My Summer Holiday (Level 3)

Description	Learners plan a holiday for their summer vacations within a fixed budget and make a travel guide using it. They will use and apply concepts of ratios and operations on ratios to do so.
Leading question	How can I plan a fun holiday on a budget?
Subjects covered	Math, Literacy, Social Studies, Art
Total time required	40-60 min a day for 4 days
Resources required	Paper, pencil, physical and political maps of the country the learners live in or an atlas, and colours *(optional)*
Learning outcomes:	By the end of this project, learners will be able to: Knowledge-Based Outcomes: 1. Define a ratio as a comparison between quantities of the same kind. 2. Recognise ratios in the real world. 3. Perform operations on money (add, subtract, multiply, divide). 4. Calculate ratios. 5. Use concepts of distance and time to determine the costs of travel. 6. Write an informational text. 7. Locate places on a map (cities/ towns/ villages). 8. Use the scale of a map to calculate distances between places. 21st Century Skill Outcomes: 1. Think creatively while planning the chosen destinations' itineraries and making a travel guide. 2. Work collaboratively while seeking suggestions on places to visit and implementing them in the itinerary. 3. Communicate effectively through the travel guide entries for the chosen destinations. 4. Think critically while revising the itinerary based on budget constraints.
Previous Learning	Operations on whole numbers and decimals (add, subtract, multiply and divide)
Supervision required	Medium

Day 1 -

Today, you will start working on your travel plans and identify the places you want to visit.

Time	Activity and Description

10 minutes	**Introduction** Have you ever been on a trip to visit relatives or friends? - Where did you go? - How did you get there? - What did you do there? - Did you spend money on those activities? In this project, you will plan a 10-day holiday for your summer vacation! - Each of you will imagine that you have a budget of $1000 to do this. - The **Leading Question** that we will answer in this project is: How do I plan a fun holiday on a budget?
15 minutes	**Travel Plan Categories** How will you plan a fun 10-day holiday on a budget of $1000 per person? What are some things that you need to think about? ***Note:*** *Ask the questions listed below to get learners to think about the pointers that they may missed.* - *Which places do you want to visit?* - *What fun activities will you do at each of these places?* - *How many days do you want to spend at each place?* - *How will you travel to these places? How much will it cost?* - *Where will you stay at each of these places? How much will it cost?* - *How much money will you spend on food and activities?*
15 minutes	**Destinations** - How many places or **destinations** do you think you can visit in 10 days? - What kind of destinations do you want to visit? (seaside/ mountain/ riverside etc) - Look at the physical map and identify where these landforms are found in your county. - Now, look at the political map and identify as many places as you want to visit in each of these landforms.
At-home activities	Discuss the places you would like to visit with an elder and find out as many activities as possible to do at each of these places.

Day 2 -

Today, you will make detailed itineraries and use ratios to check if you have assigned a sufficient number of days to each place.

Time	**Activity and Description**
20 minutes	**Itinerary** Let us start the day by making detailed plans about the sequence in which you will travel to the destinations you chose, how many days you will spend at each destination, and what you will do there! To do this:

	- First, use the political map of your country to decide the sequence in which you will cover the places.
	- Once done, decide how many days you will spend at each place.
	- Finally, make your day-wise itinerary. Include these details for each day:
	- Where you will stay (such as a hotel).
	- Activities that you will do.
	- Any travel that you need to do (to the next place).
	- If yes, how you will travel (road/ rail/ air/ water)?
	  - Use the map to find out what would be the best mode of travel. For example,
	  - Hilly regions are better connected by buses than trains.
	  - If there is a water body between two places, you may choose to travel by water.
	  - If the places are too far apart, you can travel by air because it is the fastest.
	
	Morning:
	• Breakfast - 9:00 a.m.
	• Visit the Science Museum. - 12 noon
	Afternoon:
	• Lunch - 1:30 p.m.
	• Visit the zoo. - 4:00 p.m.
	Evening:
	• Snack - 5:00 p.m.
	• Go to the park to play - 7:00 p.m.
	Night:
	• Dinner - 9:00 p.m.
	• Sleep - 10:00 p.m.
	
	Note: *Look at the sample itinerary in* ***Appendix 1*** *for reference.*

10 minutes	**Ratios**
	How many days are you spending at each place?
	- How did you decide this?
	- Do you think you are spending a sufficient amount of time at each place? How can we check this?
	
	One way to check if we are spending too much or too little time at each place is to use the concept of **ratios**. Let us understand what ratios are!
	
	Note: *Use the board/ chart paper as you explain the following to the learners.*
	
	- A **ratio** is a way to compare similar things.
	- Let's say we want to compare the number of students who like apples and oranges in a class.
	  - The class has 30 students, of which 20 like apples and 10 like oranges.
	  - We can say that
	  - $\frac{No.\ of\ students\ who\ like\ oranges}{No.\ of\ students\ who\ like\ apples} = \frac{10}{20}$, which can be simplified as $\frac{1}{2}$.
	  - This means that for every 1 student in class who likes oranges, 2 students like apples.
	  - Ratios are written in the form a : b. So we can write the ratio of students who like oranges to those who like apples is 1 : 2.
	- Let's say we want to compare the number of activities to do at different places.
	  - There are 6 activities to do at Place A and 3 activities to do at Place B.

	- We can say that $\frac{Activities\ at\ Place\ A}{Activities\ at\ Place\ B} = \frac{6}{3}$, which can be simplified as $\frac{2}{1}$.
	- This means that for every 2 activities to do at Place A, there is 1 activity to do at Place B.
	- So the ratio of activities to do at Place A and Place B is 2 : 1.
	
	Now, let us try and solve a few challenges on our own!
	- If there are 20 activities to do in total, what is the ratio of
	  - activities to do at Place A to total activities? *(1 : 10)*
	  - activities to do at Place B to total activities? *(3 : 10)*
	- Now, let's practise writing some ratios! Write the ratio of activities to do at each place in your itinerary to the total activities.

10 minutes	**Checking Day Allocation**
	How will you use ratios to check if you are spending a sufficient number of days at each place?
	
	To do this, you need to make sure that you assign days in the same ratio as the number of activities.
	- This way, if a place has only a few activities to do, you will assign less number of days to that place.
	- Similarly, if a place has more activities to do, you will assign a greater number of days to that place.
	
	Let us look at an example to understand how to do this.
	
	Note: *Using the example below, explain on the board/ chart paper how to operate on ratios as fractions.*
	- Total no. of days = 10
	- No. of places to visit = 2 (A & B)
	- Ratio of activities at Place A to total activities = 4 : 20
	- Ratio of activities at Place B to total activities = 5 : 20
	- **No. of Days to Spend at Place A**
	  - Ratio of activities at Place A to total activities = 4 : 20 =
	  - $\frac{4}{20}$ (can be written as a fraction) = $\frac{1}{5}$ (simplified)
	  - No. of days to spend at Place A = 10 x $\frac{1}{5}$ = 2
	- **No. of Days to Spend at Place B**
	  - Ratio of activities at Place B to total activities = 5 : 20 = $\frac{5}{20} = \frac{1}{4}$
	  - No. of days to spend at Place B = 10 x $\frac{1}{4}$ = 2.8
	  - Steps to round off to the nearest whole number (we can either spend 2 or 3 days at Place B, but not 2.8):
	  - If the digit after the decimal is less than 5, round off to the previous whole number (1.4 will be rounded off to 1).
	  - If the digit after the decimal is 5 or greater than 5, round off to the next whole number (1.6 will be rounded off to 2).

	- Rounding off to the nearest whole number, no. of days to spend at Place B = 3. Divide days in the ratio of activities to do at each destination and check if it matches the original distribution of days.
At-home activities	Revise your itineraries if you choose to increase/ decrease the number of days for different places.

Day 3 –

Today, you will calculate your costs and check if you are within the budget or exceeding it.

Time	**Activity and Description**
20 minutes	**Cost of Travel** - Now that you have planned your itinerary, you will calculate your budget! - What are the different things for which you will need money? (*Take responses - travel, stay, food, activities, buying things*) ***Note:*** *Using the responses, draw a table such as the one shown below, for learners to copy and keep track of their budget. They will add or remove rows based on how many places they are visiting and fill each section based on the activities that follow.*

Place	*Travel*	*Stay*	*Food*	*Activities*	*Purchases*	***Total***
A	*(Home to A)*					
B	*(A to B)*					
C	*(B to C)* *+* *(C to Home)*					

Let us start with the expense of tickets!

Note: *Share the table below showing fare and time per 100 km for different modes of travel.*

Mode of Travel	***Rail (Train)***	***Road (Bus)***	***Air (Airplane)***	***Water (Ship)***
Fare per 100 km	*$15*	*$20*	*$80*	*$15*
Time per 100 km	*2 hours*	*3 hours*	*30 min*	*4 hours*

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- How will you calculate the price of tickets to each place for the mode of travel you choose? (distance x fare per km)
- For this, we need to first calculate the distance between different destinations, and then multiply it by the fare for 1 km.
- Let us learn how to calculate distances using maps!

Note: Teach learners how to calculate the distance between different places on a map using the scale of the map:
- Read the scale
- Use a ruler to measure the distance between two places in cm.
- Multiply the distance with scale. For example:
  - If the distance between A and B is 10 cm on a map, and
  - the scale is 1 cm = 140 km;
  - the actual distance between A and B = 10 x 140 km = 1400 km.

Calculate
- the distances of the travels you need to make based on the route you chose. For example:
  - Home to Place A
  - Place A to Place B
  - Place B to Home
- the cost of travel for each mode for all travel.
  If needed, explain using the example below:
  - Distance between A and B = 200 km
  - Cost of railways for 100 km = $20
  - Cost of railways for 1 km = $20/ 100 = $0.2
  - Cost of railways for 300 km = $0.2 x 300 = $60
- the time of travel for each mode
  If needed, explain using the example below:
  - Time taken to travel by railways for 100 km = 2 hours
  - Time taken to travel by railways for 1 km = 2/100 hours
  - Time taken to travel by railways for 300 km = 300 x 2/100 = 6 hours

Once done
- calculate the total money spent on travel (cost of travel 1 + cost of travel 2…).
- Fill in their budget tables.
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Cost of Stay
Now, let us book our stay!

Note: Share or draw on the board the table below showing the per night cost of three different stay options and their features.

<table>
<tr><th>Stay Option</th><th>Hostel</th><th>Small Hotel</th><th>Big Hotel</th></tr>
<tr><td>Cost Per Night</td><td>$10</td><td>$25</td><td>$50</td></tr>
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	Features	*- 6 people per room* *- No hot water* *- Fun activities available* *- meals cost extra*	*- 1 person per room* *- Hot water is available in the morning* *- No fun activities* *- meals cost extra*	*- 1 person per room* *- Hot water is available all day* *- Fun activities available* *- breakfast included*

Now, choose your stay options! You can choose different stay options for different destinations!

Once done, calculate the total cost of stay and fill in your budget tables.

10 minutes	**Cost of Food and Activities** Now, let us calculate how much money we need for food, activities and purchases! To do this: - Decide how much money you need for food. ***Note:*** *If needed,* - *suggest they consider a base price per meal (such as $10).* - *remind them that if and wherever they are staying in a hotel, breakfast is included in the price.* - Decide how much money you need for activities and purchases. ***Note:*** *If needed, suggest they consider:* - *a base price per activity (such as $5).* - *the maximum amount of money to spend on purchases at each place (such as $50).* - Calculate the total cost of food, activities and purchases.
At-home activities	Learners calculate their total expenses to check if they are within the budget or not. - If they exceed the budget, they think of ways to make sure they stay within the budget. - If they are spending much less than the budget, they can think about what else they would like to spend money on.

Day 4 –

Today, you will align your itineraries with the budget and create a travel guide with entries about different places that you plan to visit.

Time	Activity and Description
15 minutes	**Adjusting Itineraries** Are your expenses within the budget of $1000 per person? - What can you do to stay within the budget if you have exceeded it? *(choose cheaper travel and stay options, reduce the budget for purchases etc.)* - What if you are spending much less than your budget?

	(choose better travel and stay options, add more activities, increase the budget for purchases etc.) Think of ideas! Remember that you cannot reduce the length of the holiday or make it less fun! Once done, revise your plans as needed and revise your budget tables. ***Tip:*** *If needed give them further ideas such as:* - *Travelling at night will reduce stay costs by a day.* - *Reducing the length of your route will reduce the cost of travel.*
20 minutes	**Travel Guide** Congratulations on planning amazing holidays! Now, we will write a travel guide to help others thinking of planning their vacations! - Write one entry per destination! *(If learners cannot finish this in the class, they can make just one entry and write the rest of them at home.)* - Once done, we will bind all the pages together to make a travel guide You must include these details: - Location - Activities to do - Cost of travel by different modes from the town where the school is located. - Your itinerary as a sample You can also decorate the pages the way you like or draw pictures of any monuments etc. that they know of!
5 minutes	**Reflection** Now that we have completed the project, let us think about our experience of working on it! - How easy or challenging was it to plan a holiday on a budget? - Would you go on the holiday you planned? Why or why not? - What went well? - What would you do differently? ***Note:*** *At the end of the class/ once learners are done completing their entries, bind the pages into a book.*
At-home activities	Finish writing any entries that you could not finish in the class today.

Additional enrichment activities:	- Learners can be asked to calculate the cost-to-time ratio for each mode of transport and choose their mode of travel accordingly.

	For example, rail is the best mode of transport because, for each hour of travel, it costs the least amount of money. - Learners can use Google Maps to crosscheck the distances that they calculated between two places on the map.
Modifications for simplification	- Learners can be provided/ asked to assume distances between the chosen places on the map. - Learners can present their itineraries instead of making a travel guide.

ASSESSMENT CRITERIA

A majority of my learners were able to:

☐ Use ratios to check if the distribution of 10 days across places was appropriate.
☐ Use the scale of a map to calculate distances between at least 2 places.
☐ Plan a 10-day itinerary to visit at least 2 places in India.
☐ Allocate the budget across different areas to ensure that it does not exceed $10,000 per person.
☐ Write a travel guide entry for at least 1 destination in India that includes its location, activities to do there, and cost of travel to reach there.

APPENDIX 1

A Sample Itinerary

Morning:

- Breakfast - 9:00 a.m.
- Visit the Science Museum. - 12 noon

Afternoon:

- Lunch - 1:30 p.m.
- Visit the zoo. - 4:00 p.m.

Evening:

- Snack - 5:00 p.m.
- Go to the park to play - 7:00 p.m.

Night:

- Dinner - 9:00 p.m.
- Sleep - 10:00 p.m.