Number and Algebra: Fractions and Decimals: Half of a Quantity

Australian Curriculum

This lesson plan could be used to support the teaching and learning of the following Content Descriptions from the Australian Curriculum.

Y1 – Number and Algebra, Fractions and Decimals

Recognise and describe one-half as one of two equal parts of a whole (ACMNA016).

Child-Friendly Aim:	Success Criteria:	Resources:
I can find $\frac{1}{2}$ of a quantity, weight or measure.	I can find $\frac{1}{2}$ of a quantity. I can find $\frac{1}{2}$ of measures of length, weight or capacity. I can explain why 2 halves make 1 whole.	**Lesson Pack** 3 sets of balance scales Construction bricks, sandwich bags and sticky labels, string and scissors, water tray with various sized clear containers – 2 of each kind, water coloured with food colouring, small weights, rulers Capacity containers marked with a scale
	Key/New Words: Whole, half, capacity, weight, length.	**Preparation:** Differentiated **Construction Activity Sheets** – as required Pre-cut lengths of string to various lengths in whole cm **Digit Cards**

Prior Learning: It will be helpful if children understand that half is one of two equal sized pieces or groups.

Learning Sequence

Story Time: Hand out several **Digit Cards** to each of the children. Read through the story on the **Lesson Presentation**. If the children have the answer to a fraction in the story they turn that card face down. The first child to turn over all their cards is the winner.

Primary Building Company: Read the information on the **Lesson Presentation** to introduce the task. Your class are the building company and they are going to make sure the resources are measured out to build the two houses. Introduce the three activities.

What Is a Half? Use this slide to assess children's prior knowledge. Can they verbalise what is meant by a half? Can they draw a picture to explain their thinking? As the numbers fly in on the slide emphasise that half is one of two same size or equal value pieces.

Making Half: Children discuss these slides with a partner to generate ideas about how to find half of each material. Discuss how children will know they have half of the bricks in each bucket by weighing them rather than counting them. Show the children the wood (string) which is to be sawn in half. How will they find half? There is a clue on the slide. Show children two of the water containers and get them to discuss how they will know they have half of the water in each container. Again, there is a clue on the slide.

Building Houses: Tell the children it's time to put their hard hats on and get to work. Introduce children to the activities. Differentiated **Construction Activity Sheets** have been provided, though you may prefer to organise children into mixed-ability groups and choose a selection of the activities for each group to work on.

★ Children work in pairs, grab a handful of bricks and put them in the scales. Do they balance? Can they rearrange the bricks so that they balance? Take an extra brick if necessary. What do children notice about the number of bricks on each side? Place the bricks in a bag and label each bag with the number of bricks.

★★ Children fold each piece of string in half by making sure the ends match up when they fold. They cut the string, then stick both pieces in their books.

★★★ Children work in pairs to find two identical containers. Fill one full and pour half into the other until the water levels in both containers are equal.

Ready to Build? Take feedback from the three activities and show some examples, reminding children that if we put two halves together we end up with one whole quantity. Demonstrate this, for example by pouring half a container of water into another half full container, showing that you end up with a full container of water. As a reward for their hard work the children get to watch the two houses being built! Do children notice that there is half of everything in each house?

Masterit

Measureit: Measure everyday objects using standard or non-standard units. Can children find half of the measure? Explore which numbers are straightforward and which don't split into equal halves.

Strideit: In the hall or playground give a child a digit card. That child must take that many strides as the rest of the group count. The other children take half as many strides, while the first child counts and checks they are correct.

Timeit: Children time how long half the group can hop, skip or jump for. They then repeat the action for half the time.

Spendit: Give children an amount of money and ask them to calculate and spend half.

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