Unit Project – Planning an Adventure Trip in Saskatchewan

*Math Learning Goals:*

* *Add, subtract, multiply and divide decimals* (N7.2)
* *Compare and order fractions, decimals and mixed numbers* (N7.3)
* *Convert between fractions and terminating/repeating decimals* (N7.3)
* *Solve problems involving fractions, decimals and percents* (N7.3, N7.4)
* *Adding and Subtracting Integers* (N7.6)
* *Developing and Evaluating Expressions* (P7.1, P7.2)

Your mission is to plan a 1 week adventure holiday for 12 math students anywhere in Saskatchewan. At the end of the project, you will have a chance to “sell” your adventure holiday to other students and hope they choose yours! You have $2500 a person.

*Suggested:*

* Hot springs in Regina
* Rider game
* Hunting Fishing Trip
* Snowmobiling
* Skiing
* Dogsledding
* RCMP museum
* Golf
* Boating
* Camping
* Wildlife viewing
* Hiking
* Horseback riding
* Spa
* Bird Watching
1. Explore and choose a recreational destination located in the Province.
* Tourist websites, travel brochures, newspaper adverts, travel magazine, travel agency, ask someone!
* Cut-out/print/save any information you find on your destination
* Keep in mind the more a holiday costs the fewer people who can take it. What is the point when a holiday becomes too expensive?
1. Research and make notes on options and costs for:

**Transportation:** How can you get there? (bus, plane, car rental, bicycle, other?)

**Shelter:** (hotels, motels, tents, chalets, huts?)

**Food:** (online dining guides, online menus, local grocery stores, bring your own groceries/kitchenette or camping...)

**Clothing:** Need any special gear for recreational activities? (find local sports stores/online)

**Recreational activities:** (skiing, surfing, hiking, zip-lining, swimming, sailing, fishing, bowling, watercraft rentals...)

Budget Balance: Remember that you only have $2500 a person.

* Find coupons, sale flyers, special discount offers, online sales for any items you can save money on. Keep the cut-outs/print-outs with your project as this will be proof of your good money-saving skills!
1. Create a detailed and legible expense sheet
* show all categories for expenses
* determine a total cost for 12 people including all taxes.
* determine the cost per person without and with taxes.
* Make sure that your budget balances! You only have $2500 a person.
1. Create your own brochure, poster or slideshow

to advertise your adventure trip! This is what should “sell” your trip. Students should be *persuaded* to purchase your trip! Is it fun, exciting and cost-effective? Can you encourage others to pick your trip based on mathematics? Can you encourage others to pick your trip based on the unique features of your trip such as location or activities? Using your final cost explain how much it will cost per person in a paragraph.

1. Math Requirements of your Adventure Project

Using any of the values from your project costs, show the following hand-written, long-form calculations on a separate sheet(s) of paper: It must explain on the paper why these calculations are relevant.

* 2 examples for each adding, subtracting, multiplying and dividing decimals (8 problems in total)
* select 2 of each: fractions, decimals, percent values and whole numbers and compare them using one number line with benchmarks
* 6 examples of each adding and subtracting of integers to balance your budget.
* Demonstrate in the final price what percent and number cost of the budget is spent on each: shelter, food, clothing, recreation, transportation. Calculate a final price including sales tax. If answer is rounded for a final cost explain how you rounded and why.
* Write an expression for the cost per person and list the cost per person for 2 people, for 4, for 5, for 6, for 8 for 10 and for 12
1. Due date and timelines

The project is due in before Christmas break.

You can create milestones and add to your agenda based on your work habits and schedule. We will have some time in class to work on the project but there will be parts of the project that you will want to do at home. For example, if you have a relative who is a travel agent it may be best to call them at night to be prepared to work the next day.

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| --- | --- | --- | --- | --- |
|  | *Not Yet Meeting Expectations****Level 2*** | *Meeting Expectations with some work needed.****Level 3*** | *Meeting Expectations****Level 4*** | *Exceeding Expectations****Level 5*** |
| Format & Organization | * Project is messy and hard to follow.
* Images and/or colours were not used when they could have helped.
* Many spelling and grammar errors present.
 | * Project is neat but may not be logical to follow.
* Few images and/or colours were not used where additional ones would have helped.
* Minor spelling and grammar errors present and have minimal impact.
 | * Project is neat and easy to follow.
* Project uses multiple colours and images to highlight mathematics.
* Minor spelling or grammar errors have no impact on project.
 | * Project is neat and follows a logical order.
* Project uses multiple colours and images to highlight mathematical arguments.
* Spelling and grammar are correct.
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| Originality & Creativity | * Project idea duplicates another.
* Project contents are all duplicated from another.
* Project does not include information about destination.
 | * Project idea borrows from another.
* Project contents are mostly duplicated.
* Project does not highlight features of destination.
 | * Project idea borrows from another with a unique twist
* Project contents are mostly original.
* Project highlights features of destination.
 | * Project idea is original.
* Project contents are original.
* Project highlights unique features of destination.
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| Time Management &Use of Class Time | * No project plan or timeline developed
* Class time not used effectively large amounts of time off task.
* No research completed at home and materials not present in class to use.
 | * Project plan developed without a timeline
* Class time used effectively most of the time with some time off task.
* Minimal research completed at home and materials are not present in class to use.
 | * Project plan and timeline developed
* Class time used effectively
* Research completed at home but materials may not be present in class to use.
 | * Project plan and timeline developed and followed
* Class time used effectively to collaborate with others
* Research completed at home and materials present in class to use.
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Based on the above rubric I think I have earned a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ on this project because

Curriculum Guideline Marks

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | *Not Yet Meeting Expectations****Level 2*** | *Meeting Expectations with some work needed.****Level 3*** | *Meeting Expectations****Level 4*** | *Exceeding Expectations****Level 5*** |
| N7.1Explain division | Does not explain in paragraph how much it will cost per person | Using your final cost explain how much it will cost per person in a paragraph.  | Paragraph explains how it would cost per person and how that changes depending on group size. |  |
| N7.2Adding, Subtracting, Multiplying and Dividing Decimals | Incomplete decimal math or many errors in decimal math | Completes all decimal math with little to no error | Completes Decimal math with no error | Uses numbers with ten thousands or smaller, or three (or more) digit multipliers or divisors  |
| N7.3Relationship between positive decimals and mixed numbers | Not all pieces existent | Shows 2 fractions, 2 decimals, 2 percent values and 2 whole numbers and compare them using one number line with benchmarks with little or no errors | Completes with no errors and clear laid out numberline |  |
| N7.4Express a percent as a decimal or a fraction | Incomplete or work not shown  | Demonstrate in the final price what percent of the budget is spent on each: shelter, food, clothing, recreation, transportation.. Calculate a final price including sales tax. (with little or no errors) | Demonstrate in the final price what percent of the budget is spent on each: shelter, food, clothing, recreation, transportation.. Calculate a final price including sales tax. (with no errors) | If answer is rounded for a final cost explain how you rounded and why. |
| N7.6Demonstrate an understanding of addition and subtraction of integers, concretely, pictorially and symbolically. | Incomplete or work not shown | The budget is under cost and balanced with little or no errors | The budget is under cost and balanced with no errors  | The budget is explained and clearly explained why they decided to divide each part as they did.  |
| P7.1Linear relations | Table is incomplete or unfinished.  |  A table is created from the equation for cost per person | Table is created with extra values to demonstrate pattern. | Table is created with extra values to demonstrate pattern and a paragraph explaining pattern is added.  |
| **P7.2**I can evaluate expressions. | Equation for cost per person is incomplete or unclear.  | A equation for cost per person is written and explained.  | A equation for cost per person is written and explained in a few sentences |  |

Based on the above rubric I think I have earned a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ on this project because