MATHS

Lesson 7

Prep

Topic: Number and place value

Comparing and ordering quantities

Lesson concepts

- Number — Quantity
- Number — Counting
- Number — Subitising

Today students will:

- describe collections, using number
- compare and order quantities.

Resources

Find and prepare

Card to write numbers on

Key terms

subitising

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

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

Quantify collections

- Explain to students that they are going to collect a variety of natural objects to use in different ways.
- Help students to collect at least 20 natural objects (for example, seeds, seedpods, leaves, twigs, bark, stones, shells, grass and feathers) and spread them out on a table, the floor or a tray. (Keep this collection for future lessons.)
- Ask questions to help students to talk about the collection.

Focus questions

Q: *What types of natural objects did you collect?*
A: For example, leaves, seeds, twigs, shells

Q: *What counting questions could you ask about these?*
A: For example, How many shells are in the collection? Are there more shells or leaves? Which object has the most in the collection?

Q: *Which object did you collect more of? How do you know?*
A: For example, I counted them; I can tell by looking

Q: *How could you find out for sure?*
A: By counting

- Ask students to sort the collection of natural objects in any way they like.
- Ask students to:
  - describe how they sorted the objects: for example, type of object (seeds, shells, leaves); size (big things and small things); colour; texture of the objects; where the objects come from (beach, creek, tree)
  - use numbers to describe the collections (for example, 10 shells, four leaves).

Compare collections

- Ask questions to help students to predict and check whether the groups of natural objects contain ‘more’, ‘less’ or ‘the same’.

Focus questions

Q: *Which group has more natural objects? Why do you say that?*
A: For example, this group looks bigger

Q: *How could you check?*
A: For example, count them; line them up side by side

Q: *Are there any groups that have the same totals? How could you check?*
A: For example, count them; line them up side by side

- Discuss and demonstrate using direct comparison. Match items one-to-one (that is, line up the objects from each group, one beside the other, to see which group has more). For example:

Focus question

Q: *What did you find out by matching the objects in the collections?*
A: I can see that there are more big shells than little shells. There are fewer leaves than big shells and small shells.

- Count and compare the numbers. Count the objects in each group and compare the numbers to see which number is the biggest. For example:

Focus questions

Q: *What did you learn by counting the groups?*
A: For example, which group had more; which group had the most; which group had less

Q: *Did you guess correctly which groups had more, less and the same? How did you check?*
A: For example, yes, by counting

Order quantities

- Have students discuss ways of ordering the groups that they just made.
- Question students as they order the groups from smallest to largest or largest to smallest in number.

Focus questions

Q: *How did you order the collections?*
A: For example, from biggest to smallest; from smallest to biggest

Q: *If you had a collection of five objects, where would you place it in the order? Why would you place it there?*
A: Answers will vary

- Have students store the natural objects in a safe place for later lessons.