

Differentiating STEM Explorations for Special Education Students with Desmos Activity Builder

Modifying STEM Tools for the Needs
of Special Education Students

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- I am __, from __.
- I remember __ of these things.
- It reminds me of __.

Learning Targets

- Participate in a sample Desmos lesson
 - Tour participant features of Desmos
 - Tour Desmos Teacher Dashboard
- The “Desmos potential”
- Explore strategies for scaffolding a sample lesson



Elgin County Archives

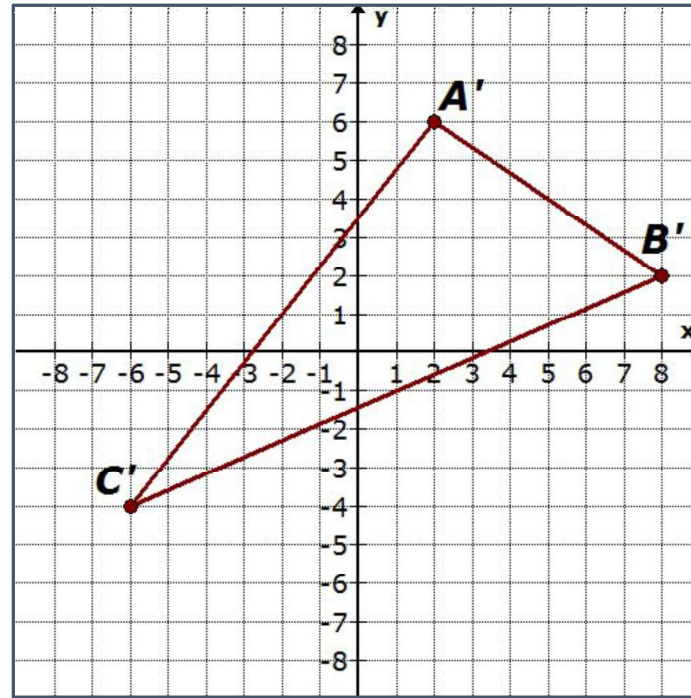
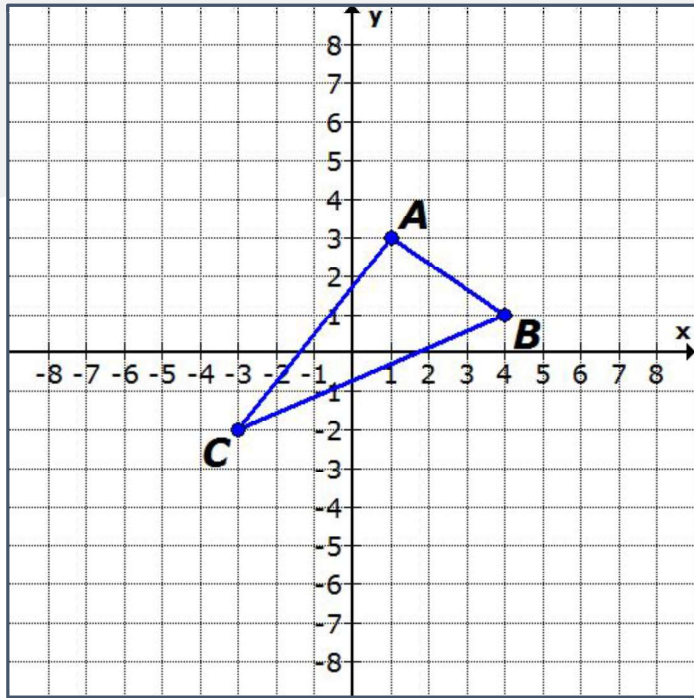


http://commons.wikimedia.org/wiki/File:Computer_Lab_of_hostel0413.jpg

TEKS 8.3(C)

use an algebraic representation to explain the effect of a given positive rational scale factor applied to two-dimensional figures on a coordinate plane with the origin as the center of dilation

Triangle $A'B'C'$ is a dilation of triangle ABC .



Record the coordinates of A and A' .
What do you notice?



Hey, students!

Go to student.desmos.com
and type in:

XCQ MDK

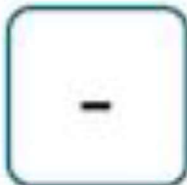
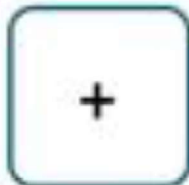
You can also share this link with your students:

<https://student.desmos.com/?prepopulateCo>



Images from Dan Meyer

Write an expression for "the quotient of 9 and c ."

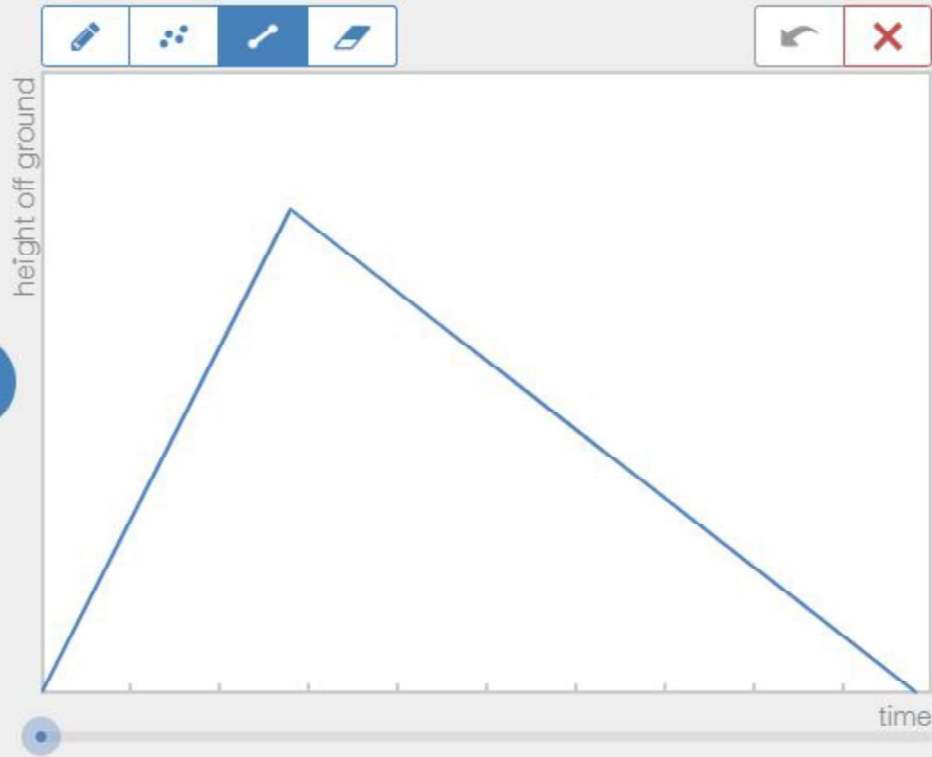


Draw a graph of Cannon Man's height v. time.

The screenshot shows a Desmos graphing calculator interface. On the left, there is a physics simulation of Cannon Man falling from a height. A vertical axis is labeled "height off ground" and a horizontal axis is labeled "time". A play button is visible next to the simulation. On the right, there is a large blank graph area with the text "draw here" in the center. The graph area has a toolbar at the top with icons for drawing, erasing, and deleting. A slider is visible at the bottom of the graph area.

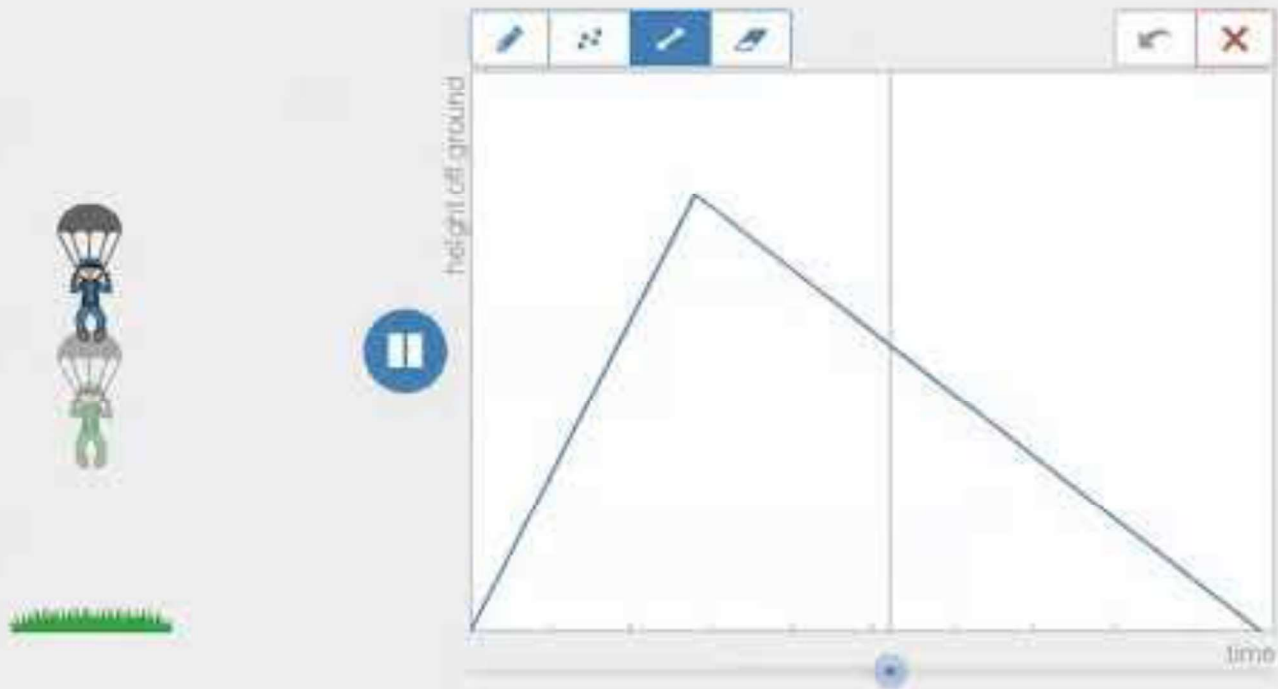
Video captured from desmos

Draw a graph of Cannon Man's height v. time.



Video captured from desmos

Draw a graph of Cannon Man's height v. time.



Video captured from desmos



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Don't scaffold out the sense-making. Math is only enjoyable if you're in charge of it.

-Tracy Zager

“



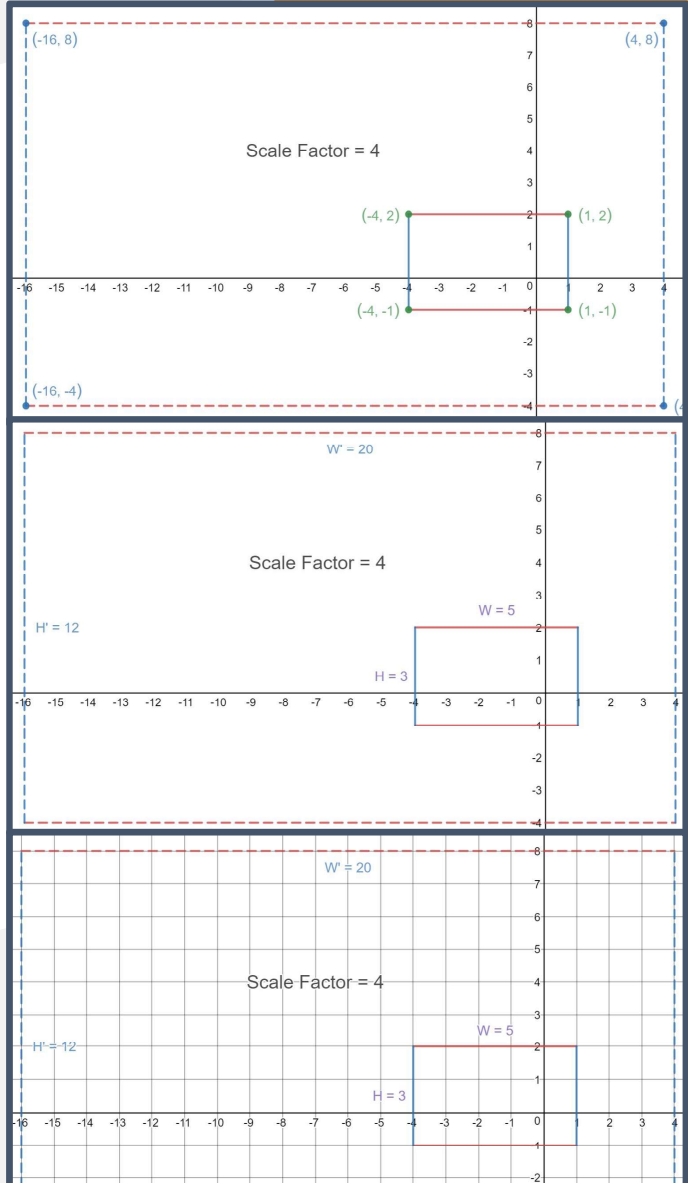
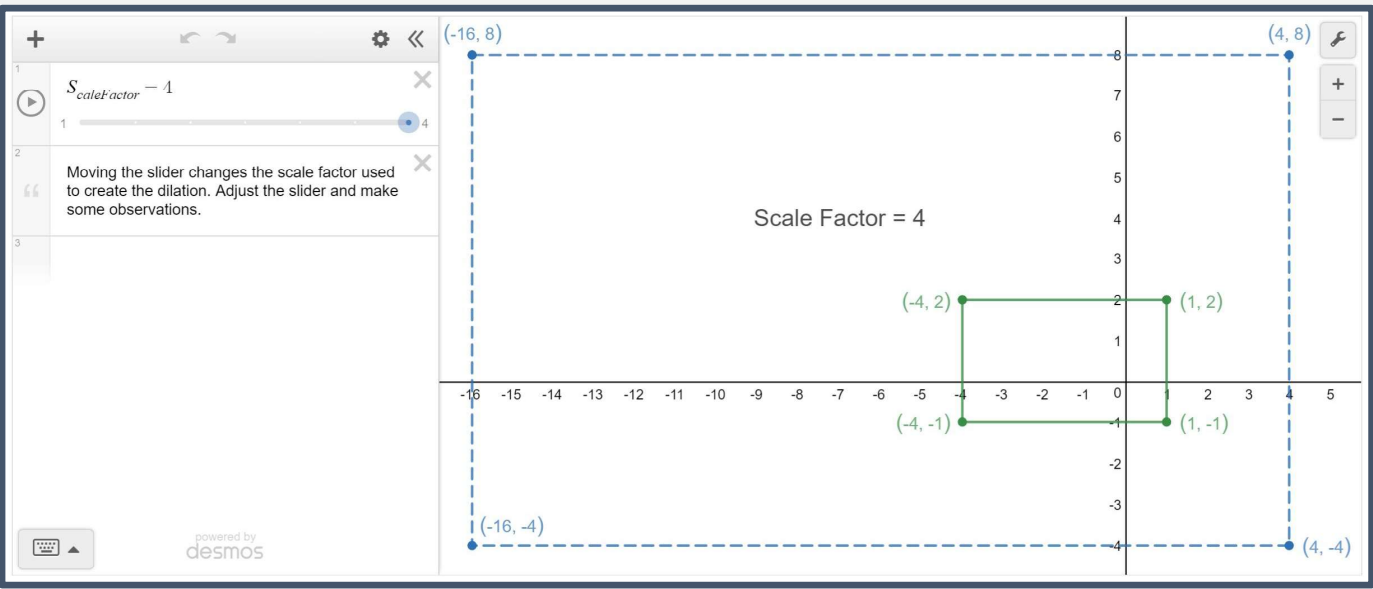
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- Color coding
- Remove decimal values
- Label dimensions instead of vertices
- Insert grid

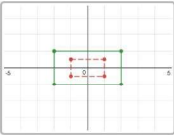
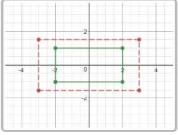
- Color coding
- Reduce number of cards

Enlargement

The scale factor is larger than 1.

$$(x,y) \rightarrow \left(\frac{1}{2}x, \frac{1}{2}y\right)$$

Reduction

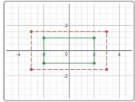
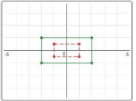
$$(x,y) \rightarrow (2x, 2y)$$



The scale factor is less than 1.

Enlargement

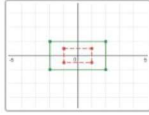
The scale factor is larger than 1.

Reduction

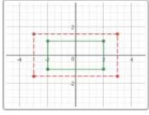



The scale factor is less than 1.

Reduction



The scale factor is smaller than 1.



Enlargement

The scale factor is larger than 1.

How does a scale factor change the dimensions of a figure?

Share with Class

Tell us how a scale factor changes the dimensions of a figure.

Here are some words you might include:

Increase Decrease Dimension

Ordered Pair Scale Factor Reduce

Enlarge Vertex Change

Share with Class

How does a scale factor change the dimensions of a figure?

When we use a scale factor larger than 1, the shape becomes...

Share with Class

- Word bank
- Sentence stems



”

All learners require and deserve a robust curriculum filled with intrigue, challenge, support, and highly engaging activities.

-Cassandra Erkens



“

Hey, students!

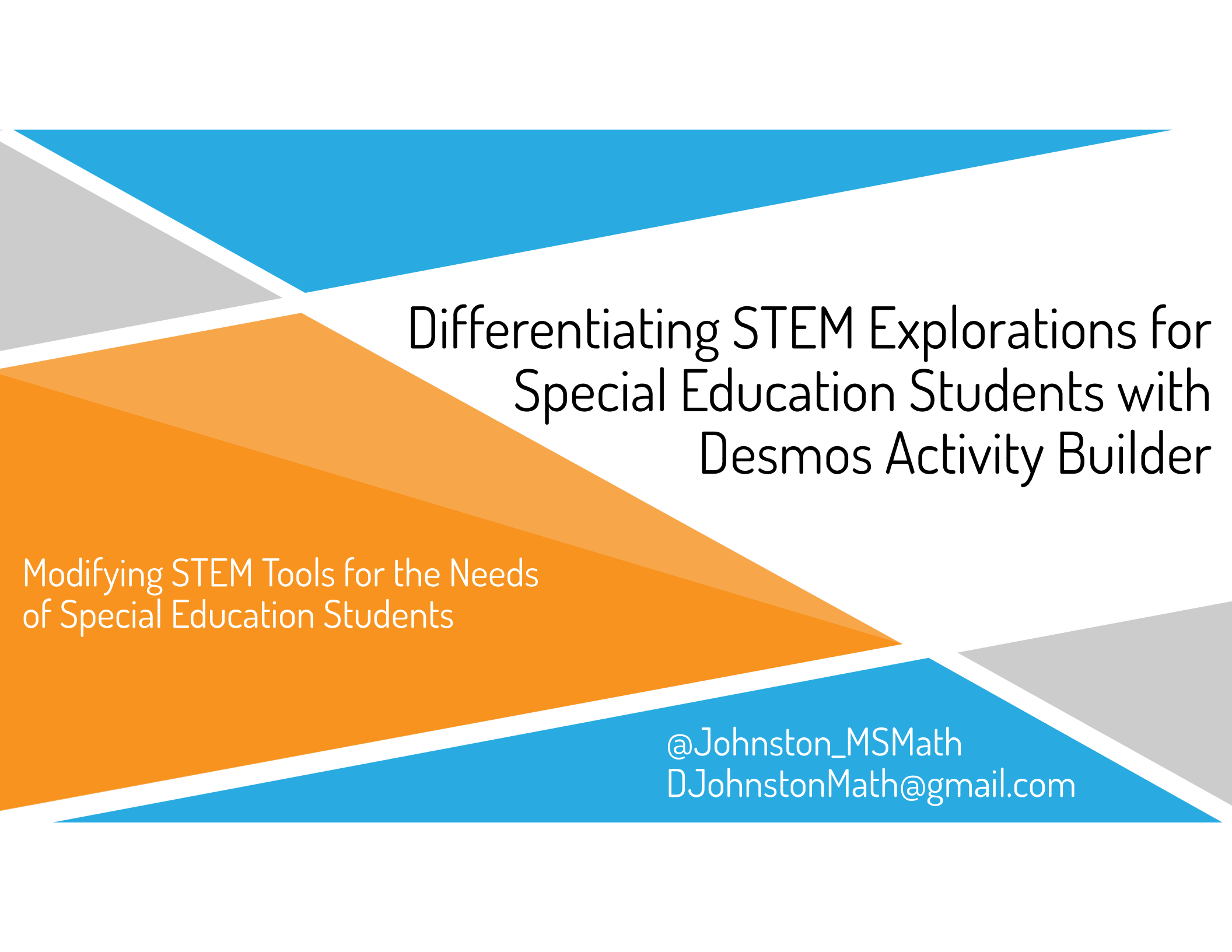
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W6S DQF

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