SAMPLE BOOK



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Year I **Unit I: Numbers to I0**

Teacher Guide sample pages



Comparing groups

Learning focus

In this lesson children will compare two groups of objects through one-to-one correspondence.

Small steps

- → Previous step: Counting one less
- This step: Comparing groups
- → Next step: Comparing numbers of objects

NATIONAL CURRICULUM LINKS

Year 1 Number – Number and Place Value

Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least.

ASSESSING MASTERY

Children can say whether one group of objects has more objects in it than another. They reach this understanding by assigning one object from one group to one object in another group and then seeing where there are more or less.

COMMON MISCONCEPTIONS

In comparing two groups of objects, children may assign more than one object from one group to another group. This shows that they have not grasped one-to-one correspondence.

GOING DEEPER

Some children may go on to work out how many more or how many less (finding the difference). This lesson will not explore finding the difference in detail, but you can challenge children to think deeper by encouraging them to count how many more or less objects there are.

KEY LANGUAGE

"Match", "equal", "more than", "greater than", "less than" or "fewer than".

RESOURCES

Cubes, counters, Power Maths eBook and image bank. Optional: printed images of buckets, flags, sandcastles and spades.

MODELS AND IMAGES

Images used in this lesson are predominantly of objects. These may be represented with cubes and counters. When modeling groups, you may want to use different colours to represent different groups so children can make comparisons between them.

Before you start 🕕

- How are you going to integrate the *Power Up* activity into the lesson?
- Based on previous lessons taught in this unit, are there any additional misconceptions you need to consider upfront?
- Are there any adaptations you are planning to make to this lesson, to link it to other lessons or curriculum work?

Discover

WAYS OF WORKING Pair work.

IN FOCUS In this part of the lesson we want children to start discovering that they can associate one object in one group with one object in another group.

IN FOCUS As they experiment with concrete objects and start to see that there is not always a one-to-one correspondence of objects between groups, children will start to use the language around comparison (e.g. "more" or "fewer").

DEEPEN Question 1b provides an opportunity to work in greater depth for children who are able to at this stage.

ANSWERS Ouestion 1a There are more FLAGS than SANDCASTLES. Ouestion 1b Each CHILD cannot have a BUCKET.

Share

WAYS OF WORKING Whole class discussion.

ASK

- How did you work out the answers? How do you know your answers are correct?
- What else could you use to represent the sandcastles and the flags?
- How can you show that each sandcastle can have a flag? • How can you show you do not have enough buckets for all

the children? Answers can be verbal or children can use interactive teaching tools and manipulatives to demonstrate understanding.

IN FOCUS Look for children explaining that they are matching one object in one group to exactly one object in another group. Once this is done they should be able to see which group has more and therefore which group has less. Children may use different coloured counters, cubes, or other objects to represent the different groups. They may match one-to-one by taking one from each group and placing them together.

ANSWERS Question 1a There are more FLAGS than SANDCASTLES. Ouestion 1b Each CHILD cannot have a BUCKET.





YEAR I TEACHER GUIDE SAMPLE PAGES

Unit 1: Numbers to 10, Lesson 7

Think together

WAYS OF WORKING Whole class teacher led: Question 2 I do, Ouestion 3 We do. Ouestion 4 You do.

ASK

- How could you see easily which group has more?
- What methods could you use?
- How could you show your working?



IN FOCUS When working on question 4, look for children to draw the correct number of circles and squares in a line to make comparison of the two groups easier. Children should then draw a line between them to connect them up and realise that there are more squares than circles.

DEEPEN Question 4 is a *Challenge* question and it provides an opportunity to work in greater depth for children who are able to at this stage.

DEEPEN Use the characters in the book to talk about the different ways to answer the question. Ask: How did the characters do it? Who do you think has the best method and why?

ANSWERS Question 2 There are more SANDCASTLES. Question 3 There are fewer **CHILDREN**. Question 4 There are more SQUARES.

4 Are there more or more Draw the shapes or use _____ to help you. I sorted I put them them first. in 2 lines PUPIL TEXTBOOK A PAGE 35



WAYS OF WORKING Independent thinking.

SUPPORT Work with children who struggled during Think *Together* on the first few *Practice* questions to help them to keep up.

IN FOCUS In question 1, the lines matching cups to plates provide scaffolding to help children move towards working independently. If children struggle here come back together as a class. Ask for answers and ask them to show you how they know.

ASSESSMENT CHECKPOINT Question 1 and guestion 2 should help you decide whether children understand the language "more" and "fewer".

IN FOCUS When children get to question 4 they should be starting to form their own mathematical sentences to compare groups of objects.

ANSWERS Answers to Practice questions are in a separate answer book.

Reflect

WAYS OF WORKING Independent thinking.

ASSESSMENT CHECKPOINT Any children struggling to use "more" and "fewer" or using them incorrectly within their own sentence will need intervention support before the next lesson.

After the lesson 🕕

- How did the lesson go? What would you do differently next time?
- What percentage of children mastered this lesson? Are you ready to move on?



YEAR I TEACHER GUIDE SAMPLE PAGES

Year I

Unit 4: Addition and subtraction within IO (2)

Textbook and Practice Book sample pages



Related facts – addition and subtraction **2**







a) Leon throws 6 rings.

2 rings miss.

How many does he score?

b) How many different number sentences can you find to show this fact?



Unit 4: Addition and subtraction within 10 (2), Lesson 6

Think together

Leon throws 7 rings.

He scores 4. How many miss?



7 – 4 =

= 7 – 4 rings miss.

How many rings are there in total? Find the number sentences to show this fact.









12



Related facts – addition and subtraction **2**



How many ducks in total?

Fill in the \sim and the number facts.

33

+

+





2 How many stay? How many jump?

Fill in the \bigcirc and the number facts.







b) How many \bigwedge^{\lor} stay?

c) How many $\bigwedge^{\mathbb{N}}$ fall?



Fill in the number sentences to match the questions.







Year 3 Unit 2: Addition and subtraction (I)

Textbook and Practice Book sample pages

Reflect





Unit 2: Addition and subtraction (1), Lesson 1

Addition and subtraction of I00s





a) Tom uses digit cards to make the numbers 3 2 6 and 5 4 1.

He adds the numbers.

What is his total?

b) Tom takes a digit card from one number and swaps it with a digit card in the other number.

His total is the same.

Which digits did he swap?





Her numb	Her numbers are 413				
What is her total?					
Hundreds	Tens	Ones			

2 Suki makes two numbers.

Think together

	1		2	à
l		h		
0				
N.				
10	÷.			

Tom makes two different numbers.

His numbers are	Ι	4	2	and	3	5	6	•
-----------------	---	---	---	-----	---	---	---	---

What is his total?





Jing gets a total of 993.







What numbers did she make to get this total?

I think there is more than one answer.

Addition and subtraction of I00s



Fill in the boxes and spaces in these additions.













Complete these additions. Try to do the last one mentally. 2 0 b) Н Т a) Η Т 3 2 2 6 0 4 7 5 6 2 4 + d) 311 + 583 = e) 400 + 425 = There are 235 boys and 312 girls in the school. 3 How many children are there in total? V Fill in the boxes in these additions. b) a) Н Н 0 Т 8 6 3 3 + q 8 5 = 678 **c)** 548 +











Multiplying fractions

Discover



a) What fraction of the jug of milk is needed for 3 milkshakes?

b) How many jugs of milk are needed to make 7 milkshakes?









 $\frac{1}{8}$

 $\frac{1}{8}$

		CHALENCE
	$\frac{1}{5} \times 4$	
<u>.</u>		1

Multiplying fractions



a) Each child eats $\frac{1}{7}$ of a bag of popcorn.

$\frac{1}{7}$ $\frac{1}{7}$	<u> </u>	<u> </u>	<u> </u>
	7	7	7

b) One person eats $\frac{1}{3}$ of a tin of soup for lunch.





- What fraction of the bag do 5 children eat?



- How many tins of soup are needed for 5 people?

c) Mike uses $\frac{1}{4}$ of a banana in his cake. How many bananas does he need for 7 cakes? Draw your answer as a bar model.



Fill in the blank boxes to complete the multiplications.





Complete the multiplications.







b)
$$\frac{1}{8} \times \boxed{=} \frac{1}{8}$$

b) $1 \times \frac{1}{8} = \frac{1}{8}$
d) $3 \times \frac{1}{8} = \frac{1}{8}$
f) $5 \times \frac{1}{8} = \frac{1}{8}$
h) $7 \times \frac{1}{8} = \frac{1}{8}$

b)
$$\frac{1}{6} \times \boxed{} = 1 \frac{1}{3}$$

YEAR 5 PRACTICE BOOK SAMPLE PAGES





The whole-class mastery approach that works for every child

Power Maths is a new and exciting programme written specifically for the latest UK curriculum and inspired by mastery best-practice from around the world.

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