

# Number and Algebra: Fractions and Decimals: Half in Different Ways

## 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)

<b>Child-Friendly Aim:</b> I can find different ways to make half.	<b>Success Criteria:</b> I can find $\frac{1}{2}$ of a quantity. I can find $\frac{1}{2}$ in different ways. I can explain why 2 halves make 1 whole.	<b>Resources:</b> <a href="#">Lesson Pack</a> Small manipulatives
	<b>Key/New Words:</b> Whole, half, $\frac{1}{2}$ , equal size.	<b>Preparation:</b> <a href="#">Rocket Riddle Activity Sheet</a> - 1 per child <a href="#">Rocket Windows Sheet</a> - 1 per child Print one <a href="#">Rocket Riddle Activity Sheet A3</a> and cut out three rocket windows from the <a href="#">Rocket Windows Sheet</a> for each member of the LA group

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

## Learning Sequence

	<b>Sharing:</b> Lisa and Ben are sharing all the objects they found on a treasure hunt. Can the children work out how many of each object they will get each? Provide small manipulatives to support working out. Do children know any halves? Can they predict how many Lisa and Ben will get each?	
	<b>What Is a Half?</b> Use this slide to assess the children's prior knowledge. <b>Can children verbalise what is meant by half? Can they draw a picture to explain their thinking?</b> As the numbers fly in on the slide emphasise that a half is one of two same size or equal value pieces.	
	<b>Rocket Riddle:</b> Alan the Astronaut's radio is broken and he needs to let ground control know he is safe. He does this by putting green lights in half of the windows in his rocket. Invite a child to make half of the windows green by clicking on them. Does everyone agree that this is half? Draw out that three out of six windows make half. Tomorrow, Alan needs to turn half the windows green in a different way. Invite another child to do it differently. Model a different way to light up half the windows on day three. Can Alan let ground control know that he is safe for 10 days until he has finished his mission? Children discuss in pairs and make a prediction.	
	<b>Rocket Riddle Activity:</b> Children complete the differentiated <a href="#">Rocket Riddle Activities</a> , <b>finding half in different ways</b> . After the activity, discuss ideas, drawing out that three windows must be coloured each time and emphasising that half does not have to be grouped together.	
	Work in a group with an adult on a <a href="#">Rocket Riddle Activity Sheet</a> printed in A3. Children each place three rocket windows from the <a href="#">Rocket Windows Sheet</a> on a rocket in a different way. When the group have agreed that they have made half, children can colour the 3 windows green. Repeat for each child, discussing whether it is a different way of colouring $\frac{1}{2}$ . Reinforce that $\frac{1}{2}$ can be made in different ways.	
	Children work on an A4 <a href="#">Rocket Riddle Activity Sheet</a> in pairs. Can they find 10 different ways of colouring $\frac{1}{2}$ the windows green? Encourage them to work together discussing whether a way is the same or different.	
	Children work on an A4 <a href="#">Rocket Riddle Activity Sheet</a> independently, with extra sheets available if needed. How many different ways can they find to light up half of the windows? How many days can Alan the Astronaut stay in space?	
	<b>What Fraction?</b> Discuss the images on the <a href="#">Lesson Presentation</a> , drawing out the understanding that <b>two halves make one whole</b> .	



**Half Blue, Half Red:** How many children are there altogether? How many will be wearing red? How many will be wearing blue? Invite children to click to change the colours of the jumpers, emphasising that it does not matter how they are arranged.



### Master it

**Build it:** Make different sized towers from linking cubes or building bricks which are half one colour and half another.

**Grab it:** Play in the hall or playground. Spread out different coloured cones and shout an instruction such as 'half yellow'. Children then have to work in groups to grab cones so they have the arrangement you have asked for.

**Paint it:** Paint dotted pictures where half the dots are one colour and half another.

**Cook it:** Use play food to create a meal that is half red, half yellow or half one sort of vegetable and half another.

**Decorate it:** Bake or buy buns or biscuits. Make halves the theme for decorating them; half blue icing, half red icing, half pink marshmallows, half white, etc.

**Construct it:** Using any construction materials available (e.g. marble runs, building bricks) construct something which is half a designated colour.

**Picture it:** Make pictures using materials such as coloured art straws, pipe cleaners, magnetic letters or numbers, threading or lacing pegboards and pegs, 2D shapes or 3D objects. Find different ways to use half of one coloured material. Take photos for use in future mental and oral starters.