



Fractions - 3

1.4.7

Word Wall: part, part part, one half, one of two equal parts of a whole, collections, estimate, division, share, equal, odd

Introduction

Students will divide collections into two equal amounts and identify each equal division of the whole collection as one half.

Resources

- Blocks
- Square paper
- Animal counters
- Early Years FISH



Time / Classroom Organisation

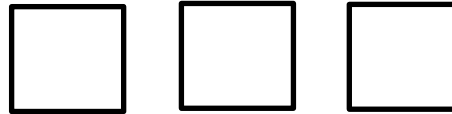
This activity may be introduced to the whole group or small groups. As a 20 minute focused teaching and learning event. Allow time for students to explore the materials and discuss and explain their reasoning.

Australian Curriculum Year One

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

Activity Process---How Many in each half?

1. Give students a square piece of paper to represent a farm.
2. Ask students to fold the paper in half to create two equal size paddocks.



3. Give students a collection of animal counters and ask students to count out ten for their farm.
4. Ask students: How many animals do you think will be in each paddock? Could you have worked out the number of animals in each paddock without sharing them out one by one?
5. Repeat activity with a different number of animals.
6. Repeat activity within a different context, for example: flowers in a garden, chocolate chips on a biscuit, candles on a cake, peas on a plate.



Source: Board of Studies NSW, Mathema1cs K---6 Units of work. p54
http://k6.boardofstudies.nsw.edu.au/files/maths/maths_k6_ws.pdf

Activity Process – Sharing Collections -- Halves

1. Show students a collection of 8 blocks.
2. Tell students you are going to share these 8 blocks between 2 people.
3. Ask two students to hold out their hands and share the blocks one at a time between the two students.
4. Then ask the students: Did each student get an equal amount? How many blocks did each student get?
5. Discuss that as the blocks were shared between two, the collection was split in half.
6. Repeat with other even numbers and objects.
7. When students are ready repeat activity with an odd number and discuss the left over part.

Source: Board of Studies NSW, *Mathematics K-6 Units of work*. P 54
http://k6.boardofstudies.nsw.edu.au/files/maths/maths_k6_ws.pdf

Activity Process – Hidden Half

1. Give each pair of students a collection of objects.
2. Student A turns away
3. Student B selects a number card (even numbers 2---20), they collect that number of objects and displays them on a piece of felt.
4. Student B then covers half of the objects with a piece of felt.
5. Students A is then asked to determine: How many blocks are under the cloth? How many blocks are there altogether?
6. Repeat the activity with a new number and students changing roles.



Catholic Education
Diocese of Cairns

Learning with Faith and Vision

Variations & Extensions

1. Estimating Halves

Resources: Blocks, counters, beads, container, felt
In pairs or small groups, provide students with a collection of small objects in a container. Ask students to empty the objects onto a piece of felt and create two groups of objects which they estimate to be about half of the collection.

Ask students: *What strategies did you use to help with your estimations? What could you do to improve your estimation? How did you check your results?*



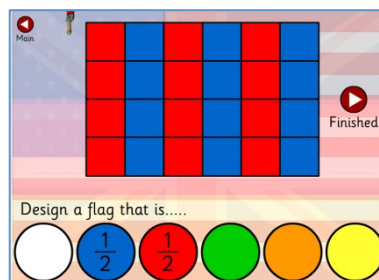
2. Magazine Hunt

Resources: magazines, scissors
In small groups ask students to create a half poster. Ask students to cut out pictures from magazines and catalogue of half items or objects that can be cut out and then cut into half.



Digital Resources

<http://www.oswego.org/ocsd-web/games/fractionflags/fractionflags.html>



Contexts for Learning

Play:

Cooking: Use a recipe that allows the use of lots of half cup measurements. When measuring half a cup – use a whole cup measuring cup and only fill it half way.

Investigation:

Liquid Halves: Provide students with a 1l bottle of water and a variety of cups/containers. Ask students to determine how much is half of the liquid. Ask: What are the different ways of finding half the water? How would you know if you were close enough to half? How could you record your methods for finding half a of the water?

Source: Baker, J. & Baker, A. 2006. *Natural Maths Strategies Book 2*. Blake Education: Clayton. P121

Real life experience:

Half of the class: Ask the students in your class to divide themselves in half, ask the girls to divide themselves in half, ask the boys to divide themselves in half. Discuss strategies for checking that the two groups are even.

Routines and Transitions:

Ask students move to the next activity, hold up a Substitising Dot Card and ask students to identify the collection of dots and tell you what half the collection would be. Start using only the even number cards and when students are ready add in the odd dots, asking students to tell you what half the collection would be with one left over.

Assessment

Provide students with a collection of objects. Ask students to count out a small group and then divide the collection in half. Ask students to explain their answer and how they came to it. Repeat with odd and even numbers.

Achievement Standard: identify representations of one half

Background Reading

Some students will associate the word 'half' with fairness and sharing. They will use it to refer to any number of shares, for example: *We all got half*. Others will associate the word 'half' with two and use it whenever there are two parts even if they are not of equal size. Halving will often simply mean to split or share. Students' use of these words should be refined during the primary years of schooling.

Source: *First steps in Mathematics – Number – Understand Fractional Numbers*, 2007. Rigby: Port Melbourne. p 92.

Year three NAPLAN -- Numeracy test links

- Fractions

Links to Related MAGs

- 1.2.5 – Fractions -- half
- 1.3.7 – Fractions -- 2
- 2.1.7 – Fractions – Area and Linear



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