

# MATHS



## Lesson 8

Prep

**Topic: Number and place value**

### Making equal quantities

#### Lesson concepts



**Number** — Quantity



**Equivalence** — Language

Today students will:

- ▶ compare quantities
- ▶ make equal collections of objects.

### Resources

#### Digital

Video — Make them equal (7:20)

#### Find and prepare

Blocks for building towers (for example: linking cubes, construction set, wooden blocks)

Two containers — put 20 pegs or beads in one container; put 10 pegs or beads in the other container

### Key terms

subitising

For definitions and explanations of terms, please see the **Glossary**.

## Lesson

### Introduce the lesson

#### Note

It is important to highlight and develop the following vocabulary throughout this lesson.

count, compare, sort, number, total, quantity, amount, more, less, the same, subitise, make, match

### Recognise equal quantities

- Show students a collection of blocks.
- Explain to students that they will have one minute to make as many towers as they can with three, four or five blocks in each tower.

#### Say to students

‘ You have one minute to build as many towers as you can with the blocks. The only rule is that each tower must have either three blocks, four blocks or five blocks in it. ,  
Your time starts now.

- After one minute, ask students to count their towers to see which have the same number of blocks. Ask questions to help students to talk about the equal towers.

#### Focus questions

Q: *Which towers all have three blocks?*

Q: *How can you tell they are the same?*

A: For example, if I put them side by side, I can see they have the same number of blocks

Q: *Which other towers have the same number of blocks?*

A: When a group of objects contains the same amount, we say that they are equal.

Q: *What do the towers look like when they are equal?*

A: They are the same size.

- Explain to students that in the lesson today, they will look at ways to make groups equal.
- Show students the two containers with 20 pegs or beads in one container and 10 in the other.
- Ask questions to help students to compare the number of pegs/beads in each container.

### Focus questions

Q: *How can you tell if the containers hold the same or different amounts?*

A: For example, tip them out and count them

Q: *How could you tell without tipping the pegs out?*

A: For example, look at them (subitise); hold them up (heft); put them on balance scales

Q: *If you tipped the pegs out, what could you do to find out if the containers had the same number of pegs?*

A: For example, count them; look at them (subitise)

- Demonstrate how you can compare amounts by hefting. Hold one container in each hand.

### Focus questions

Q: *Which container feels heavier? What does that tell you?*

A: There are more pegs in this container

Q: *What else can we do to see which container has more pegs?*

A: For example, look at them (subitise); count them

- Demonstrate how you can compare numbers by subitising.
- Tip the pegs or beads out of each container and look to see which has more pegs.

### Focus questions

### Focus questions

Q: *What can you tell just by looking at the pegs?*

A: For example, this group is bigger than that group

Q: *How can you be sure that this group has more pegs?*

A: For example, count them

- Demonstrate how you can compare amounts by counting.
- Tip the pegs out and count each group. Help students to compare the numbers.

### Say to students

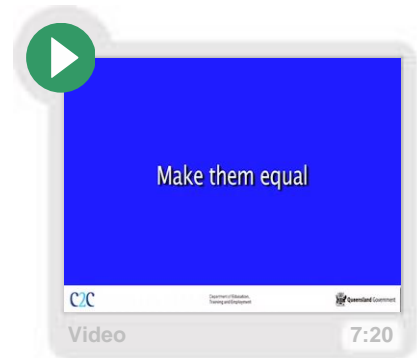
‘ We counted 20 pegs in this container and 10 pegs in the other container.

Do you know which number is bigger?

Twenty is a bigger number than 10, so the container that has 20 pegs has the most. ’

## Describe the process of making up to a larger quantity

- Have students view the **Video — Make them equal**.
- Ask questions to help students to describe what they observed.



### Focus questions

Q: *Why was Sarah upset?*

A: For example, Jim had more pencils than she did

Q: *How did she know that Jim had more pencils than she had?*

A: For example, she could tell by looking/placing them side by side

Q: *How did she change the collections of pencils so that they both had the same?*

A: For example, Sarah added some more pens to her pile

Q: *How did they share the pile of lizards so that they had equal quantities?*

A: For example, they shared them out one at a time

Q: *What does 'equal quantities' mean?*

A: For example, each group has the same number of objects