That's a Lot of Coins

Subject: Math

Grade Level: 3rd-5th grades

Summary: After learning how many coins a new press can strike in a minute, students calculate the number of new coins that can be made in a single day. Students then share their problem-solving strategies with the class, using them to make additional calculations.

BIG QUESTION

How do I use different problem-solving strategies to make calculations?

TIMING

0 to 45 minutes

LEARNING OBJECTIVES

- Construct number meanings through real-world experience and the use of physical materials
- Understand our numeration system using relating counting, grouping, and place value concepts
- Interpret the multiple uses of numbers encountered in the real world
- Model, explain, and develop reasonable proficiency with basic facts and algorithms Use a variety of mental computation and estimation techniques
- Use calculators in appropriate computational situations
- Select and use computation techniques appropriate to specific problems and determine whether the results are reasonable.

MATERIALS

- Paper and pencils
- Manipulatives and calculators as needed

PROCEDURE

1. Share the following fun fact with the students: A brand-new press can strike 700 coins in one minute.
2. Ask the students to determine how many coins could be struck in one hour.
3. As a class, have the students discuss the strategies they used to figure out the number of coins struck in an hour.
4. Ask students to determine how many coins could be struck in a single day if four new presses were used and the presses ran for 24 hours a day.

ASSESSMENT

Use the students' calculations and class participation to determine whether they were able to determine how many coins could be struck and to successfully explain their problem-solving strategies.

DIFFERENTIATE

- Allow students to work independently or in small groups instead of the full class.
- Ask students to determine how many coins are made in a week.

RELATED

- U.S. Mint Coin Classroom circulating coin information: https://kids.usmint.gov/learn/kids/about-the-mint
- U.S. Mint Coin Classroom free online game Coin Stamper: https://kids.usmint.gov/games/coin-stamper

STANDARDS

CCSS.Math.Content.4.MD.A.1
Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table.

CCSS.Math.Content.4.MD.A.2
Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.