

# **Lesson 1: What Is a “Language”?**

**by Enrichment Para-Educator Teresa Benedict  
(Rose Park Elementary, Salt Lake City, Utah)**

## **Grade Level(s)**

Grades 3-5

## **Lesson Overview**

In this lesson, students will tackle the question, “Is math a language?”

## **Learning Objectives**

- To understand there are diverse types of languages and communication
- To understand that math is a language we use every day

## **Standards**

### Utah Core Standards for Mathematics

- Number and Operations in Base Ten (K-4.NBT)

### Utah Core Literacy Standards

- Reading Standards for Informational Text (K–4.RI)
- Speak and Listening Standards (5.SL)

## **Preparation**

- Print out copies of “How I Feel About Math” pre/post survey. (2 per student)  
You can make or use your own math survey.
- Print a copy of Math Core Standards from each grade, K – 4 (Basic version included at end of lesson plans. I concentrated on the Number and Operations in Base Ten or you can make your own. This can be geared toward the weakest math concept in your class).
- Find word problems or story problems that are appropriate to your grade level.  
White out the names and the names of objects before making copies.
- Find Math Mad Libs. Make two (or more) different Math Mad Libs with different math concepts so each student can fill out a Mad Lib with their partner.

## **Materials and Resources**

- “Animal Communication” (<https://www.youtube.com/watch?v=i74RbATjBk4>)  
This one is great to watch all the way through. You can emphasize the fact that there are several ways to communicate.
- “American Sign Language” (<https://www.youtube.com/watch?v=k9cFqNYIV1A>)  
You don’t need to watch the whole thing, just enough for a taste of what ASL is like as a language.
- “Body Language” (<https://www.youtube.com/watch?v=FAB9RrC9x54>)  
This is a funny video about body language. Isn’t it interesting that humans and animals rely on body language to communicate?
- “Texting Language” (<https://www.youtube.com/watch?v=dvM6tShrHkM>)  
This is a cute video made by a girl about common texting language.
- This is a nice website to customize Math Mad Libs (<http://kidcourses.com/mathlibs/>)
- This is a nice website to find books about math (<http://www.the-best-childrens-books.org/math-for-kids.html>)

### Activity 1: What Is a Language? (30 Minutes)

- Begin by giving each student a “How I Feel About Math” pre-lesson survey.
- After collecting survey, lead the class in the discussion, “What Is a Language?” (Dictionary Answer: Language is the system of words or signs that people use to express thoughts and feelings to each other.)
- Use videos as desired to show how there are different ways of communicating.
- Lead a post-video discussion: “What do they think about the language and communication that you saw on the video?”
- Ask class: How often do you use math? Discuss their answers while helping them see that there is math all around them.
- Discuss: What does math have to do with language? Ask: Think of a time you talked about or used math. (Here are some ideas to spark discussion: Do you talk to other people about math? Do you use math to make sure that your little brother or sister doesn’t get more candy than you get? Do you plan how far you can go on your bike? Do you figure out how much money you need to buy a treat at the store? Do you cook? (Fractions, Measurement), Listen to Music? (Bop your head to a  $\frac{4}{4}$  beat), Sports (Scores and Statistics), Pokemon, Yugi Oh! and other games (adding up scores, comparing Hit Points), Social Life (20 people at a party, how many pieces of cake do we need?), Money (Counting Change), Figure out what time your favorite show is on? (Time, Measurement).
- Allow everyone to tell his or her math stories. Make sure to help them see what kind of math they were using in their stories. How were they speaking the language of math? Write key words from student’s stories on the white board and have class talk about whether that was a positive experience with math or a negative experience with math. What kind of math language was used? Words? Numbers? Methods? Was the student’s story actually a word problem?

### Activity 2: Math Mad Libs (30 Minutes)

- Pass out Math Mad Libs to students.

- Put kids into teams of two and have them take turns asking the other to fill in the blank of their Mad Libs Math Story Problem sheet and then solve the problems.
- Students may work together or separately to solve problems. If they finish quickly, have them draw their Math Mad Lib problem and answer in pictures or numbers. Really fast students can make up their own Math Mad Libs for each other or you may have extra sheets available.
- Leave time to share really funny Mad Libs with the class.
- Reflect on what they learned about Math and Language.

## Troubleshooting

The responses might be negative. It would be helpful to ask what kinds of things students like to do and help them see that there is math involved in everything they do. (For example: sports have scores and statistics, games have points and numbers of items, cars deal with speeds and gas measurements, parties have a lot of math involved to get the right amount of food for the right amount of people, we measure things all the time.)

## Assessment

Throughout the discussions, look for students' understanding of the many uses of math around them. Also look for students' understanding and using the language of math in everyday life.