Take a Trip

Reporting Category	Computation and Estimation
Topic	Solving practical problems
Primary SOL	5.4 The student will create and solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division with and without remainders of whole numbers.

Materials

- Trip Cards
- Trip Sheet (one per group)

Vocabulary

sum, difference, product, quotient

Student/Teacher Actions – What should students be doing? What should teachers be doing to facilitate learning?

1. Ask students if they have taken a vacation with their family recently.
2. If so, where did they go? What had to be paid for? Was there a budget?
3. Have students work in groups of 3 to find the cost of their trip in "Take a Trip".
4. The group should decide where they would like to go on vacation. They have $2,000 to spend.
5. Students will pick a card from each of the following categories: Number of People Traveling, Number of Days, Name and Cost of Airline, Name and Cost of Rental Car, Name and Cost of Hotel. You may want to copy the cards using different colors.
6. Have students split up the jobs to find the cost: one person will find the cost of airfare, one person will find the cost of the rental car, and another will find the cost of the hotel.
7. Each person should fill out their portion of the Trip sheet.
8. After the group has found the total amount that they need for the trip, they pick a card from the change pile. Then they need to find the new cost of the trip.
9. Have the groups take turns sharing their trips and how much it cost. Was $2,000 enough? How much extra money did they have or how much more money did they need?
10. Activity can be done multiple times. This activity can be considered a game and the group whose trip is closest to $2,000 is the winner.

Assessment

- **Questions**
    - How do you know when to add, subtract, multiply or divide?
    - What are some situations when you have to do more than one operation?
- **Journal/writing prompts**
    - Create a problem where you have to do more than one operation.
    - Sally read 736 pages over the summer and Matt read 348 pages. Write a word problem with that information. What could you add to it to make it a 2- step problem?
- **Other**
    - Have students work in groups of 4. They should each pull out a handful of linking cubes. Then have the group put all the cubes together and then separate them into fair shares. Students should write an equation to show the steps for solving the problem.
    - Have students solve a multiplication or division problem in two different ways.

Extensions and Connections (for all students)

- Multiplication War: Assign values to the J, Q, K cards, or remove from the deck. Each pair of students deals cards as if playing War. Each player flips two cards. They multiply the two numbers and announce their product. The player with the highest product wins the trick. Play for a set time. The player with the most cards wins.
- Use "think, pair, and share" when solving word problems as a class. After presenting a problem, allow the students to think about how they would solve it, share their ideas with a partner, and then share ideas with the class. Students can solve the problems individually and then discuss their answer with their partner.

Strategies for Differentiation

- Use fewer categories.
- Prior to lesson, provide students with an organizer of 4 columns (division, multiplication, addition, subtraction) and brainstorm terms associated with each operation.
- As an alternative to each person filling in their portion, assign jobs such as recorder, facilitator, computation checker.
- Allow student to create nonlinguistic representations of their trips.
- Provide a list of steps for the team to follow.
- Facilitate discussion to allow students to identify practical applications of addition, subtraction, multiplication and division in their daily life.

- Students can choose a place to visit and use the internet to find actual cost for airfare, hotel and car rental instead of the cards.

Number of People Traveling cards

2 people	2 people
3 people	3 people
3 people	4 people
4 people	4 people

Number of Days cards

2 days	2 days
3 days	3 days
4 days	4 days
5 days	5 days

Airline and Cost cards

Chi Airways $162 per person	Beta Airlines $268 per person
Alpha Airlines $189 per person	Epsilon Airways $322 per person
Omega Airlines $253 per person	Gamma Airways $121 per person
Kappa Airways $275 per person	Zeta Airlines $337 per person

Rental Car and Cost cards

Watt Car Rental $25 plus $35 per day	Lense Car Rental $30 plus $15 per day
Micro Car Rental $15 plus $20 per day	Bushel Car Rental $50 plus $12 per day
Radian Car Rental $35 plus $17 per day	Dash Car Rental $28 plus $18 per day
Violle Car Rental $10 plus $36 per day	Karat Car Rental $23 plus $25 per day

Hotel and Cost cards

La Quantum Inn $78 per day Maximum: 2 people	Comfortable Inn $89 per day Maximum: 2 people
Sleepy Inn $112 per day Maximum: 2 people	Campton Inn $145 per day Maximum: 2 people
Best Eastern $99 per day Maximum: 2 people	Emblem Suites $157 per day Maximum: 2 people
The Milton $64 per day Maximum: 2 people	Valentine Inn $138 per day Maximum: 2 people

Change cards

A friend wants to join the group.	Your car rental company is having a sale. They are offering one day free.
Your hotel has a special offer. The cost is half off.	Your airline has added a new fuel fee. Add $35 per person.
One of the people in the group cannot go.	You have too many people for one hotel room. You have to get a second or third.
The car rental company doesn't have a big enough car for everyone. You have to rent another car.	The airline is offering a discount of $25 per person.

Trip Sheet

Names of students

_____

_____

Name of Vacation Site _____

Budget $2,000

Number of people traveling _____

Number of days traveling _____

Cost of airfare per person _____ Total cost _____

Cost of rental car _____

Cost of hotel per night _____ Total cost _____

Total cost of trip_____

Change in cost based on change card _____

Did the group have enough money to take the trip?

_____

If so, how much extra money did the group have?

_____

If not, how much more money did the group need?

_____