Sharing

P.4.3

Word Wall: *fair, unfair, share, sharing, 'share between', 'how many', 'left over', 'equal groups of', 'how many different ways', quantity, proportion, 'I share'*

Introduction

Students will discover the difference between fair and unfair sharing of a group of objects.

Resources

- Early FISH Kit
- Party hats
- Balloons
- Candles
- Straws
- Party bags
- Paper plates
- Plastic cups

Time/Classroom Organisation

This activity may be introduced in a small group as a 20 minute focused teaching and learning event. Allow students time to play and explore with the materials and the concept.

Australian Curriculum Prep

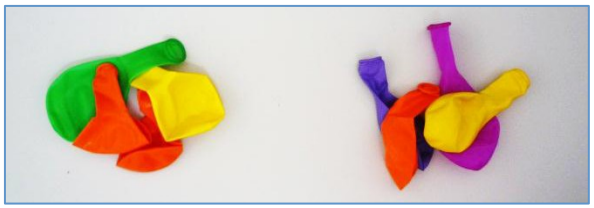
Year level: Prep

Represent practical situations to model addition and sharing (ACMNA004)

Activity Process---Party Sharing

1. In a small group provide students with a collection of party materials.
2. Place 8 balloons in the middle of the circle.
3. Explain to students that there are four people at the party and you want to work out how many balloons they will each get.
4. Assist students with sharing the balloons between 4 people.

1. Start again with 8 balloons in the middle of the groups. Tells students that this time the balloons need to be shared between 2 people.
2. Ask students: *How many balloons with they each get?*



3. Continue the sharing activities with a different set of party materials and numbers.

Source: Linthorne, C. & Serenc, M. 2005. *Jigsaw Maths Teacher Resource Book 1.* Firefly Press: Buderim p162

Activity Process – Fair Share

1. Share out a collection of party objects unevenly to a group of four students.
2. Ask students:
   Have the objects been shared evenly?
   Why/Why not?
   What can we do some that we all get the same?
3. Assist students in re-organising the objects so that each students has an even amount. Discuss what you would do to the le=over objects.

4. Repeat the activity with different a different number of objects and students.

Source: Board of Studies NSW, Mathematics K---6 Units of work. http://k6.boardofstudies.nsw.edu.au/files/maths/maths_k6_ws.pdf p22

Variations and Extensions

1. Sharing

Resources: A selection of bags that each contain a different number of objects.

In small groups ask each group to selects a bag containing a different number of objects. Ask students to share the objects from their bag evenly between their group

Discuss whether this is possible or not. Discuss the differences between the success of this activity between the different groups.

Source: Board of Studies NSW, Mathematics K-6 Units of work. http://k6.boardofstudies.nsw.edu.au/files/maths/maths_k6_ws.pdf p21

2. Round the Block

Resources: Ball, questions

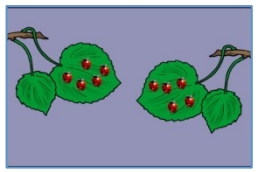
Have learners stand in a square. Give one of them a ball and a sharing challenge that requires a response, such as 'I have 10 counters to share with two students. How will I share them?'

Before the student answers, he/she passes the ball in a clockwise direction to the person next to him/her. Students pass the ball around the square as quickly as they can, and the student questioned, must respond before the ball comes back to him/her.

Challenge: When the correct answer is given, the student who has the ball must respond to the next challenge, sending the ball back around the circle in the opposite (anti---clock wise) direction.

Digital Resources

http://www.ideal---resources.com.au/



http://www.abc.net.au/countusin/games/game1.htm

Contexts for Learning

Play:

Clumps: Put music on for the students to dance to. When the music stops – call out a numbers. Students then form groups of that number. The children that are le= over are out. Model language:

We have 4 groups of 5 and 2 left over.

We have 2 equal groups of 6

Source: Linthorne, C. & Serenc, M. 2005. *Jigsaw Maths Teacher Resource Book 1.* Firefly Press: Buderim p162

Investigation:

Draw It: On a mini whiteboard ask students to draw a picture of 10 goldfish. Tell students that only 2 goldfish can live in each tank, so you must put them into groups of two. Circle groups of 2. Count how many goldfish tanks you will need? Repeat with other stories.

Source: Linthorne, C. & Serenc, M. 2005. *Jigsaw Maths Teacher Resource Book 1.* Firefly Press: Buderim p162

Real life experience:

Discuss the sharing process when handing out objects in class. For *Example: I have 60 counters and 6 students.*

I wonder how many counters you will each get?

Routines and Transitions:

When splitting into small groups ask students sort themselves into four even groups. Discuss the division of the class.

Assessment

Provide students with 12 small plastic animals or other small objects. Ask students:

- *Can you arrange the animals/counters into equal groups?*
- *How many different ways can you arrange them into equal groups?*

Source: Board of Studies NSW, Mathematics K---6 Units of work. http://k6.boardofstudies.nsw.edu.au/files/maths/maths_k6_ws.pdf p21

Prep Year Achievement Standard

By the end of the Foundation year, students make connections between number names, numerals and quantities up to 10. They compare objects using mass, length and capacity. Students connect events and the days of the week. They explain the order and duration of events. They use appropriate language to describe location.

Students count to and from 20 and order small collections. They group objects based on common characteristics and sort shapes and objects. Students answer simple questions to collect information.

Background Reading

Students should learn that the division operation is appropriate for problems where you know the quantity and the number of portions to be formed from it, and you want to find how many or how much will be in each portion. For example: I shared 18cm of licorice equally between three people. How much did I give each person? These are called partition problems because you know how many parts. They are also informally called sharing problems.

Source: *First steps in Mathematics – Number: Operations/Calculate/ Number Patterns,* 2010. Rigby: Port Melbourne. p40

Links to Related MAGs

1.2.5 – Fractions half

2.4.1 – Division --- halving