## Math Mad Libs

Grade Level: 2, 3, 4
Duration: 30-45 minutes
Classification: Classroom, STEM Spark
Subject(s): Algebra, Computations
Categories (STEM): Math
Keywords: Calculator, Addition, Subtraction, Multiplication

## Introduction

- Summary: Students will use the order of operations to solve a math-based mad lib
- Description: Students will be challenged to apply their knowledge about addition and subtraction to win Calculator Kalah.

Online Resources: http://www.dr-mikes-math-games-for-kids.com/calculator-word-game-upside-down.html

## Materials

| Materials | Quantity | Reusable? |
| :--- | :--- | :--- |
| Calculator* | 1 Per 2 students | Yes |
| Copy Paper | 1 Per student | No |
| Pencils | 1 Per student | Yes |

*For activity extension

## Directions

- Break students into teams of 2 or 3 .
- Write the following mad lib and key on the board. Do not include the underlined words, yet.
- Hello! I am a secret agent. My mission is to find more desserts before dinner. Can you help me?
- Have students work together to solve the following problems to get the missing words.

| Problem | Numerical Answer | Mystery Word |
| :--- | :--- | :--- |
| $9+(10+8)$ | 27 | Hello |
| $(12-3) \times 2$ | 18 | Agent |
| $6 \times(3+2)$ | 30 | Mission |


| $(48+57)-41$ | 64 | Desserts |
| :--- | :--- | :--- |
| $52+(51-8)$ | 95 | Help |

Key for Mystery Words

| $0=$ Sion | $1=\mathrm{Ag}$ | $2=\mathrm{Hel}$ | $3=\mathrm{Mis}$ | $4=$ Serts | $5=\mathrm{Lp}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $6=\mathrm{Des}$ | $7=\mathrm{Lo}$ | $8=\mathrm{Ent}$ | $9=\mathrm{He}$ |  |  |

## Activity Extension

1. Teach students how to play Calculator Kalah
a. Player 1 enters a digit $1-9$, followed by a + sign
b. Player 2 enters a digit 1-9 followed by a + sign
c. Players take turns until the number is 73 .
i. A player who enters a number that results over 73 loses.
ii. Number MUST be between 1 and 9 .
2. Play Calculator Kalah starting at 73 and subtract numbers until it reaches 7.

## Discussion Questions

- Does the order you solve the equation in matter? Explain.
- Why can't you use zero in this game?
- If zero was allowed in this game, each play could avoid going over 73 by using zero and the game would stall.
- What strategies work best? Explain.


## What is happening?

- Students utilize the order of operations and a secret code to solve riddles.
- Students will learn how to play the traditional game of Kalah.


## Applications:

- Majors: Mathematics, Statistics
- Jobs: Mathematician
- Hobbies: Chess
- Real world applications: Game Logic

