

Lesson Printables

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Planners: 2-3

Extras

Colouring Table: 4
Recording Logs: 5
Legend Recording Log: 6

**Printing in the US? Scale to 'fit to printable area' in order to get the best print.*

LESSON 1: Fractions - Exploring halves

Starter	Main Activity and Input: Showing half by building towers or colouring in blocks.	Plenary
<p>Pooch Pics: What could be the value of each dog?</p> <p>To support:</p> <ol style="list-style-type: none">1. What do students think could be the value of the first picture? How could this help them with the next problem? <p>To challenge:</p> <ol style="list-style-type: none">1. Can students make the final answer an odd number that rounds up to the nearest ten? Rounds down to the nearest ten? An even number?	<p>Input:</p> <p><i>Note, this lesson is an inquiry into exploring fractions, specifically halves. Throughout the lesson, we have not shown half written as a fraction. We also have not used the terms numerator or denominator. This vocabulary will come into play in future lessons. This lesson is all about inquiring into the meaning of half and how it can be shown in a multitude of ways. If students already know how to write half as a fraction and understand its meaning, encourage students to write what other fractions they know throughout the lesson.</i></p> <ol style="list-style-type: none">1. Slide 6 asks students if the llama was to eat half of the cookies, how many would it eat? Use this slide as a discussion point for students to share what they already know about the term half. Once you have determined that to eat half you will eat 2 cookies, ask students to identify all the ways this could be done. E.g. Two purple cookies, a purple cookie and a green cookie, 1 purple and 1 red cookie, or 1 green and 1 purple. This demonstrates that halving doesn't mean you 'cut' down the middle, it means dividing into 2 equal groups.2. Slide 8 asks students to draw halves on the shapes on the board. Ask students to draw on their whiteboards or draw on the board to show how to halve the shapes displayed. Does half always mean 2 equal pieces? Discuss as a class. You could model that the square could be cut into 6 pieces. How many different ways can students identify half?3. Slide 9 explains that the llama is building towers or buildings where half of the blocks are all the same colour. What could this look like? If you have blocks in your class, allow students to explore possible answers. If you don't have blocks, students can colour on graph paper or whiteboards.4. Slides 10 to 13 model the main activity by exploring possible colour combinations that show half. Slides 11 and 13 are animated to show dividing the whole tower/building into two equal groups in order to see if half of the tower is one particular colour. Ask students to fill in the table on slides 11 and 12 in order to model how they will record their thinking. What do they notice once they have filled in the table? Do students notice that 2 out of the 4 blocks are yellow? That half of the number 4 is 2?5. Slide 13 shows a different building/tower. Ask students if half of the blocks are green. How do they know? Elicit from students that there are 16 blocks and 8 are green. This slide is animated to show that If you divide the 16 blocks into two equal parts or groups, each part has 8 pieces. <p>Activity: Exploring halving.</p> <ol style="list-style-type: none">1. Provide students with blocks to build towers. If you don't have blocks, students can colour squares on graph paper.2. Encourage students to change their 'whole', or the total amount of blocks that they use. E.g. If students have 8 blocks, how can they show half? If students have 12 blocks, how can they show half? <p>To support:</p> <ol style="list-style-type: none">1. Start with a small amount of blocks. Students could just use 2 different colours rather than multiple colours. <p>To challenge:</p> <ol style="list-style-type: none">1. How many different ways can students show half? What is the biggest number of blocks they can use or colour in to show half?2. Encourage students to Include additional information about their tower/building. E.g. 1 out of 4 blocks is purple.3. If students are confident making $\frac{1}{2}$s, what else can they make? Let them explore and explain the fractions they create.	<p>Fraction Writing:</p> <p>What fractions have students made?</p> <p>Check for understanding:</p> <ol style="list-style-type: none">1. Encourage students to write a fraction that matches the halves that they made. E.g. $\frac{4}{8}$ represents 4 yellow blocks out of 8 blocks in total.

How many different ways can you colour half?



Recording Logs

Amount of blocks in the whole tower or building	How many blocks are the same colour?	How many blocks are different colours?

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Recording Log

Amount of blocks in the whole tower or building	How many blocks are the same colour?	How many blocks are different colours?	Legend information