SAMPLER

Welcome to the Winter Holidays around the World- By the Numbers! Students will engage in this multi-day project researching one of the many holidays celebrated world-wide throughout the winter months. As they learn about their holiday, they will look into the history and global context for the holiday, traditions and customs for celebrating the holiday and traditional foods eaten during the holiday. Students will use mathematics to analyze basic statistics, budget, write expressions, create and graph equations and analyze cultural aspects with geometry.

Get ready to research, build and collect data as we embark on our quest to answer the age old question:

When am I ever going to need this?

Project at a Glance

Phase 1: Holiday Research- A Global View
Phase 2: Holiday Research- A Traditional Celebration
Phase 3: Holiday Planning + Preparation
Phase 4 : Sharing Holiday Celebrations

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What's Inside...

Inside you'll find the **four different phases** of the project for each of the holidays. Phase 1 and 2 could easily be completed on the same day, particularly if you are operating on a block schedule. There are also optional extension opportunities for students to engage in further study of their individual holidays.

Holidays included in this project include:
- Christmas
- Hannukah
- Kwanzaa
- Las Posadas
- St. Lucia Day
- Soyal
- Yule/Winter Solstice

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Standards Alignment

Depending on which aspects you choose to focus on for the project, students will engage in a variety of mathematical standards, as well as standards in English and Social Studies. Some standards are addressed in depth, while others are review or reinforcement.

Standard Alignment.

Component	Criteria	Standards
Phase 1: Population Analysis	Determine the percentage of the global population who celebrates this holiday. Determine the local population percentage who may* celebrate this holiday	N.Q.1, N.Q.2, N.Q.3
Phase 2: Customs Geometric Analysis	Geometrically analyze a traditional decoration, dish or craft for the holiday, including shapes, symmetry and transformations.	G.CO.2, G.CO.5, G.CO.6
Phase 3: Budgeting -Variables + Expressions	Create expressions to represent total cost. Create and solve expressions to find cost per guest and cost per serving.	N.Q.1, N.Q.2, N.Q.3 A.CED.1, A.CED.2
Phase 4: Spread Awareness Fundraising	Create and solve systems of linear equations to represent time and/or budgeting constraints	A.CED.1, A.CED.2, A.CED.3, A.RE1.5, A.REI.6

Name_____ Hr_____

Phase 1: Holiday Research- A Global View- by the Numbers

Celebrating <u>Christmas</u> Around the World

Students will investigate the origins of the <u>Christmas</u> holiday, explore where it is celebrated globally and determine percentage of the global population who celebrates.

What is <u>Christmas</u>?

Where is <u>Christmas</u> celebrated throughout the world?

Name_____ Hr_____

Phase 1: Holiday Research- A Global View- by the Numbers

Celebrating Hanukkah Around the World

Students will investigate the origins of the Hanukkah holiday, explore where it is celebrated globally and determine percentage of the global population who celebrates.

What percentage of the world population celebrates this holiday? How many people is that worldwide? Hint: you need to know the current global population!

What percentage of your local (state, region, etc.) population likely celebrates this holiday? How many people is that? Hint: you need to know the current local population!

Name_____ Hr_____

Phase 2: Holiday Research- A Traditional Celebration

Celebrating <u>Kwanzaa</u> Around the World

Students will investigate how people celebrate the <u>Kwanzaa</u> holiday, throughout the world, including customs, crafts and traditional food.

What are some celebratory customs people do to celebrate <u>Kwanzaa?</u>

What are some traditional <u>Kwanzaa</u> crafts or activities people engage in?

What is included in a traditional celebratory meal?

Name_____ Hr_____

Phase 2: Holiday Research- Extension

Holiday Crafts and Customs

The star plays a prominent role in the celebration of Las Posadas. Many times children may break open piñatas in the shape of a star.

Notice, Wonder and Connect

What do you NOTICE about the piñatas? What do you WONDER?

I Notice…….	I Wonder…….

What mathematical connections can you make to the piñatas?

Name_____ Hr_____

Phase 3: Holiday Planning + Preparation

Planning the Event

Now that you've learned more about <u>Christmas</u> and the traditions it entails, it is time to plan a celebration. We will need to plan for....
- ✓ Who is attending our celebration
- ✓ How much money we have to budget for the celebration
- ✓ What we will plan to serve at our celebration
- ✓ What we will plan to do at our celebration (budget permitting!)

Create a Guest List

Who will you invite to celebrate <u>Christmas</u> with you? You don't need to fill all the spaces, but think about who you want to celebrate with!

Family	Friends
1. 2. 3. 4. 5. 6. 7. 8. 9. 10.	1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

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Menu Items	Ingredients Needed	Cost Per Ingredient	# of Servings per recipe	# of batches needed	Total Cost
Example	Spinach Artichoke Dip - Frozen Spinach, Artichokes, Cream Cheese	Spinach- $1.97 Artichokes- $1.94 Cream Cheese $2.50	8	2	2x (1.97 +1.94 +2.50)= $12.82
Appetizer					
Main Dish					
Side Dish 1					
Side Dish 2					
Dessert					
Totals					