MATHS

Lesson 27

Prep

Topic: Number and place value

Making equal parts of a whole

Lesson concepts

- **Number** — Quantity
- **Multiplication and division** — Sharing
- **Multiplication and division** — Part–part–whole (partitioning)
- **Fractional understanding** — Equal parts
- **Equivalence** — Language

Today students will:

- share a whole into equal parts

Resources

Digital

Learning object — Sharing

Find and prepare

Square sheets of paper

Key terms

share, give out, equal, parts, shares, collection, total, same, more, less, fairness, each, groups, whole

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.

share, give out, equal, parts, shares, collection, total, same, more, less, fairness, each, groups, whole

- Have students tell about their sharing experience.

Focus questions

Q: *How did you share after the last lesson?*

Q: *Did each person get the same amount?*

Q: *Was it fair sharing? How do you know?*

Q: *Were there any problems? What were they?*

Q: *How could you fix the problem next time?*

Q: *What can you say about the sharing?*

Making equal parts of a continuous whole

- Explain to students that they will be exploring how a piece of paper can be folded into parts. Sometimes they are equal parts.

Note

This is meant to be an opportunity for students to experiment with folding and seeing how a whole can be folded into parts. Sometimes these parts are equal. The focus of the activity is not on techniques to make equal parts.

- Give students a sheet of paper to experiment with different folds.
- Ask students to:
  - predict how equal parts could be made out of the sheet of paper
  - visualise what equal parts might look like
  - fold and unfold the paper in different ways
  - describe their ideas.

Focus questions

Q: *How many parts have you made?*

Q: *Are these equal parts? How do you know?*

Q: *How could you check?*

A: For example: Place them one on top of the other.

Q: *How could you make four equal parts/eight more equal parts?*

Q: *Is it possible to make five equal parts? How?*

Q: *Why are some equal parts more difficult to make?*

Note

Students can see if the parts are equal by folding them on top of each other and checking that they match exactly. Sometimes they will only have to adjust the fold slightly to make the parts equal.

Share collections and check for equivalence

- Have students make a collection of about 12 household objects, such as pencils or buttons.
- Ask students to share that collection between three people (or toys).
- Explain to students that when they are sharing, they will need to make equal parts of the collection.

Focus questions

Q: *How could you share these out?*
A: For example: Give one to each person until there are none left.

Q: *How many will each person get? How did you work that out?*
A: Four, for example, when I made three groups, there were four in each group.

Q: *Are the groups that you made equal? How do you know?*
A: Yes, there are four in each group.

Q: *What could happen if there were not enough pencils for everyone to have equal shares?*
A: Some people would have more/fewer than others.

Q: *How could you solve this problem?*
A: For example: Get some more [pencils]; share with a smaller group.

- Ask students to share the same collection between four toys or people.

Interact with the Learning object — Sharing

- Have students open the **Learning object — Sharing** (select 'Equal sharing') and discuss sharing into equal parts.

  This learning object provides students with practice in sharing quantities into equal groups.

Focus questions

Q: *How many did each get? Were there any left over?*

Q: *Were the parts equal? How do you know?*

Identify equal sharing

- Ask students to make equal parts of a whole by pouring a jug of water equally into two cups.
- Make playdough cakes and pizzas and cut them into equal shares.
- Share 20/10/five rings between the fingers on one hand.
- Have students display examples of equal sharing and unequal sharing and discuss these.

Focus questions

Q: *Are these equal parts/shares? How can you tell?*

Q: What could you do to make them equal?

Q: *What have you learned about sharing?*