



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. They 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. Children complete number lines and bar models to solve problems. Children complete number lines and bar models to solve problems.

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 within ten and subtract facts. Use these to derive number 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.



Applying Number Facts to Numbers within 100



Aim

- To apply number facts within 10 to numbers within 100.

Success Criteria

- I can recall number facts within 10.
- I can continue a number pattern.
- I can add a single digit to numbers within 100 (not crossing tens).
- I can subtract a single digit number from numbers within 100 (not crossing tens).

Remember It



Who can make the largest possible number?

Who can make the smallest possible number?

Who can make the number that is closest to 100?

Can you make your own rule?

Take 2 cards from the pile and add, subtract or find the difference to win the game.

Remember It



You can add in extra rules, such as:



Take 3 cards.

Make the smallest odd number.

Make a number between 3 and 6.

Number Facts



You will already know lots of facts.

We can use these to make new facts.

$$7 + 2 = 9$$

$$2 + 7 = 9$$

$$9 - 7 = 2$$

$$9 - 2 = 7$$



Number Facts

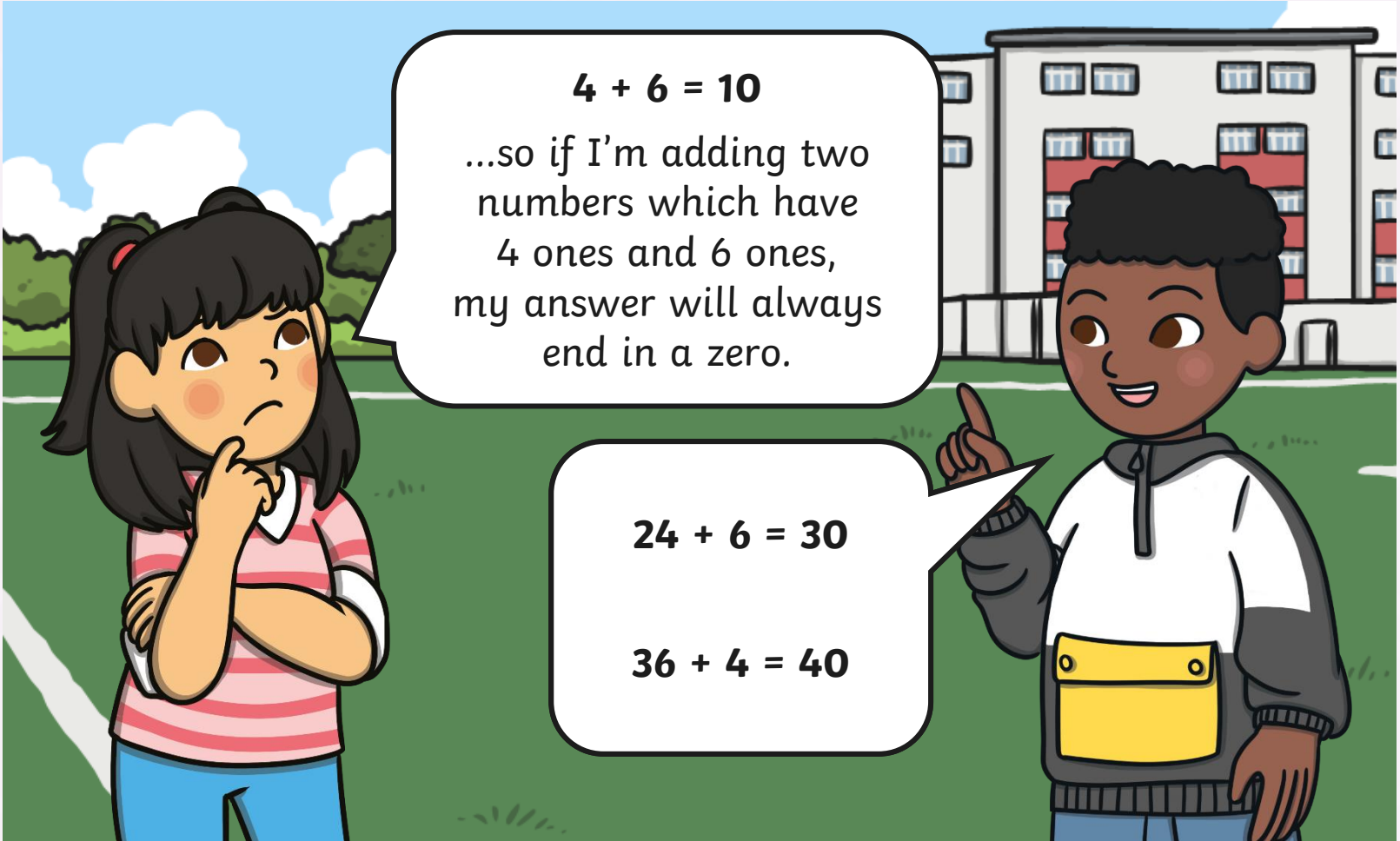


$$4 + 6 = 10$$

...so if I'm adding two numbers which have 4 ones and 6 ones, my answer will always end in a zero.

$$24 + 6 = 30$$

$$36 + 4 = 40$$



Number Facts

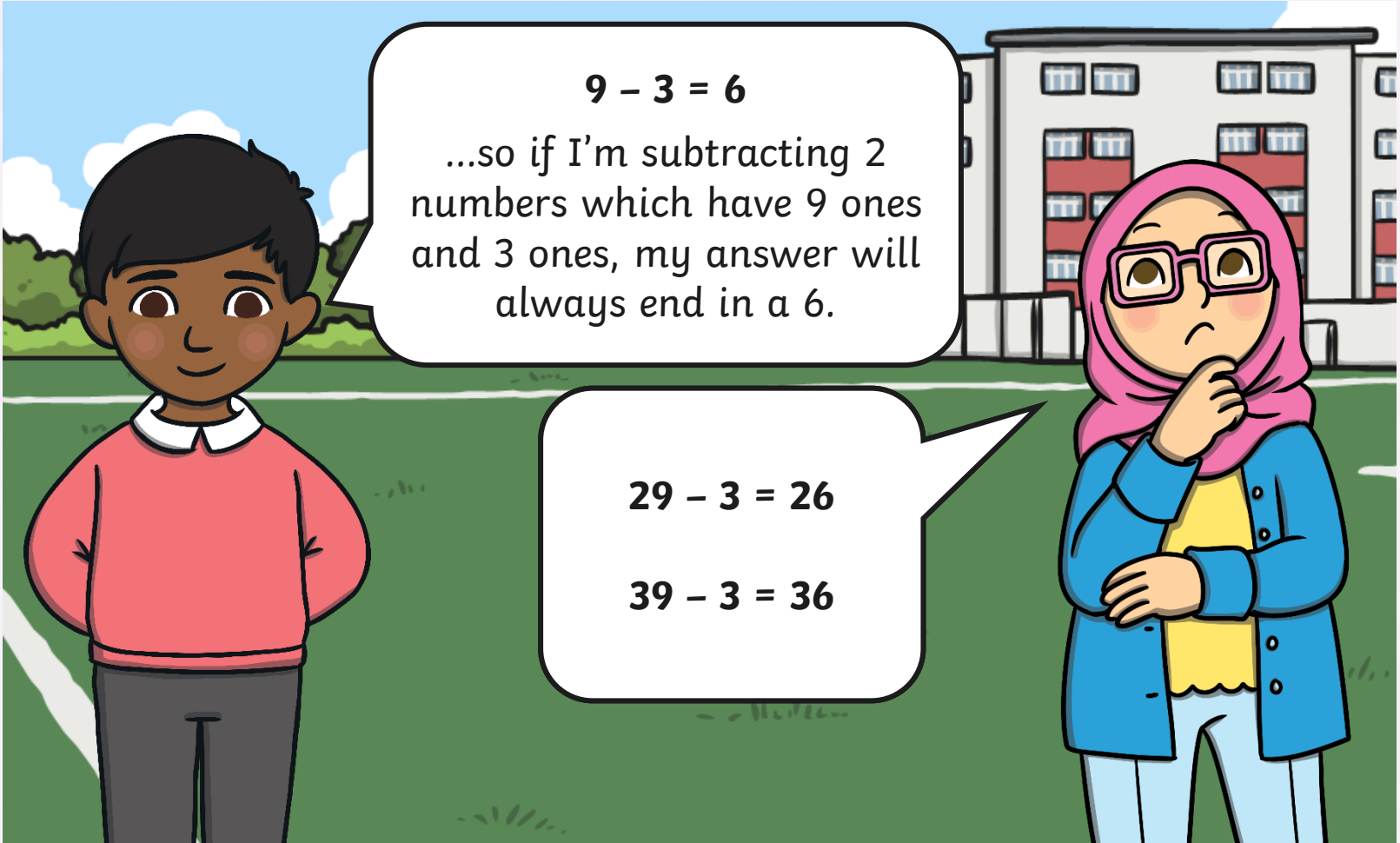


$$9 - 3 = 6$$

...so if I'm subtracting 2 numbers which have 9 ones and 3 ones, my answer will always end in a 6.

$$29 - 3 = 26$$

$$39 - 3 = 36$$



Number Facts



But...

Adrian is only right if he puts the 9 first and subtracts 3.



$$23 - 9 = 14$$

$$33 - 9 = 24$$

Follow the Pattern



Can you continue the pattern that has been started?

$$100 - 7 = 93$$

$$40 - 7 = 33$$

$$90 - 7 = 83$$

$$30 - 7 = 23$$

$$80 - 7 = 73$$

$$20 - 7 = 13$$

$$70 - 7 = 63$$

$$10 - 7 = 3$$

$$60 - 7 = 53$$

$$50 - 7 = 43$$

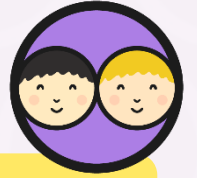
Can you explain what is happening?

Can you use equipment to explain why this happens?

Can you make a rule?



Follow the Pattern



Can you continue the pattern that has been started?

$$4 + 3 = 7$$

$$64 + 3 = 67$$

$$14 + 3 = 17$$

$$74 + 3 = 77$$

$$24 + 3 = 27$$

$$84 + 3 = 87$$

$$34 + 3 = 37$$

$$94 + 3 = 97$$

$$44 + 3 = 47$$

$$54 + 3 = 57$$

Can you explain what is happening?

Can you use equipment to explain why this happens?

Can you make a rule?



Speed It Up



Challenge 1 ★

Can you continue the pattern to 100 and describe what is happening?

$$7 + 3 = 10$$

$$17 + 3 = 20$$

$$27 + 3 =$$

Why does this happen?

Can you make a rule about what happens when you add numbers with 7 ones and numbers with 3 ones?



Challenge 2 ★

Can you continue the pattern to 10 and describe what is happening?

$$100 - 5 = 95$$

$$90 - 5 =$$

$$80 - 5 =$$

Why does this happen?

Can you make a rule about what happens when you subtract 5 from numbers ending in 0?



★★

Describe what is happening.

$$8 - 4 =$$



Challenge 2 ★★

How quickly can you complete these calculations?

$$2 + 6 =$$

$$42 + 6 =$$

$$82 + 6 =$$

$$12 + 6 =$$

$$52 + 6 =$$

$$92 + 6 =$$

$$22 + 6 =$$

$$62 + 6 =$$

$$32 + 6 =$$

$$72 + 6 =$$



Were you quick?
Can you explain why?

Challenge 3

How quickly can you complete these calculations?

$$8 + 2 =$$

$$68 + 2 =$$

$$18 + 2 =$$

$$78 + 2 =$$

$$28 + 2 =$$

$$88 + 2 =$$

$$38 + 2 =$$

$$98 + 2 =$$

$$48 + 2 =$$

$$58 + 2 =$$

Challenge 1 ★★★

Take a pack of digit cards. Start at zero and add each number as you turn it over.

Can you use your number bonds to help you?



Challenge 2 ★★★

Take a pack of digit cards. Start at 100 and subtract each number as you turn it over.

Can you use your number bonds to help you?



Challenge 3 ★★★

How quickly can you complete these calculations?

$$3 + 4 =$$

$$13 + 4 =$$

$$23 + 4 =$$

Continue the pattern.

Make a rule about what you notice.

Now, make up one of your own for a friend to try.



Challenge 4 ★★★

How quickly can you complete these calculations?

$$96 - 5 =$$

$$86 - 5 =$$

Continue the pattern.

Make a rule about what you notice.

What would happen if you subtracted 15 each time? Now make up one of your own.



Diving into Mastery

Dive in by completing your own activity!



Applying Number Facts to Numbers within 100

Use number facts to continue the pattern.

$4 + 5 = \square$

$\square + \square = \square$

$\square + \square = \square$

We have got lots of toys for the shop.

How many toys do we have altogether?

$\square + \square = \square$

$\square + \square = \square$

$66 - 10 = \square$

We sold 10 unicorns on Monday, Tuesday and Wednesday.

How many are left?

$56 - 10 = \square$

$\square - \square = \square$

lot s!

find ??

to to s?

tly?

uzzles.

- 5 =

re?

r?

Explaining



Can you explain to the class what you noticed during your activity?

Can you share a rule that you made?



Do the rest of the class agree with you?

Aim



- To apply number facts within 10 to numbers within 100.

Success Criteria

- I can recall number facts within 10.
- I can continue a number pattern.
- I can add a single digit to numbers within 100 (not crossing tens).
- I can subtract a single digit number from numbers within 100 (not crossing tens).

