

# Best Camping Rates for Utah State Parks

## Summary

In this lesson, students will have an opportunity to apply their understanding of rate and ratio. They will analyze the fees of different campgrounds and use that information to make decisions about where to camp.

## Main Core Tie

Mathematics Grade 6

[Strand: RATIOS AND PROPORTIONAL RELATIONSHIPS \(6.RP\) Standard 6.RP.3](#)

## Time Frame

2 class periods of 45 minutes each

## Group Size

Pairs

## Life Skills

Thinking & Reasoning, Communication

## Materials

- Graph paper
- Pencils
- Markers
- Rulers
- Chart paper
- Math journals

## Background for Teachers

To ensure that all students have access to this activity you will need to build/assess their background knowledge regarding camping. This includes showing them maps of campsites, explaining the concept of fees and why they are necessary, different types of camping, etc.

Mathematically, teachers need to be sure that students understand the concepts and language related to working with unit ratios and ratio relationships. See 6.RP 1 and 2

## Student Prior Knowledge

Students need a working knowledge of ratio relationships, the forms of unit ratios ( $a/b$ ;  $a:b$ ), and the language associated with both. In addition, students need to be aware of campgrounds, campground fees, and the various styles of camping.

## Intended Learning Outcomes

Students will be able to use ratio and rate reasoning to solve real-world and mathematical problems by using tables to organize equivalent ratios.

## Instructional Procedures

Follow the suggestions detailed in the attached lesson plan. An alternative to this lesson could be to organize the class into groups of 3-4 and give each group a different campground situation, in each

case making sure one is a proportional relationship and one is not. This will make the presentations more powerful as they will reinforce the patterns that emerge in proportional relationships. The data can further be used to make graphs and see the relationship in graphs.

### Strategies for Diverse Learners

As students are working ask:

What steps could you take to solve this problem?

What information do you know?

What is one difference between the two campgrounds?

If necessary, provide students with a sample of the table they will use and provide an initial entry.

Scaffold by asking the following questions:

What is an effective way to communicate your solutions or your way of thinking about this problem?

How many weekends are there in a two-month period?

How often do you think the clean-up fee is assessed?

What patterns do you see in the tables?

### Extensions

Extensions:

Have students create their own campground rate tables with a variation in price depending the number of campers, tents, or additional vehicles.

Have students go to the Utah campground websites and look for actual rates for their local camping areas and determine the cost for a week-long camping trip.

Have student plan a camping trip for their family and estimate the cost of the trip including food, gas, and supplies.

### Assessment Plan

Students will create posters that include:

at least two similarities and differences between the two campgrounds and that highlight one that is proportional and one that is not

the rate equation for both campgrounds i.e..  $y = \$8x$

the rate equation for the summer stay for each campground

### Rubrics

[Best Camping Rates](#)

### Bibliography

Smith, Margaret Schwan, Victoria Bill, Elizabeth K. Hughes. "Thinking Through A Lesson Protocol: Successfully Implementing High-Level Tasks." *Mathematics Teaching in the Middle School*. 14 (October, 2008): 132-138

### Authors

[David Smith](#)

[Patricia Stephens-French](#)