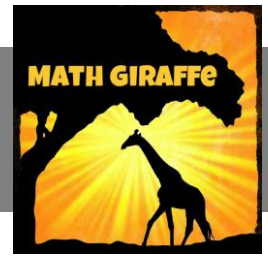


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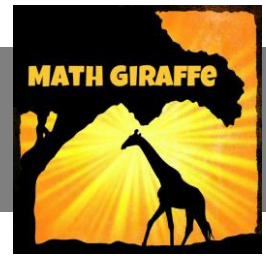
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Teacher Notes

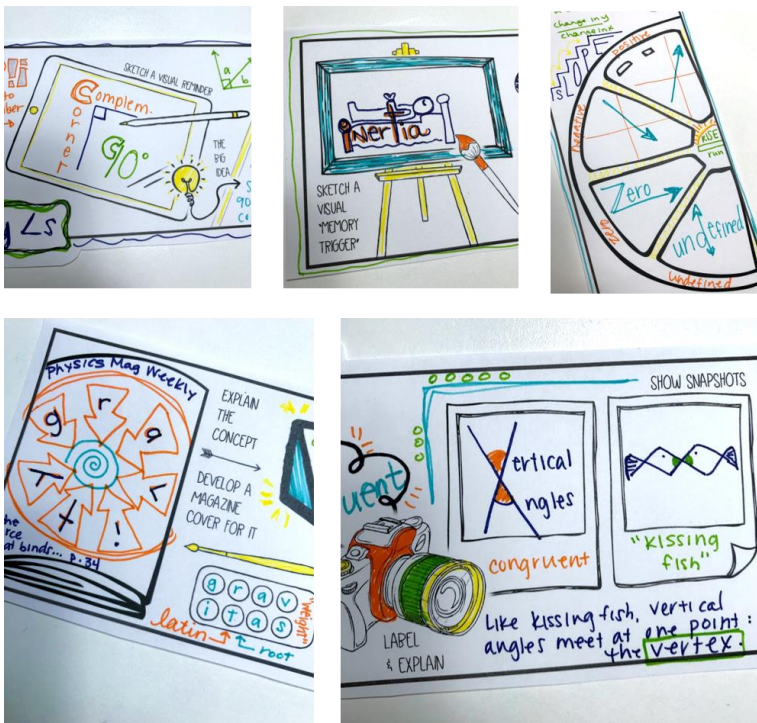
The goal of this project is to help students use hands-on creative thinking to boost long-term memory of a formula.

You can use this project quickly, over and over with each new formula you introduce in class.

It will help kids remember what each part of a formula represents, because they chose specific materials based on some significance for each number or letter.

Print pages 3-5 and distribute to students. That way, they will have the directions, samples to help them get the idea of how the project works, and the rubric in advance.

Creative thinking and visual representations help students retain concepts. You may also want to try this set of visual vocabulary prompts to help students with key terms in your lessons.



Visual Vocabulary

54
template cards
for ANY content

Doodle Note Prompts

Click [here](#) for memory-boosting visual vocabulary cards for your class.

Tactile Formula Project

Directions

Your job is to represent the formula that we are studying in a tactile way (with tangible materials).

Choose materials that you will lay out to form each different part of the formula. Your materials must be carefully chosen to somehow represent the meaning of each number, letter, or symbol. Then, take a photo and label each piece of the formula.

The key is to explain WHY the materials you chose in the layout will help you remember what each part of the formula actually represents. You can get creative, but your explanation must make sense in terms of the mathematical meaning that the elements in the formula represent.

You will turn in one page that contains the photo of the materials laid out as the written formula as well as your explanations.

Review the samples and rubric that are attached.

About this particular project:

Formula to Create: _____

Due Date: _____

Tactile Formula Project

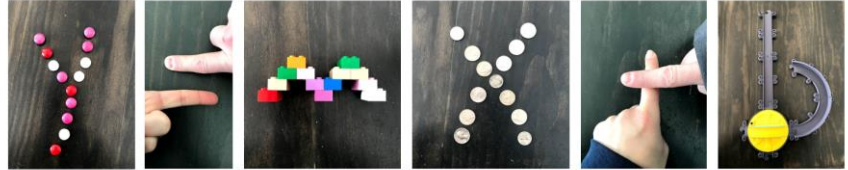
Samples

FORMULA PROJECT: $Y = MX + B$

Candy represents OUTPUT (from a candy machine) Because y is the output.

Steps represent SLOPE because they have a rise and a run.

b is made from a INTERSECTION piece of train set, because it represents the y-intercept (the point where the line intersects the axis.)



Pythagorean Theorem

a and b are made from "legs" because they represent the legs of the right triangle.

The 2 for "squared" is made from dice because they are squares.

I formed the c from the long sides of triangles, since c is the hypotenuse, or the longest side of the right triangle.

This is one man and one woman. I'll remember that because they are EQUALS.

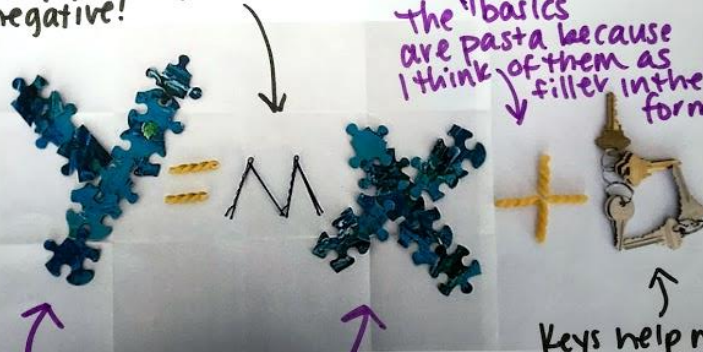
Coins represent INPUT for the candy machine, since x is for input.

2 people form the plus sign because addition makes me think of teamwork. That's how I will remember it's a plus here, not a minus.

Bobby pins represent slope because they can slant different ways in your hair. And, like slope, hair days can be positive or negative!

Slope-Intercept Form Project

The "basics" are pasta because I think of them as filler in the formula.



puzzle pieces represent the variables because they're "unknown" (mystery!)

Keys help me remember that "b" is where to START. We start graphing with the y-intercept and START a car with a key to go.

Tactile Formula Project

Rubric

Name:

Date:

Formula:

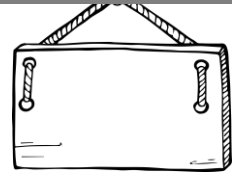
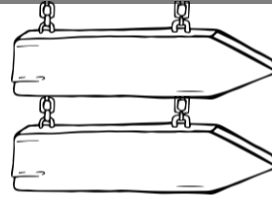
Score
(out of 3)

Section total
(out of 6)

Completeness

The project was turned in on time.

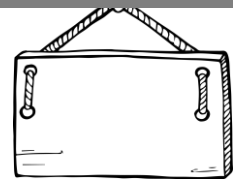
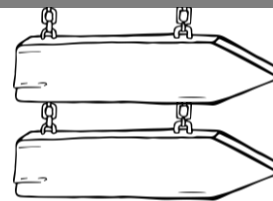
The student followed directions
(labels, photos, etc.)



Creativity

Effort to use tactile materials is clear.

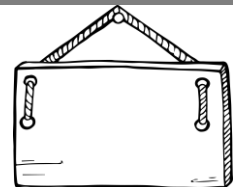
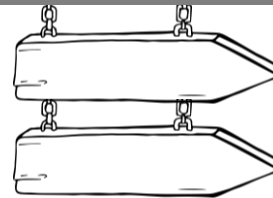
The student thought about selections and
used creativity and presented it well.



Clarity

Writing is legible.

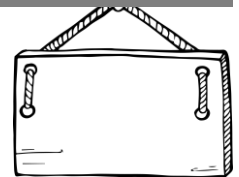
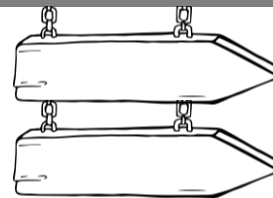
Labels offer an explanation for
choices of materials.



Comprehension

The formula is correct.

Labels for choices reflect an
understanding of the concept or what
each part of the formula represents.



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Teacher Notes:

Total (out of 24)

