

Number Wb 3.11.20

Comparing quantities

Each day begin with some counting forward and back to 20

Tuesday

Learning focus

Noticing inequality of groups

Before you teach

- Are children confident counting to 5?
- What resources and representations will you make available from previous lessons to support children's learning?

Starter

Unit 3 Comparing groups within 5

Comparing quantities of identical objects



PREREQUISITE CHECK

PREREQUISITE CHECK Picture of 5 sandcastles, some with flags, some with shells, some with both.

WAYS OF WORKING Whole class

IN FOCUS This **Prerequisite check** practises the Unit 1 skill of counting to 5 accurately and the Unit 2 skill of describing and sorting objects.

ASK

- Can you remember how to count to 5?
- How many sandcastles have flags?
- How many sandcastles have shells and flags?
- How many sandcastles have a shell and no flag?
- How many sandcastles are there altogether?



STIMULUS

STIMULUS Photograph prompting a guided activity

WAYS OF WORKING Whole class

IN FOCUS The **Stimulus** introduces the idea of spotting differences between two similar images and introduces children to the questions: *What's the same?* and *What's different?*, prompting children to make comparisons. They could talk about the colour of the flowers, the shape of the vases or the number of flowers in each.

ASK

- What is the same about the vases/flowers?
- What is different about the flowers/vases?
- How many flowers can you see in each vase?

GET ACTIVE Create a picture using one type of countable objects, such as pebbles. Children start by copying the picture exactly. Children then try to make a picture that is different. Ensure children are always using the same object. As with the **Stimulus** photograph, use the **Ask** questions to guide discussion about what is the same and what is different.

Unit 3 Comparing groups within 5

Comparing quantities of identical objects

How many?



Let's look!



PREREQUISITE CHECK

Unit 3: Comparing groups within 5, Week 3: Comparing quantities of identical objects



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STIMULUS

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Wednesday

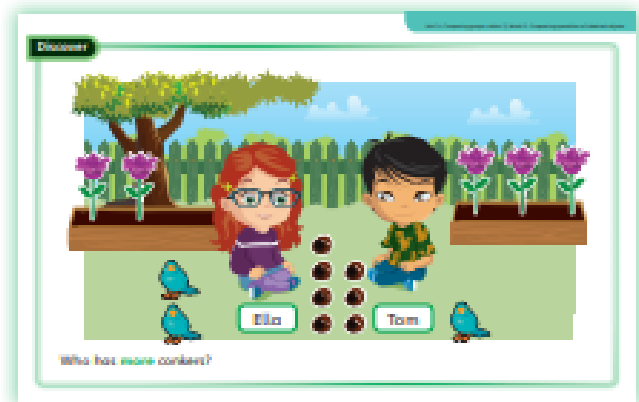
Discover

WAYS OF WORKING Whole class or small groups
Ensure cubes or conkers, or objects to represent the conkers are available for children to use.

IN FOCUS Children count the items they can see in each picture and compare the groups using the language *more* and *fewer*. They can recreate the lines showing the conkers. Discuss and demonstrate, where necessary, the importance of starting both lines at the same place (you could use a ruler as a baseline) and of keeping the first, second and third conkers in each line level with each other.

ASK

- How many conkers does each child have?
- Who has more? How many more do they have?
How do you know?
- Can you compare the flowers? What else can you compare?



Share

WAYS OF WORKING Whole class
Children recreate the pictures using objects.

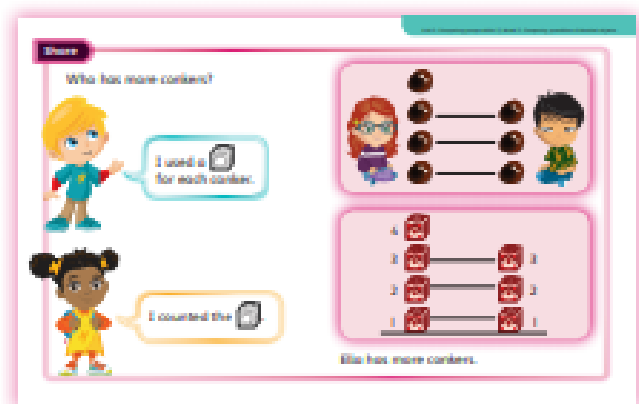
IN FOCUS Children represent the conkers using cubes in order to compare the quantities. This is the first time that children are shown how a concrete object (a cube) can be used to represent something (a conker). Using the questions below as a prompt, ensure that children are comfortable with this representation. A baseline is shown under the cubes to illustrate the importance of lining objects up when comparing them.

ASK

- What does a cube represent?
- How many cubes do you need to represent Ella's conkers?
How many cubes do you need to represent Tom's conkers?
- Why have you lined up the cubes? Who has more conkers?

STRENGTHEN If children do not understand how a cube can represent an object (conker), use actual conkers to support them in their understanding. When the conkers are in the correct position, replace each conker with a cube, one at a time. If necessary, use five frames or number tracks to enable children to space the cubes equally.

DEEPEN Deepen children's thinking by showing them examples where items are not spaced out evenly so that



the smaller quantity looks as if it is more than the larger quantity. Challenge children to explain why this is not the case and to correct the problem by lining the objects up.

GET ACTIVE Provide children with two bags of identical objects (different amounts, up to 5). Challenge them to find out which bag has more. Children empty the contents of the bags and line up the objects inside, finding out which bag has more. Children can then create their own bags to challenge other children to find out which bag has more.

Discover




Who has **more** conkers?

Share

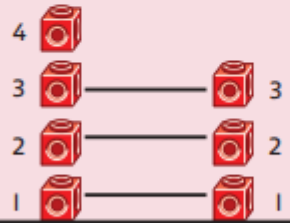
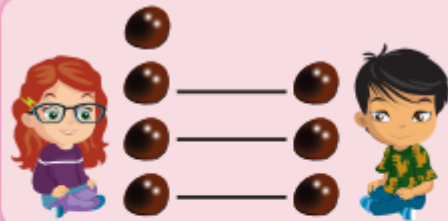
Who has more conkers?



I used a  for each conker.



I counted the .



Ella has more conkers.

Thursday

Learning focus

Identifying more and fewer in different representations

Think together

WAYS OF WORKING Whole class

Ensure cubes are available for children to use.

IN FOCUS Children are introduced to the word *fewer* and use it to compare two groups. Prompt children to see that the same method of lining up the groups will still work to compare them. Question 1 moves children on from **Share** by focusing on the concept of fewer as the opposite of more. Question 2 moves children on a step further by varying the orientation of the lines of conkers. Children now think about how they can apply the same method of comparison to this new layout.

ASK

- Question 1: How many conkers does each child have?
- Question 1: Who has fewer conkers? Who has more conkers? How do you know without counting?
- Question 2: Refer children to what Astrid is saying: Can you see which is the longer line of conkers, without counting them? Will the longer line always be more? (Only if the objects in both lines are spaced out equally.)
- Question 2: What's different about the conkers now? (Changed to horizontal lines.)



STRENGTHEN Provide children with two bags of identical objects (different amounts, up to 5). Give children a five frame each and encourage them to line up the objects, asking them to work out which bag has fewer. Can they use the five frame to show the different layouts in Questions 1 and 2?

DEEPEN Show children a bag containing 4 identical items. Show them another bag and explain that this bag has fewer inside it. Ask: How many items could there be in the bag? How do you know?

Practice: Journal 1

WAYS OF WORKING Independent thinking

IN FOCUS Children use their understanding of the language *more* and *fewer* to identify which character has more apples. Encourage children to justify their choice. Can they draw a child with fewer apples than Tom?

MASTERY CHECKPOINT Children who have mastered this concept can correctly identify the group that has more or fewer objects.



Think together

1 Who has fewer conkers?



2 Who has fewer conkers?



I can use  to help me.

I can see without counting.



Who has more  ?



I can see who has more!

ELG 1E: Mathematics: Numbers count reliably with numbers from 1 to 5, say which number is one more or one less than a given number



Strengthen: Can you use cubes to help you compare? Who has more apples? Can you circle the child with more apples?

Deepen: Who has more apples? Who has fewer apples? Is fewer the same or different from more? How do you know?

Friday

WAYS OF WORKING Whole class or in pairs
Use cubes or real-life objects to support learning.

IN FOCUS This activity focuses on comparing two groups that are equal. Children can either subitise that the amount of conkers are the same or line them up to check. Children realise that two groups can be equal and one group does not have to be more or fewer.

ASK

- How many conkers does each child have?
- How did you count the conkers? Can you line them up?
- Can you use the words *more* or *fewer* to describe the groups? What words **can** you use?

STRENGTHEN Make an amount using cubes or real-life objects, using the dice formation or similar. Ask children to make the same size group as you. Prompt children to match up the items in vertical or horizontal lines to show that the number in each group is equal.

DEEPEN Show representations of numbers up to 5 in different arrangements on the **Multilink cubes** teaching

CHALLENGE

Who has more conkers?

I will line them up.

Can you always use 'more' or 'fewer'?

The illustration shows a boy and a girl sitting on the floor with two groups of four conkers each. A girl character says, "I will line them up." A cat character asks, "Can you always use 'more' or 'fewer'?"

GET ACTIVE Give children buckets with images of up to 5 conkers on the front of each. Children collect the same number of conkers that they can see on the front of their bucket. Choose two buckets and ask children to compare the amount of conkers in each bucket, including two buckets containing the same amounts.

CHALLENGE

Who has more conkers?

I will line them up.

Can you always use 'more' or 'fewer'?

The illustration shows a boy and a girl sitting on the floor with two groups of four conkers each. A girl character says, "I will line them up." A cat character asks, "Can you always use 'more' or 'fewer'?"

Reflect: Journal 2

WAYS OF WORKING Independent thinking

IN FOCUS Children demonstrate their understanding of finding more or fewer by showing a ladybird with more spots. Can they draw a ladybird with fewer spots?

MASTERY CHECKPOINT **Children who have mastered this concept** can identify if a group has more or fewer objects. They can line up objects to check which has more or fewer. They can say if groups are equal. Given an amount, they can show more or fewer with support.

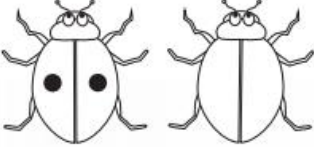
Children who have not yet mastered this concept can identify if a group has more or fewer objects when groups are aligned.

Children who have mastered this concept with greater depth can line objects up to show if a group has more or fewer items. They can say if groups are equal. Given an amount, they can show more or fewer independently.

Unit 2: Comparing groups within 5, Week 5: Comparing quantities of identical objects

Reflect

Show a ladybird with more spots.



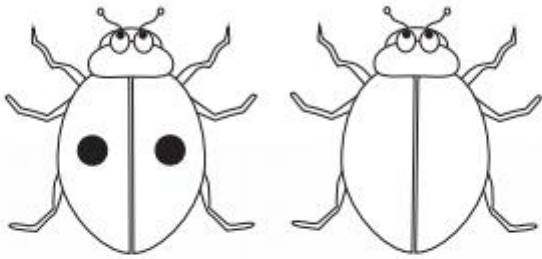
I think there is more than one way.

Strengthen: How many spots does this ladybird have? Can you make it with cubes? Do you need more or fewer cubes? How can you make more?
Deepen: If the ladybird has 2 spots, how many could be more? Is there more than one answer? Have you got the same answer as your partner?

Unit 2: Comparing groups within 5, Week 5: Comparing quantities of identical objects

Reflect

Show a ladybird with more spots.



I think there is more than one way.

Strengthen: How many spots does this ladybird have? Can you make it with cubes? Do you need more or fewer cubes? How can you make more?
Deepen: If this ladybird has 2 spots, how many could be more? Is there more than one answer? Have you got the same answer as your partner?