

# Assignment #7: OER lesson plans

## Ratio and Proportions: 7th Grade

All video and lesson ideas were found from:

Teacher Tube: <https://www.teachertube.com/>

and

OER Commons: <https://www.oercommons.org/>

### Lesson 1: Introduction

**Description of lesson:** Students will work on a class activity exploring ratios: Cool Kool-Aid Experiment. <https://www.oercommons.org/courses/cool-kool-aid-experiment> to understand the reason of the mathematics of ratios/rates.

- **Activities:**

Students will work as teams to make different concentrations of Kool Aid to understand the concept of ratios in a real-world situation. They will document their findings in each mixture that they make. Refer to lesson plan and data sheet from above website.

- **Method of assessment**

Students will be assessed by the completion of the data sheet and group discussion of the relationship of the product (Kool-Aid) and the mathematics behind making a quality tasting product.

- **Expected student outcomes**

Students are expected to have an understanding of rates and ratios and how they are demonstrated in the real-world.

- **Follow-up learning**

Students will continue to learn the process of the mathematics behind the Kool-Aid experiment.

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## Lesson 2: Ratios

- **Description of lessons:**

Students will watch a video on ratios and then do a group activity to represent the different forms ratios can be written and represented.

- **Activities**

1. Students watch a video that gives the background of representing and writing a ratio. Video: <http://www.teachertube.com/video/ratios-210381>
2. Lead students through a class discussion about the video and add notes into interactive notebook.
3. Students will be grouped and participate in Ratio Spoons. (Activity from Teachers pay Teachers)

- **Method of assessment**

Students will be assessed by observing their understanding of ratios as they do the activity Ratio Spoons. ( Ratios, Unit Rates, Rate of Change Math Lib- Teachers Pay Teachers Activity)

- **Expected student outcomes:**

Expected student outcome is to demonstrate mastery of writing and representing ratios.

- **Follow-up learning:**

Students will continue to use their knowledge of ratios and direct it to rates.

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## Lesson 3: Rates and Unit Rates

- **Description of lesson:**

Students will watch a video that describes the meaning and differences of ratios and rates/unit rates and then complete practice problems.

- **Activities**

1. Student watch a video on rates, ratios, and unit rates:

<http://www.teachertube.com/video/42-lesson-math-antics-ratios-rates-and-unit-rates-363016>

2. Lead a student/teacher discussion on the differences between rates and ratios and add notes to the student's interactive notebooks.
3. Students will practice the concept of ratio, rates, and unit rates with task card practice problems. ( Ratios, Unit Rates, Rate of Change Math Lib- Teachers Pay Teachers Activity)

- **Method of assessment**

Students will demonstrate the understanding of the mathematics behind ratios, rates, and unit rates by completing practice problems at mastery level.

- **Expected student outcomes**

The expected student outcome is to understand rates and unit rates to be able to apply it in further in-depth understanding.

- **Follow-up learning**

Students will continue to work with ratios and rates and expand their knowledge with unit rates and how they can apply it to real-world situations.