

RATIO

Subject

Mathematics

Prepared By

[Instructor Name]

Grade Level

5

Overview

This lesson plan covers teaching content for;

1. Solving problems involving the relative sizes of two quantities.

Objectives

1. Solve problems involving the relative size of two quantities.

Activity Starter/Instruction

1. Demonstrate to students the concept of using ratios to compare objects.
2. Begin by providing objects for pupils on a table in the front of the room to compare during a whole class discussion (for example, rulers and pencils, erasers and markers, etc.).
3. Ask pupils to count the number of each object, and demonstrate how to write ratios to compare the quantities of the objects using the following formats: Using slash (resembling a fraction): Rulers/Pencils or Erasers/ Markers, using colon: Rulers: Pencils or Erasers: Markers
4. You can vary items in the ratios or add additional items as needed until pupils appear confident in writing ratios based on the number of objects in relation to each other.

Teacher Guide

Day 1/ Lesson 2: 15 Mins

1. Assisting pupils as a class, compile a list of objects in the classroom and outside the classroom, which they will be able to count and record in ratios. Objects might include general items, such as textbooks, or specific categories of items, such as novels, textbooks or workbooks. Outside items might include tables and chairs, flagpoles, or playground equipment.
2. Once students have a general list of available items, ask pupils to choose 20 items from the list to count. This will encourage variety among the items. You may wish to ask students to work in teams so that they are counting items accurately or divide the work of counting if it becomes tedious.
3. Using the numbers they collected on their tour, pupils will begin organizing them into ratios. Ask pupils to group objects into pairs that make sense (such as lunch tables and chairs).

Materials Required

- Rulers and pencils
- Erasers and markers
- Picture of bird and cow

Additional Resources

- <http://kuna6th.weebly.com/ratio-and-proportion-lesson-plan/>
- <https://educators.brainpop.com/lesson-plan/ratios-proportion-lesson-plan-making-real-world-connections/>
- <https://www.slideshare.net/AubreyRose5/detailed-lesson-plan-ratios-and-proportion>
- <https://www.cpalms.org/Public/PreviewResourceLesson?resourceID=123456>
- <https://www.brighthubeducation.com/elementary-school-activities/92864-use-food-to-teach-math-ratios/>
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Additional Notes

Guided Practice

Day 2/ Lesson 2: 15 Mins

1. Start by showing a picture of a bird. Ask pupils questions such as, "How many legs? How many beaks?" Show a picture of a cow. Ask pupils: "How many legs? How many heads?"
2. Tell pupils that for birds, the ratio of their legs to beaks is 2:1. Then add: "For every two legs, we'll see one beak. For the cows, help pupils see that for every four legs, they'll see one head. Therefore, the ratio of legs to heads is 4:1.
3. Use body parts to further demonstrate the concept. Ask pupils: "How many fingers do you see? (10) How many hands? (Two)" the ratio of fingers to hands is 10:2. Ask pupils: "What if we only had one hand? (five fingers) So the ratio of fingers to hands is 5:1."

Guided Practice

Day 3/ Lesson 4: 20mins

1. Using two color balls and bags.
2. Divide the class into 2 groups (equal or unequal). Tell each group to decide together and bring out any number of their color balls.
3. Each team selects a representative who places the desired number of balls in one of the bags which is in front of the class.
4. Count the number of balls in each bags (one bag first, then the other).
5. Class should record the number of balls in the first bag representing one color. To ratio sign (:) or 'to' should be placed next, then the number of balls in the second bag is recorded after the ratio sign.
6. Task is repeated again until teacher is satisfied.

	Assessment Activity Assess if pupils can: 1. Solve problems involving the relative size of two quantities correctly	Assessment Activity Make sure that pupils understand how to get a ratio.
	Summary 1. Ask for volunteers to share their answers to the problems assigned. 2. As the problems are reviewed in front of the class, have the students check their answers for accuracy	