

RATIONAL NUMBERS collaborative project



CCSS: 6.NS.2, 6.NS.3, 6.RP.3 | TEKS: 6.4B, 6.5A

The problem: You are a travel agent who helps clients determine if it is cheaper to drive or fly to a destination.

The investigation: Student groups will research and calculate the costs of each method of travel for their client's desired trips.

ARE WE THERE YET?

You are travel agents who help clients determine if it is cheaper to drive or fly to a destination. Your task is to research and calculate the costs of each method of travel for your client's desired trips. Your client is counting on you to make a recommendation for which method of travel they should choose as they plan their dream vacation!

PROJECT STAGES	EXPECTATION	DUPLICATE
1. Intro and Research	Become familiar with your client and research your client's desired travel destinations.	
2. Road Trip Costs	Determine the gas mileage of your client's vehicle and calculate the cost of each road trip.	
3. Compare and Summarize	Research the cost of your client flying to each destination. Then, summarize the information and make travel recommendations for your client in a travel portfolio.	

PROJECT REQUIREMENTS

Your final product will be a travel portfolio for your client that includes the following:

- Information about client's desired travel destinations.
- The cost of both driving and flying to the requested destinations.
- The method of travel recommended for their client's trips, including a recommendation.

Be sure your travel portfolio is engaging, informative and easy to read. Use your math skills as you present travel recommendations to your client.

STAGE 3 - COMPARE AND SUMMARIZE 6th

TEACHER INSTRUCTIONS

STAGE OUTLINE

The table below provides a suggested outline for this project stage. The accompanying slide deck follows the outline shown.

STAGE 3 - COMPARE AND SUMMARIZE	(Estimated time: 1-2 days)
WARM-UP	1. Give each student a Stage 3: Warm-up sheet to answer the following: "What additional travel costs might your client need to consider when taking either a road trip or flying on an airplane? How will these additional costs influence your recommendations?" 2. Provide each student with a Stage 3: Recording Sheet. 3. Watch the "7 On Your Side: Compares the travel costs for driving vs flying" clip below. Encourage students to take notes on anything they find interesting or any questions they have after viewing the clip. https://abc7news.com/7-on-your-side-michael-finney-driving-vs-flying-travel-costs/1490120/ 4. Students will research the cost of flying to each destination and calculate the client's total airfare costs based on the number of people traveling. Suggested site: gojet.com/travel/flights 5. Students will record the cost of the road trip from Stage 2 and make comparisons between the two different methods of travel. Students will recommend which method of travel the client should choose for each trip. 6. Students should take the information from their research and calculate and create a travel portfolio for their client. The portfolio should include the following: <ul style="list-style-type: none">Information about client's desired travel destinationsThe cost of both driving and flying to the requested destinationThe method of travel recommended for their client's trips, including an explanation of the recommendation Suggested formats for the products include: <ul style="list-style-type: none">A Google Slide presentationPrinted brochures (consider using templates from Canva.com)A file folder portfolio Note: Use the format(s) that work best for your students and your resources. Directions on the slide deck have been left intentionally blank for you to substitute your own format if you prefer.

STAGE 3: STEPS

ARE WE THERE YET?

CLIENT INFORMATION:

NAME: Erna Esteb
HOMETOWN: Nashville, Tennessee
NUMBER OF TRAVELERS: 3

VEHICLE INFORMATION:

My vehicle uses 15 gallons of gas to drive 285 miles.

TRAVEL DESTINATIONS:

TOP 3 TRAVEL DESTINATIONS:

- Charlotte, North Carolina
- Dallas, Texas
- Albuquerque, New Mexico

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TIME FRAME: 3-6 DAYS

ARE WE THERE YET?

CLIENT INFORMATION:
 NAME: Dalton Peth
 HOMETOWN: Pittsburg, Pennsylvania
 NUMBER OF TRAVELERS: 4

VEHICLE INFORMATION:
 My vehicle uses 11 gallons of gas to drive 187 miles.

TRAVEL DESTINATIONS:
 TOP 3 TRAVEL DESTINATIONS:
 1. St. Louis, Missouri
 2. Billings, Montana

ARE WE THERE YET?

CLIENT INFORMATION:
 NAME: Erma Esteb
 HOMETOWN: Nashville, Tennessee
 NUMBER OF TRAVELERS: 3

VEHICLE INFORMATION:
 My vehicle uses 15 gallons of gas to drive 285 miles.

TRAVEL DESTINATIONS:
 TOP 3 TRAVEL DESTINATIONS:
 1. Charlotte, North Carolina
 2. Dallas, Texas
 3. Albuquerque, New Mexico

how is this project organized?

materials needed:

computer
+ internet access

STAGE	DESCRIPTION	TIME FRAME
1: Intro and Research	This stage will introduce students to the project scenario and allow students to become familiar with their client. Students will research information about the client's travel destinations.	1-2 days
2: Road Trip Costs	Students will determine the miles per gallon rate of the client's vehicle and calculate the cost of each road trip.	1 day
3: Compare and Summarize	Students will research the cost of flying to each destination and summarize the information in a travel portfolio for their client.	1-2 days

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WHAT IS THE FINISHED PRODUCT?



ARE WE THERE YET?
6TH GRADE PROJECT RUBRIC

Name _____
Total Points _____

	ABOVE STANDARD	MET STANDARD	BELOW STANDARD
MATHEMATICAL CONTENT	Calculates the cost of road trips without error		
MATHEMATICAL THINKING	Provides appropriate for travel method recommendations		
PARTICIPATION	Participates fully		
FOLLOWS TEACHER INSTRUCTIONS AND PROJECT CRITERIA	Follows directions and fully		
FINAL PRODUCT	Final product is well organized and includes all required details		

ARE WE THERE YET?
6TH GRADE PROJECT RUBRIC

Name _____
Date _____
Pd _____

	ABOVE STANDARD	MET STANDARD	BELOW STANDARD
MATHEMATICAL CONTENT	Calculates the cost of the client's road trips without errors	Calculates the cost of the client's road trips with few errors	Calculates the cost of the client's road trips with multiple errors
MATHEMATICAL THINKING	Provides appropriate reasoning for travel method recommendations	Provides some reasoning for travel method recommendations	Does not provide reasoning for travel method recommendations
PARTICIPATION	Participates fully	Participates with minor redirects from teacher	Participates with major redirects from teacher
FOLLOWS TEACHER INSTRUCTIONS AND PROJECT CRITERIA	Follows directions and criteria fully	Follows directions and criteria with few errors	Follows directions and criteria with multiple errors
FINAL PRODUCT	Final product is well organized and includes all required details	Final product is somewhat organized and includes most required details	Final product lacks organization and is missing several required details

TEACHER NOTES: _____

TOTAL POINTS: _____

rubrics are provided to streamline grading



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PLANNING IS DONE FOR YOU

each of the three stages includes teacher lesson plans



STAGE 1 – INTRO AND RESEARCH 6th
TEACHER INSTRUCTIONS

STAGE OUTLINE

The table below provides a suggested outline for this project stage. The accompanying slide deck follows the outline shown.

STAGE 1 - INTRO AND RESEARCH (Estimated time: 1-2 days)	
WARM-UP	1. Give each student a Stage 1: Warm-Up sheet to answer the following: "When someone is planning a trip, what factors do you think are considered when choosing to drive or fly? Describe pros and cons for each method of travel."
STAGE 1: STEPS	2. Provide each group with the following project materials: <ul style="list-style-type: none"> • Project Cover Sheet (one per group) • Client Info Sheet (one per group) • Stage 1: Recording Sheet (one per student) 3. Use the Project Cover Sheet to introduce the project scenario. Inform students that they are travel agents who help clients determine if it is cheaper to drive or fly to a destination. 4. Give each group time to become familiar with their client's information. For each of the client's travel destinations, students will research how far they have to travel. 5. Students will determine the client's hometown, the road trip, and the round trip. Suggested site: h 6. Students will also calculate the road trip. (This will be the final stage of the project)
EXIT TICKET	7. Give each student an exit ticket. "For each trip, prepare a travel portfolio."

STAGE 1

PROJECT STAGES

STAGE	EXPECTATION	DUE DATE
Intro and Research	Become familiar with your client and research your client's desired travel destinations	
Road Trip Costs	Determine the gas mileage of your client's vehicle and calculate the cost of each road trip	
Compare and Summarize	Research the cost of your client flying to each destination. Then, summarize the information and make travel recommendations for your client in a travel portfolio	

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and a slide deck to present the material

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EVERYTHING YOU NEED TO KEEP STUDENTS ON TRACK

STAGE 2: EXIT TICKET Name: _____ Date: _____

Based on the cost of the road trips and the information you have gathered on the destinations, which trip would you recommend to your client? Explain your reasoning.

ARE WE THERE YET?: STAGE 2 EXIT TICKET ©Maneuvering the Middle LLC, 2022

- ✓ student materials
- ✓ warm-ups
- ✓ exit tickets

STAGE 2: EXIT TICKET Name: _____

Based on the cost of the road trips and the information you have gathered on the destinations, which trip would you recommend to your client? Explain your reasoning.

ARE WE THERE YET?: STAGE 2 EXIT TICKET

STAGE 2: WARM-UP Name: _____ Date: _____

Four friends decide to take a road trip to visit their favorite amusement park. They determine that the cost of gas for the trip will be \$125.20. How much will each person pay for gas if they divide the cost evenly?

ARE WE THERE YET?: STAGE 2 WARM-UP

STAGE 2: EXIT TICKET Name: _____

Based on the cost of the road trips and the information you have gathered on the destinations, which trip would you recommend to your client? Explain your reasoning.

ARE WE THERE YET?: STAGE 2 EXIT TICKET

STAGE 2: WARM-UP Name: _____

Four friends decide to take a road trip to visit their favorite amusement park. They determine that the cost of gas for the trip will be \$125.20. How much will each person pay for gas if they divide the cost evenly?

ARE WE THERE YET?: STAGE 2 WARM-UP

ARE WE THERE YET? TRAVEL AGENT: _____ CLIENT: _____

STAGE 2 RECORDING SHEET

TRANSPORTATION COSTS TRAINING: NOTES

CLIENT VEHICLE INFORMATION

	MILES PER GALLON

TRIP #1: _____ TO _____

NUMBER OF MILES OF THE ROAD TRIP		WORK
NUMBER OF GALLONS OF GAS NEEDED		
AVERAGE GAS PRICE PER GALLON		
TOTAL COST OF ROAD TRIP		

ARE WE THERE YET?: STAGE 2 RECORDING SHEET ©Maneuvering the Middle LLC, 2022