**Subject area/course**: Mathematics/Pre-Algebra

**Grade level/band**: 7

**Task source**: New Hampshire Task Bank; Authors: Randi Margey, Brandon Knox, Annah Kelley, Butch Emerson, Wyman Eckhardt, Carol Marino, Danell Lunz. Revised and edited by Theresa Morris, SCALE

**Every Dollar Counts**

**TEACHER'S GUIDE**

1. **Task overview**:

Students will use inequalities and equations to choose the best bus company for a field trip.

1. **Aligned standards:**
2. **Primary Common Core State Standards**

CCSS.Math.Practice.MP1 Make sense of problems and persevere in solving them.

CCSS.Math.Practice.MP6 Attend to precision.

CCSS.Math.Content.7.EE.B.4 Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.

1. **Critical abilities:**

* Analysis of information - Integrate and synthesize multiple sources of information (e.g., texts, experiments, simulations) presented in diverse formats and media (e.g., visually, quantitatively, orally) in order to address a question, make informed decisions, understand a process, phenomenon, or concept, and solve problems while evaluating the credibility and accuracy of each source and noting any discrepancies among the data.
* Communication and reasoning - Use oral and written communication skills to learn, evaluate, and express ideas for a range of tasks, purposes, and audiences. Develop and strengthen writing as needed by planning, revising, editing, and rewriting while considering the audience.
* Model, design, and problem solving - Use quantitative reasoning to solve problems arising in everyday life, society, and the workplace, e.g., to plan a school event or analyze a problem in the community, to solve a design problem or to examine relationships among quantities of interest. Plan solution pathways, monitoring and evaluating progress and changing course if necessary, and find relevant external resources, such as experimental and modeling tools, to solve problems. Interpret and evaluate results in the context of the situation and improve the model or design as needed.

1. **Time/schedule requirements:**

This task will take approximately 2 class periods to complete.

1. **Materials/resources:**

* Calculator/multiplication chart (optional)
* Every Dollar Counts Document A
* Access to previous formative tasks & notes

1. **Prior knowledge:**

* Introduction to algebraic expressions, equations, and inequalities
* Solve multi-step and real life mathematical problems
* Apply properties of operations to calculate with numbers in any form
* Use variables to represent quantities in a real-world or mathematical problem
* Construct simple equations and inequalities to solve problems by reasoning about the quantities

1. **Connection to curriculum:**

This performance assessment is a culminating on-demand task intended to be administered at the end of a unit or mini-unit on algebraic expressions.

Sample unit lesson plan:

* Lesson 1: Algebraic Expressions
* Lesson 2: Create a simple equation or inequality from a one-step word problem.
* Lesson 3: Create a simple equation or inequality from a multi-step word problem.
* Lesson 4: Properties of Operations
* Lesson 5: The Distributive Property
* Lesson 6: Simplify Algebraic Expressions
* Lesson 7: Solve One-Step Equations
* Lesson 8: Solve Two-Step Equations
* Lesson 9: Solve One-Step Inequalities
* Lesson 10: Solve Two-Step Inequalities
* *Every Dollar Counts* Performance Assessment

1. **Teacher instructions:**
2. Teacher will provide students with Performance Assessment and Rubric (*calculator optional*).
3. Teacher will explain task: For this project, you will use equations and inequalities to help a principal choose the best company to use for a field trip.
4. Students will work independently for 2 class periods (*approximately 90 minutes*) to complete all three questions.
5. **Student support:**

All necessary scaffolding should be used for each and every student in accordance with student IEP/504 Plans. Possible accommodations include:

* Reduce the number of bus companies to analyze
* Word bank for words
* Extra time to complete task
* One on one direct instruction
* Less information on a page/one question at a time
* Provide students with less information at a given time
* Performance assessment could be read aloud
* Provide template/graphic organizer to organize work

1. **Extensions or variations:**

None provided.

1. **Scoring:** Student work can be scored using the Every Dollar Counts rubric.