

Family Vacation (5.OA.2)

Summary

Students will apply their understanding of expressions to a real world problem involving travel distances.

Main Core Tie

Mathematics Grade 5

[Strand: OPERATIONS AND ALGEBRAIC THINKING \(5.OA\) Standard 5.OA.2](#)

Time Frame

1 class periods of 90 minutes each

Group Size

Pairs

Life Skills

Thinking & Reasoning, Communication

Materials

Paper
Pencils

Background for Teachers

Teachers need a strong understanding of the use of expressions to represent data and the role Order of Operations plays in this representation.

Student Prior Knowledge

Students need an understanding of how to represent quantities in an expression, how to express the operations, and how Order of Operations affects the answer.

Intended Learning Outcomes

Students will apply their understanding of writing expressions to a real world problem involving travel distances. CCSS.MATH.CONTENT.5.OA.A.2 Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. For example, express the calculation "add 8 and 7, then multiply by 2" as $2 \times (8 + 7)$. Recognize that $3 \times (18932 + 921)$ is three times as large as $18932 + 921$, without having to calculate the indicated sum or product.

Strategies for Diverse Learners

Supports for struggling students include:

- Organizational supports such as a chart for recording each distance and its corresponding letter
- Color coding for each segment of the trip
- Opportunities for partners to do portions of the tasks

Extensions

Additional activities include:

- Calculating the time for each segment

Calculating the gas mileage and cost
Adding additional stops or another trip

Bibliography

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

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