle



Cho and Ben went down the slide on the bouncy castle 18 times.
Cho went down 15 times. How many goes did Ben have?

We don't know how many turns Ben had. How could we work it out?

18	
15	3

Ben had 3 goes.



Winnings



Piggy Back Race

1st Place:
11 points



2nd Place:
7 points



3rd Place:
4 points



Egg and Spoon Race

1st Place:
12 points



2nd Place:
6 points



3rd Place:
3 points



Wheelbarrow Race

1st Place:
15 points




2nd Place:
10 points



3rd Place:
5 points



Cho came 2nd in the egg and spoon race and 2nd in the in the wheelbarrow race. 

Ben came 1st in the piggy back race and 3rd in the egg and spoon race. 

How much did they both win? How much less did Ben win than Cho?

Show your thinking in as many ways as you can, using equipment or models.

Piggy Back Race

1st Place: 11 points



2nd Place: 7 points



3rd Place: 4 points



Egg and Spoon Race

1st Place: 12 points



2nd Place: 6 points



3rd Place: 3 points



Wheelbarrow Race

1st Place: 15 points



2nd Place: 10 points



3rd Place: 5 points

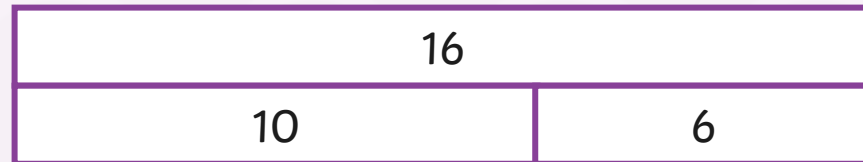


Winnings



$$10 + 6 = 16$$

Cho won 16p.



$$11 + 3 = 14$$

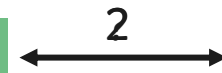
Ben won 14p.



Ben scored 2 points less than Cho.

Cho's winnings: 16p

Ben's winnings: 14p

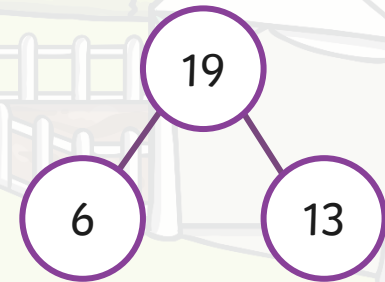
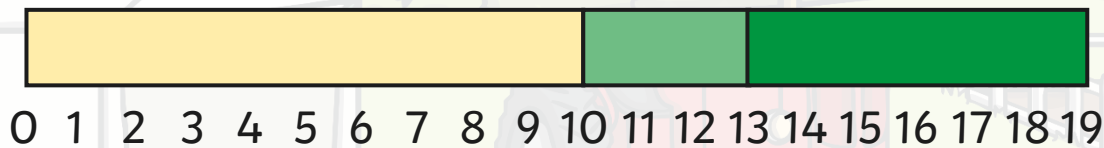


The Great North Show

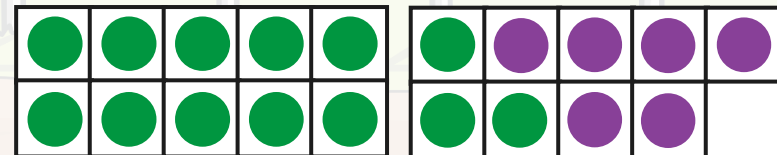


Work with a partner to solve the problems on your activity sheet.
Represent your work in as many ways as you can.

Here are some examples:



19	
13	6



Click on a model to make the rest disappear. Click [here](#) to show them all.

The Great North Show



The Great North Show

To solve addition and subtraction problems using equipment and models.

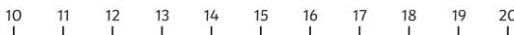
Work with a partner to solve the problems and fill in the missing gaps on the models. Use equipment to help you and talk to your partner about which methods you find helpful.

Grandad has brought his prize-winning sheep to the show. How many prizes have the sheep won altogether?



	2	3	5

The dog trainer has 16 treats in her pocket but cheeky Barney eats 5 of them. How many treats does the trainer have left?



	16		

The Great North Show

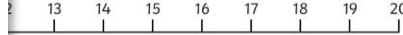
To solve addition and subtraction problems using equipment and models.

Work with a partner to solve the problems and fill in the missing gaps on the models. Use equipment to help you and talk to your partner about which methods you find helpful.

Grandad has brought his prize-winning cows to the show. How many prizes have the cows won altogether?



The dog trainer has 20 treats for a pet show but cheeky Barney eats 7 of them. How many treats are left for the other dogs?

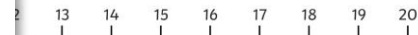
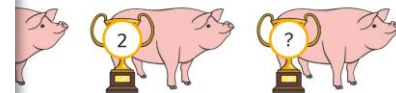


The Great North Show

To solve addition and subtraction problems using equipment and models.

Work with a partner to solve the problems and fill in the missing gaps on the models. Use equipment to help you and talk to your partner about which methods you find helpful.

Grandad has brought his prize-winning pigs to the show. How many points did the 3rd pig get?



The dog trainer has 20 treats but cheeky Barney steals some. How many treats did Barney steal?





Dive in by completing your own activity!



Using Different Representations to Solve Problems



Cho and Ben visit the sweet stall at the show.

Penny Sweets!

Cola Bottle 1p
Gummy Bear 3p
Sour Cherry 2p
Lollypop 5p
Chocolate Frog 14p



Cho

I bought a
cola bottle and
a lollypop.

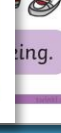


Ben

I bought a
gummy bear and
a chocolate frog.

Who spent the most?
How much more did they spend?

Each child had 20p to spend.
How much change did they each get?



Grandad's Prizes



Piggy Back Race

1st Place:
11 points



2nd Place:
7 points



3rd Place:
4 points



Egg and Spoon Race

1st Place:
12 points



2nd Place:
6 points



3rd Place:
3 points



Wheelbarrow Race

1st Place:
15 points



2nd Place:
10 points



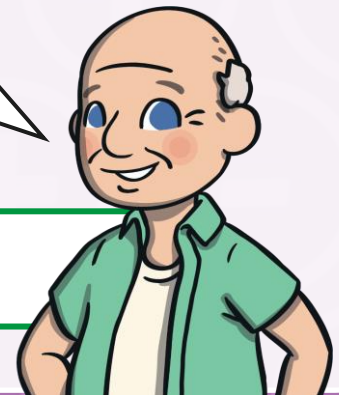
3rd Place:
5 points



Grandad scored 19
points in 3 races.

Show your thinking in as
many ways as you can,
using equipment or models.

Where did he come in each race?



Grandad's Prizes



Piggy Back Race

1st Place:
11 points



2nd Place:
7 points



3rd Place:
4 points



Egg and Spoon Race

1st Place:
12 points



2nd Place:
6 points



3rd Place:
3 points



Wheelbarrow Race

1st Place:
15 points



2nd Place:
10 points



3rd Place:
5 points



1st place in piggy back,
3rd place in egg and spoon,
3rd place in wheelbarrow.

19		
11	3	5

What strategy did you use? Did you try different combinations? Did you look at the ones column? Could you represent this in different ways?

Aim



- To solve addition and subtraction problems using equipment and models.

Success Criteria

- I can use equipment to solve a problem.
- I can use a model to solve a problem.
- I can choose a representation to help me solve a problem.

