



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 the scheme.

Recall and Use Facts (1): Number Facts up to 10
This computer game themed lesson is designed to help children secure their recall of number facts up to 10. Children use a range of methods to investigate and check their understanding. They use a range of methods to investigate and check their understanding. They use a range of methods to investigate and check their understanding.

Recall and Use Facts (2): Number Facts up to 20
This lesson teaches children to use familiar number facts to solve and create problems. Children use a range of methods to investigate and check their understanding.

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.

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 and within ten and subtraction facts. Use these to derive number facts to 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 but 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.



Number Facts within 20



twinkl

Aim

- To recall and use addition and subtraction facts within 20.

Success Criteria

- I can recall addition facts within 20.
- I can recall subtraction facts within 20.
- I can use known facts in a context.

Remember It

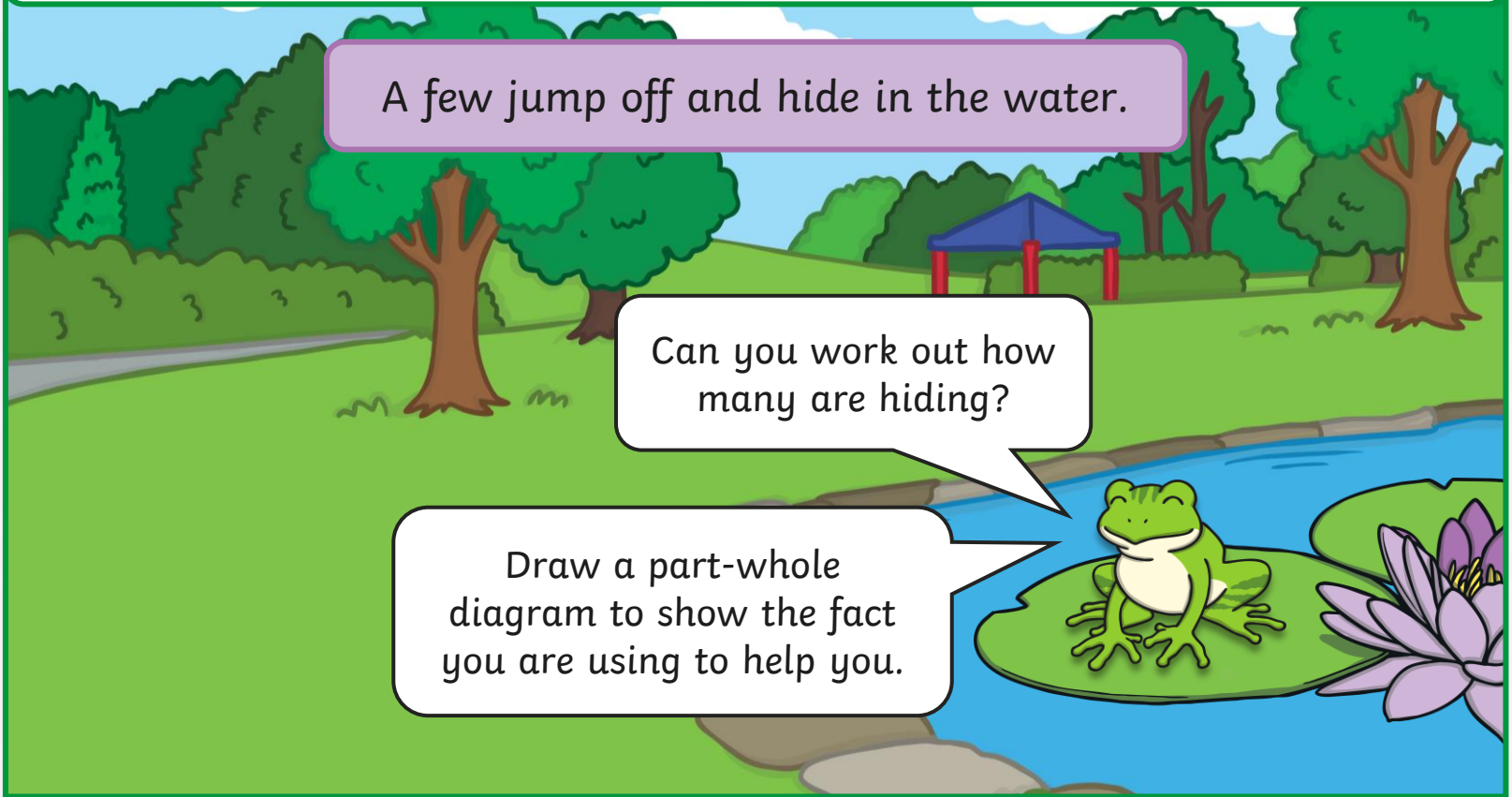


Some frogs are sitting on the lily pads.

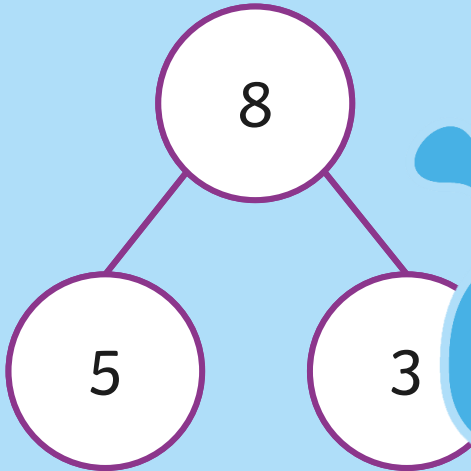
A few jump off and hide in the water.

Can you work out how many are hiding?

Draw a part-whole diagram to show the fact you are using to help you.

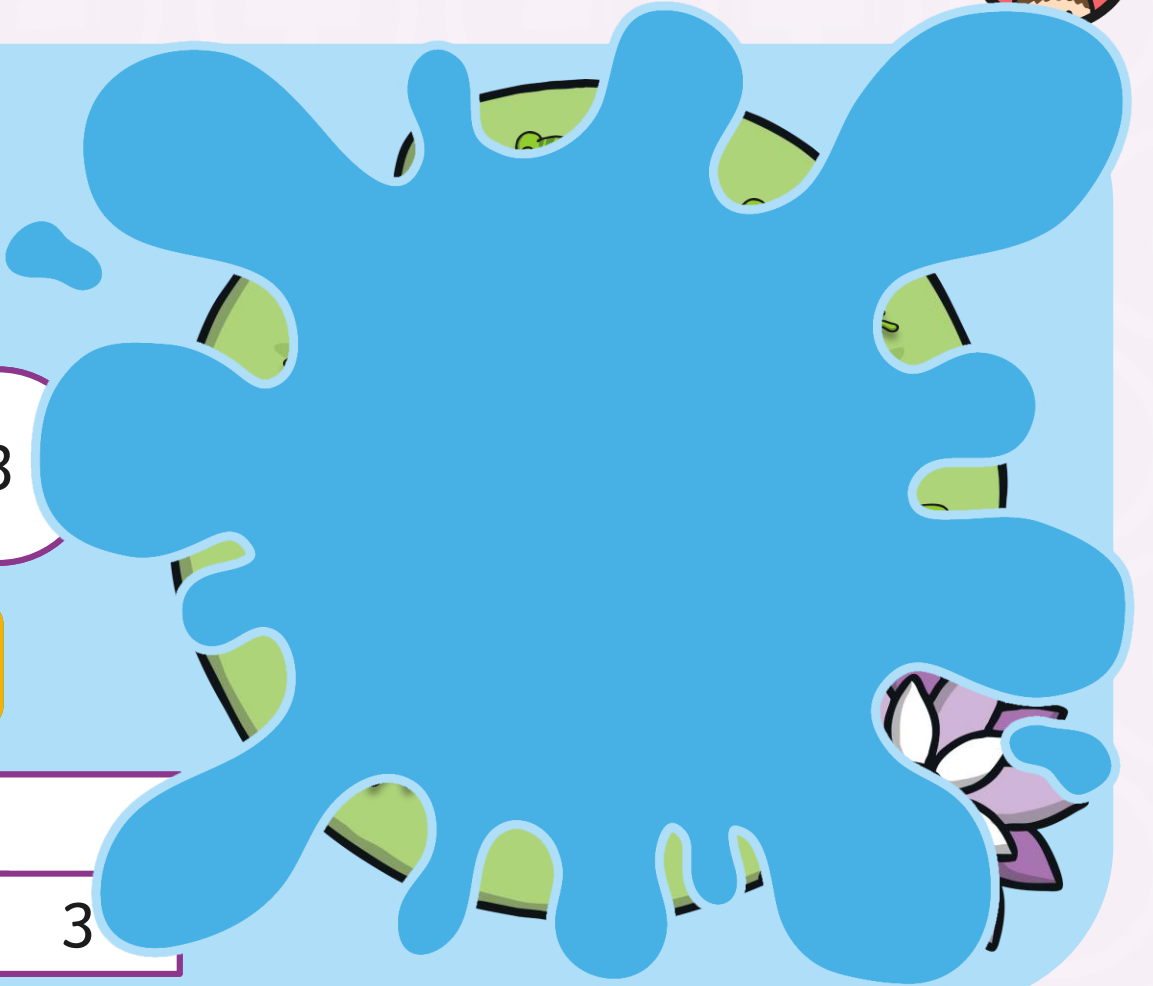


Remember It

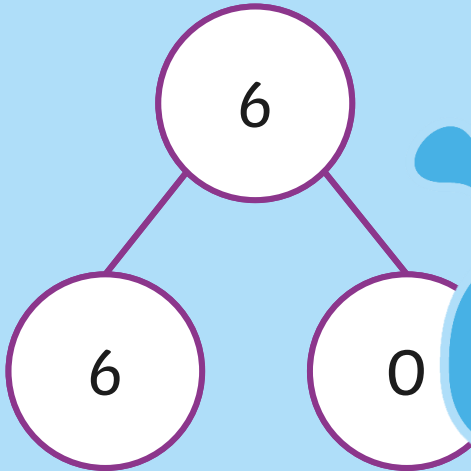


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8	
5	3



Remember It

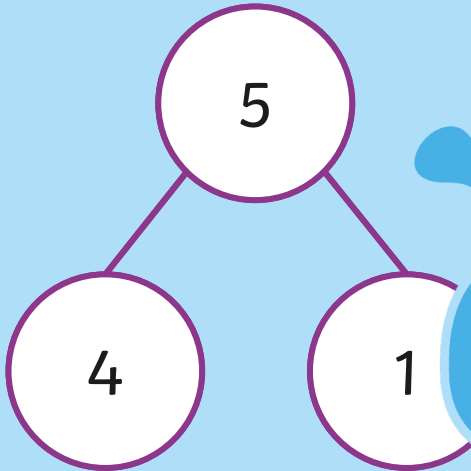


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6
6

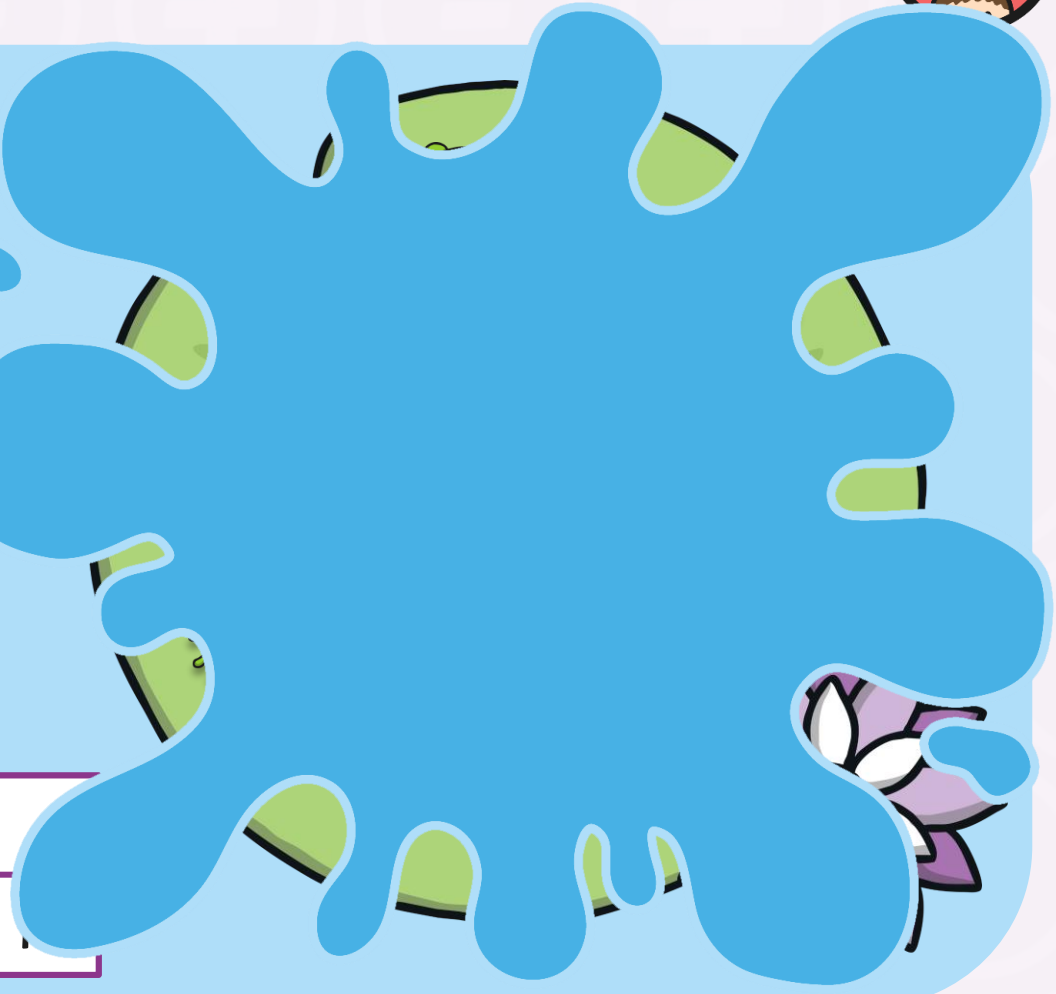


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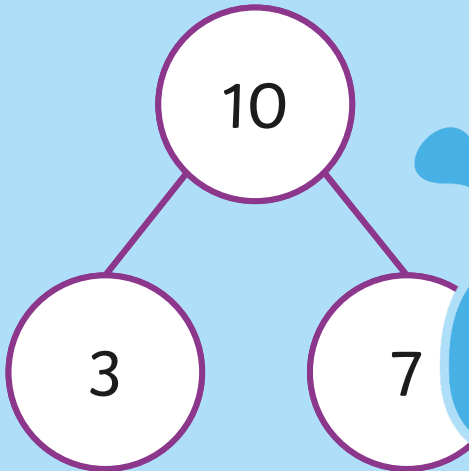


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5	
4	1



Remember It

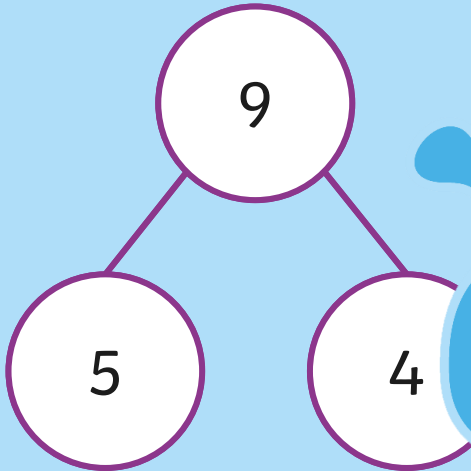


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10	
3	7



Remember It

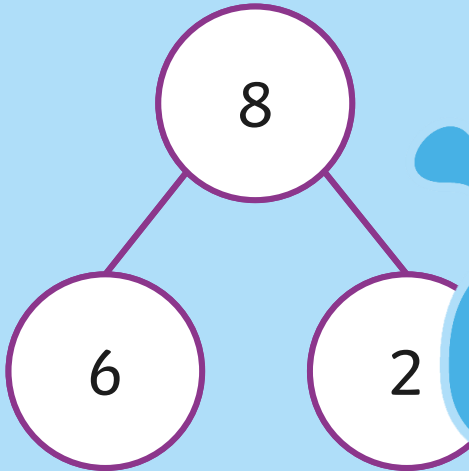


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9	
5	4



Remember It



hide

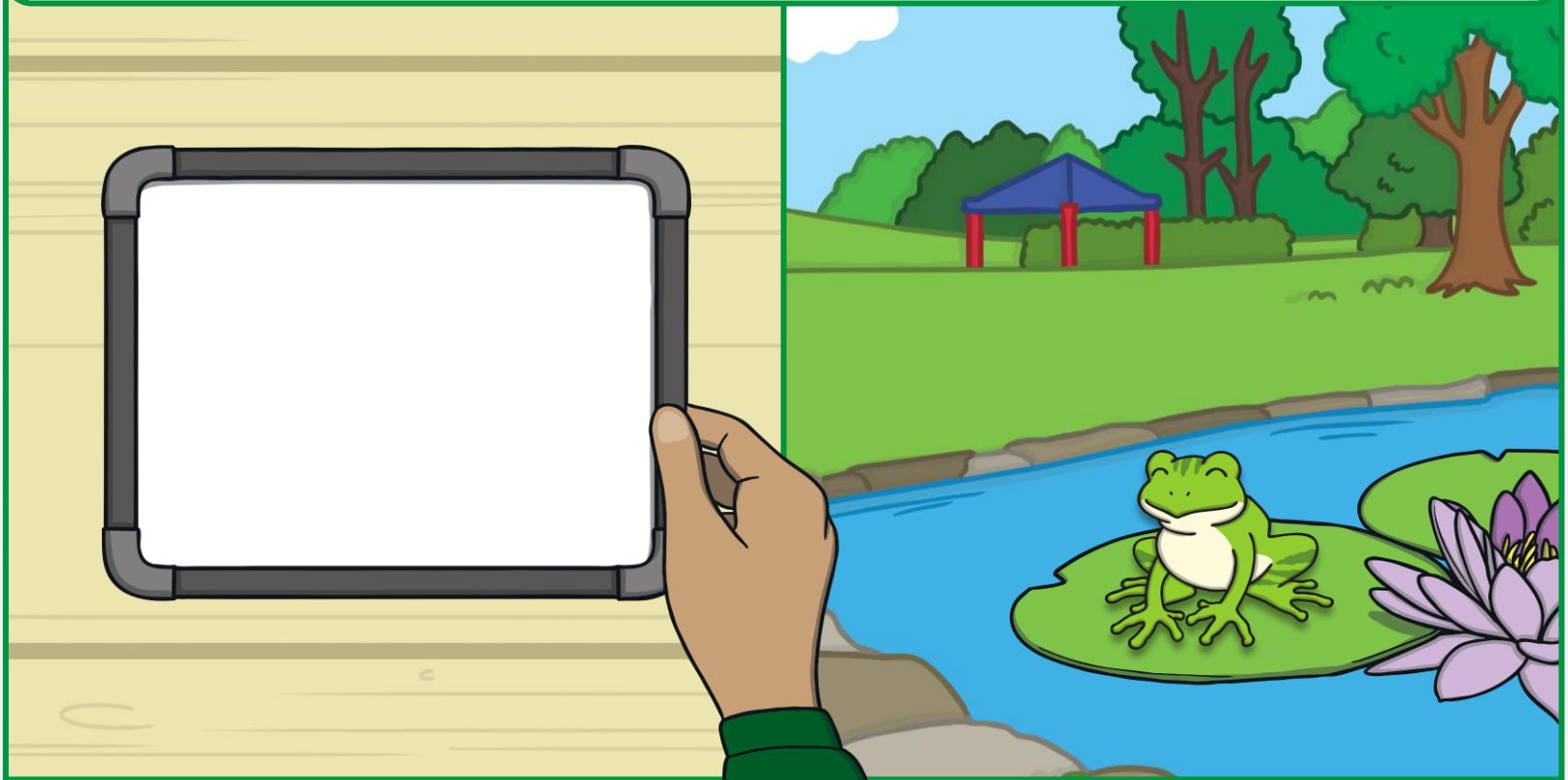
8	
6	2



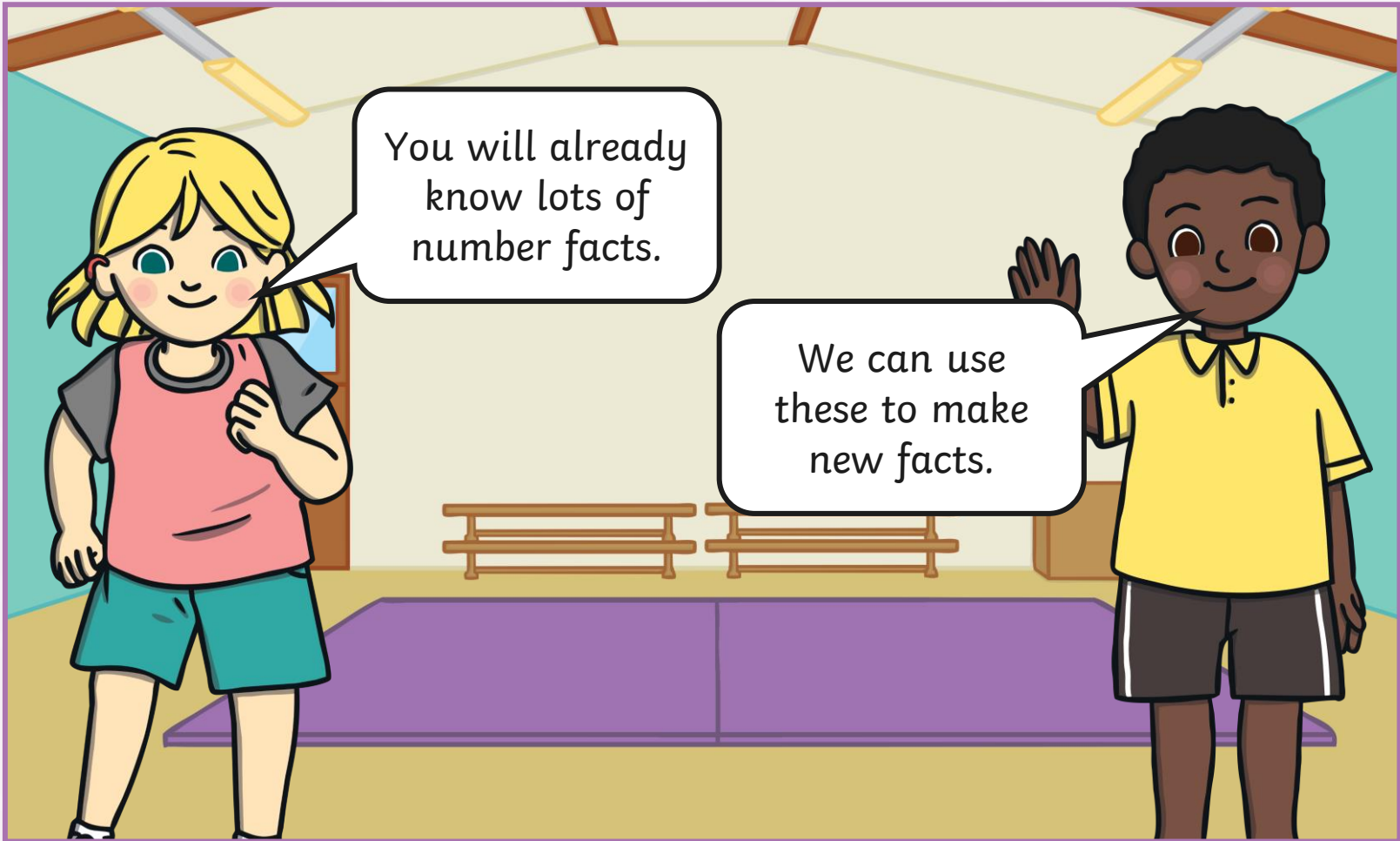
Remember It



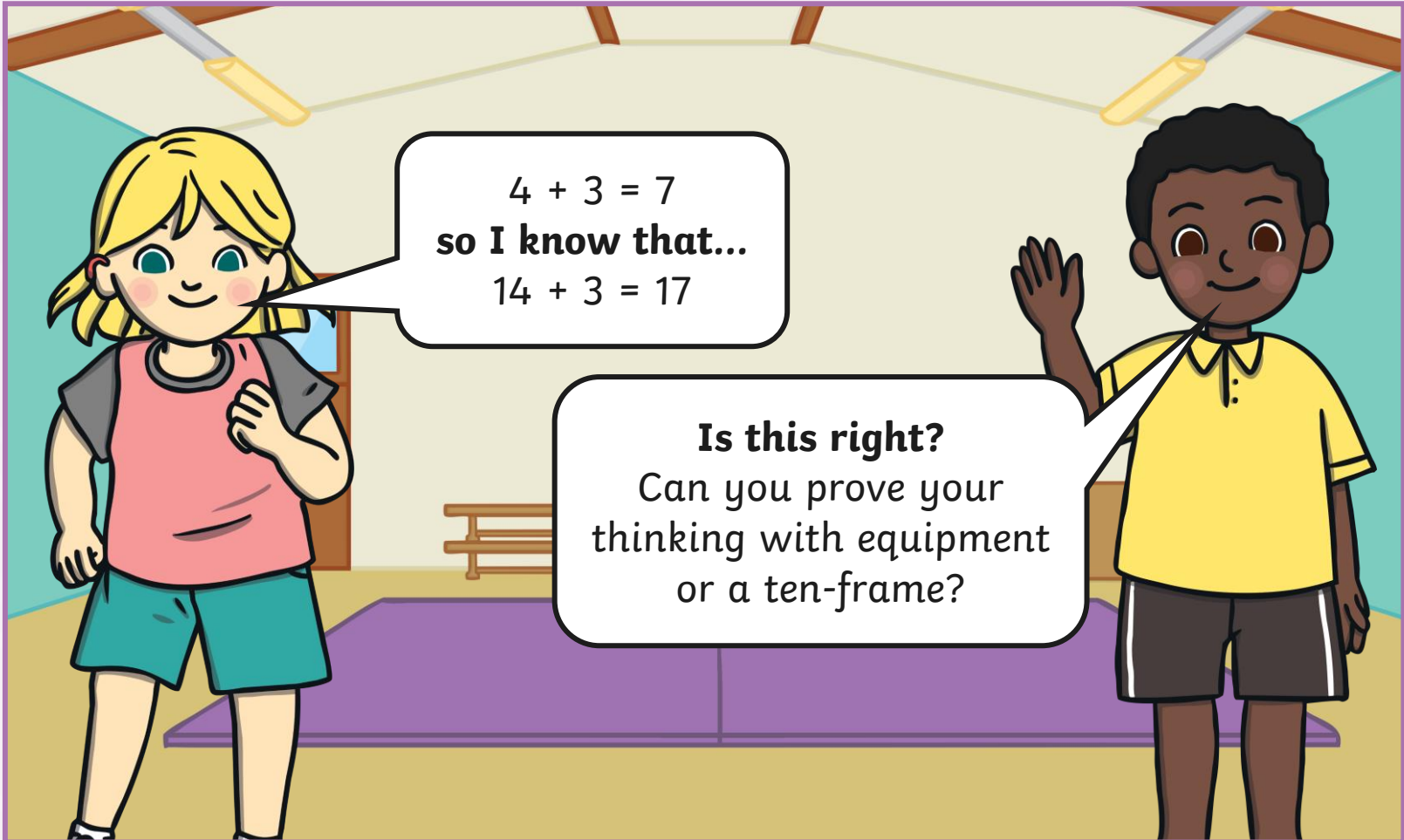
You could continue to play this game with cubes, hiding them under a whiteboard. Can your friend guess how many are hidden?



Number Facts



Number Facts



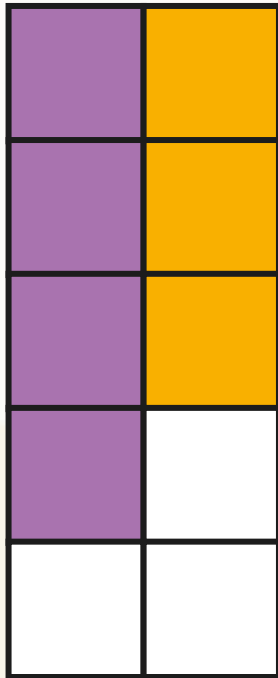
$4 + 3 = 7$
so I know that...
 $14 + 3 = 17$

Is this right?
Can you prove your
thinking with equipment
or a ten-frame?

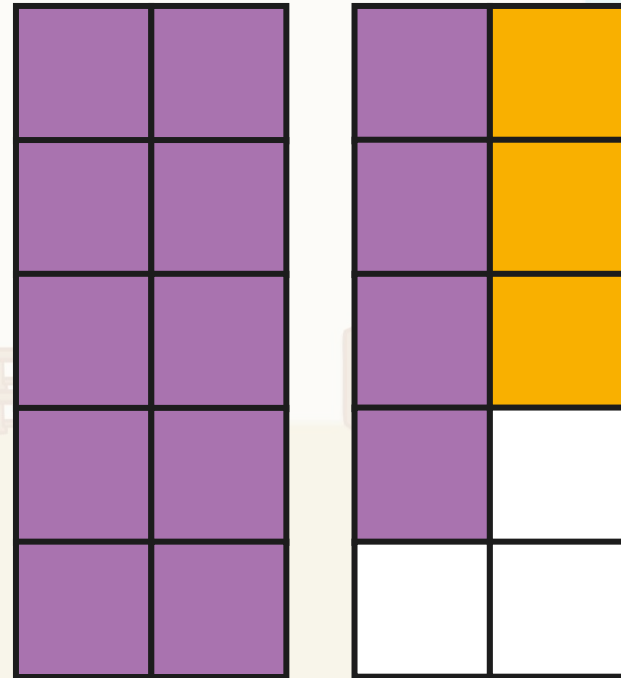
Number Facts



$$4 + 3 = 7$$



$$14 + 3 = 17$$

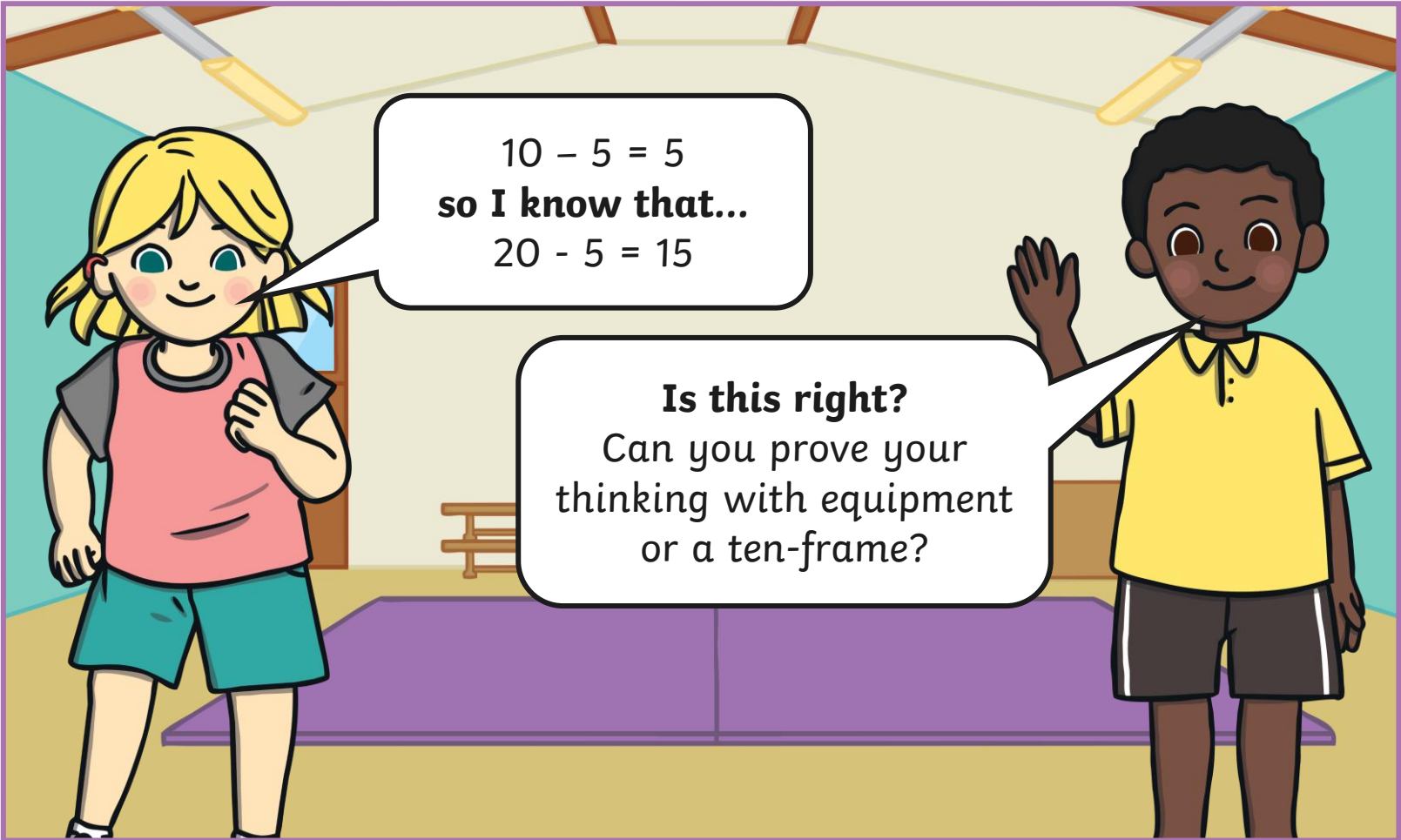


Number Facts



$10 - 5 = 5$
so I know that...
 $20 - 5 = 15$

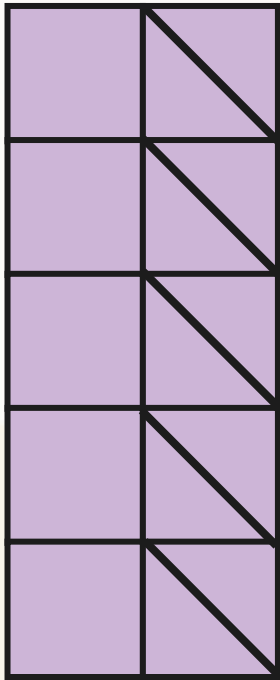
Is this right?
Can you prove your
thinking with equipment
or a ten-frame?



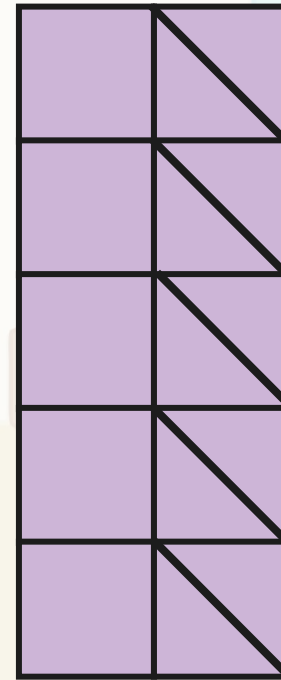
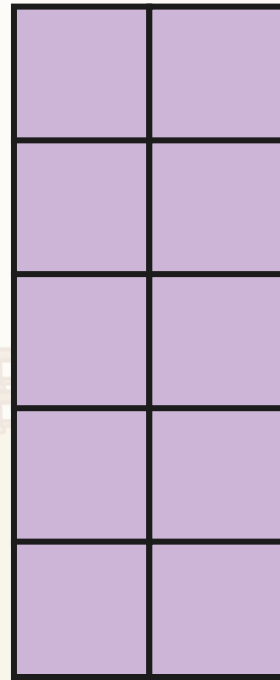
Number Facts



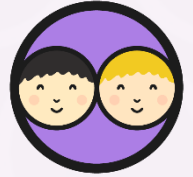
$$10 - 5 = 5$$



$$20 - 5 = 15$$



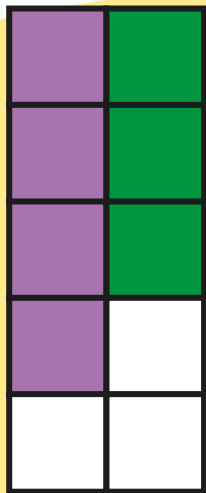
Make Me!



Using ten-frames and cubes or base ten blocks, represent a number up to 20 using a number fact that you are confident with.

Ask your partner to make a similar fact including a ten stick.

Compare facts and write as many number sentences as you can that show the same facts, for example:



$$4 + 3 = 7$$

$$14 + 3 = 17$$

$$3 + 4 = 7$$

$$3 + 14 = 17$$

$$7 - 4 = 3$$

$$17 - 3 = 14$$

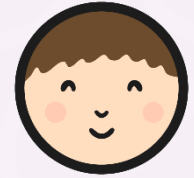
$$7 - 3 = 4$$

$$17 - 14 = 3$$

What patterns do you notice?



The PE Lesson



The PE Lesson

To recall and use addition and subtraction facts to 20.

Hint: You may be able to use your previous answer to help you with the next question.

1. How many laps did each child run altogether?

a) Lisa ran 4 laps, then she ran 4 more.

b) Ben ran 4 laps, then he ran 5 more.

c) Aima ran 4 laps, then she ran 6 more.

d) Hari ran 14 laps, then he ran 6 more.

e) Phil ran 14 laps, then he ran 5 more.

f) Jess ran 14 laps, then she ran 6 more.



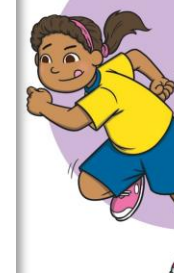
The PE Lesson

4 points

to 20.

help you with

run after the rest?



The PE Lesson

the children threw

5 points

to 20.

recall?

run after the rest?



The PE Lesson

point each time they with?

4 times.

2 times.

times.

possible scores.

5 points

2. The children each started with 20 points. They lost a point each time they missed a goal. How many points did each child finish with?

a) Lisa missed 3 times.

d) Hari missed 16 times.

b) Ben missed 13 times.

e) Phil missed 8 times.

c) Aima missed 6 times.

f) Jess missed 18 times.

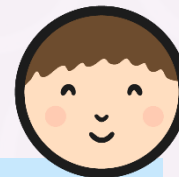
point each time they with?

7 times.

times.

5 times.

Diving into Mastery



Dive in by completing your own activity!



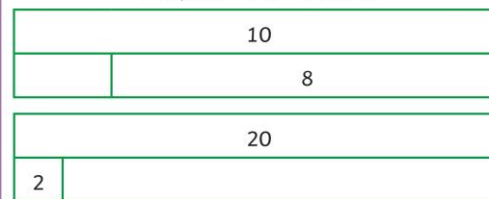
Number Facts up to 20



Use the first facts to calculate the second facts.

$2 + 6 = \square$	\longrightarrow	$12 + 6 = \square$
$3 + 7 = \square$	\longrightarrow	$3 + 17 = \square$
$9 - 3 = \square$	\longrightarrow	$19 - 3 = \square$
$8 - 5 = \square$	\longrightarrow	$18 - 5 = \square$

Complete the bar models.



Can you use practical equipment to represent these calculations?

Reasoning



Aima has some questions:

$$20 - 9 =$$

$$20 - 10 =$$

$$20 - 11 =$$

$$20 - 12 =$$

$$20 - 13 =$$

$$20 - 14 =$$

She says that once she has worked out the answer to the first question, she can answer them all.

Is she right?

Give a reason for your answer.



Reasoning



Ben has some questions:



$$4 + 4 =$$

$$14 + 4 =$$

$$24 + 4 =$$

$$34 + 4 =$$

$$44 + 4 =$$

$$54 + 4 =$$

He says that once he has worked out the answer to the first question, he can answer them all.

Is he right? Give a reason for your answer.

Can you continue the pattern? Can you write a similar puzzle for a friend to solve?

Aim



- To recall and use addition and subtraction facts within 20.

Success Criteria

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- I can use known facts in a context.

