ACTIVITY 5: The Great Math Decoder

In math, writing expressions is like writing **simple codes** using mathematical symbols instead of words. And solving equations, which use **variables**, or letters to represent numbers we don’t know yet, is like translating symbols into words we know.

Be a math translator. **Write** some mathematical expressions from the sentences below.

**The number of ancient scrolls found in Egypt was greater than the number of scrolls found in North America.**

**If one archaeologist joins the expedition team A, expedition team A will have an equal number of explorers as team B.**

**Three new scrolls from archaeological site A plus four scrolls from site B equals one box of scrolls.**
Now, let’s **decode** some variables to solve math equations.

1. variables
   - a=1, c=6
   - equation
     \[ 14a + 2c = \]

2. variables
   - d=2, y=12
   - equation
     \[ d^2 + 4y = \]

3. variables
   - z=144, y=3
   - equation
     \[ (z) + y^3 = \]
     \[ 12 \]

4. variables
   - b=5, h=4
   - equation
     \[ 90b \times 6h = \]

We use codes every day! **Bar codes** help machines identify products. Can you think of other codes we use?

You are all my BFFs!

LOL!

Sorry I’m late. I thought I’d BRB, but I’m OMW!
Time to be a Citizen Scientist!

Transcribe to translate:
When we copy one text to make it clearer, or when we write down what people say, we are transcribing something. For example, when you wrote down the events in “Jabberwocky,” you were transcribing the events you read from the poem as a story. When you decoded homophones, you were translating the words from code into readable text.

You can help transcribe ancient texts so researchers can later translate it. You are helping scientists break the code!

Here’s how:

Go to steamsquad.org/book1 to find your rockin’ transcription project!
The Scientific Process

1. What question are the researchers trying to answer in this project?

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2. What is your hypothesis (your best guess) to answer their question?

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3. List the steps they are taking to answer their question. With which step did you help? What will they do with the information you give them?

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Think about it!
1. What was difficult about transcribing old texts? Did you have to guess on any of the texts? How do you think this will affect the researchers' data?

2. What resources did you use to help with your transcription? A field guide? Help text? How did you use them?

3. Describe some codes you see in your own life, like bar codes or emojis. How do you think people from the future would translate these codes you use?
4. What is the difference between transcribing and translating? When do you transcribe in your daily life? Do you ever translate? When?

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5. What was difficult about transcribing old texts? Did you have to guess on any of the texts? How do you think this will affect the researchers' data?

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