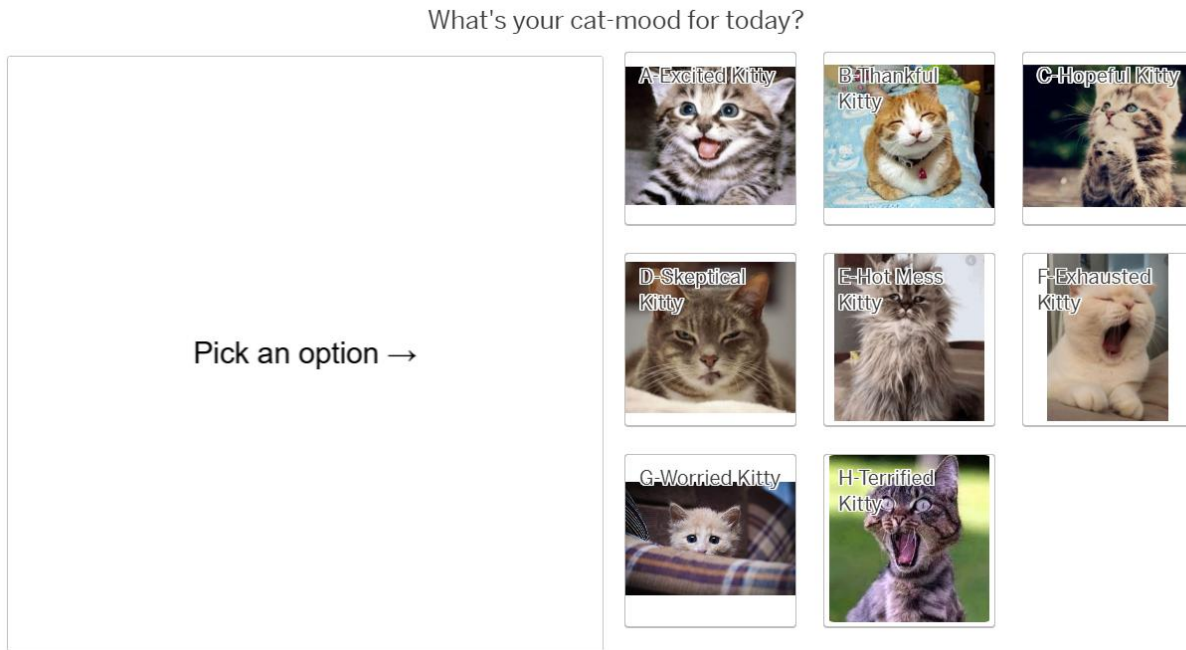


## Screenshots of Desmos used in the presentation.



## WHY USE DESMOS?

Desmos is designed as an interactive math software. The program allows teachers to create lessons where students interact visually with different problem sets. Desmos has several different question types that allow students to engage with complex problems and receive instant feedback on their progress. Teachers can also chart students' mastery over different concepts as they progress through the lessons.

Although Desmos was designed as a math software, we are going to demonstrate how it can be used in a variety of settings and contents.

Desmos allows teachers to build lesson slides with interactive elements. Which of the following elements do you want to learn to use in your classroom?

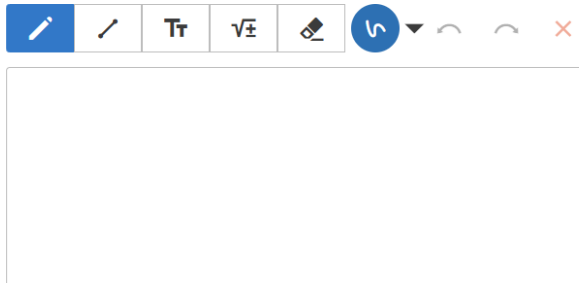
*(Select all that apply.)*

- Notes
- Free Response
- Math Response
- Multiple-Choice
- Checkboxes
- Ordered List
- Graph
- Sketch
- Media
- Table

## Desmos is Interactive for Students! Here are just a few examples...

Below is a SKETCH option. This allows students to show their work, draw, design, or explain with visuals. The teacher can also UPLOAD a desired background, so if you have an organizer or problems and you want the students to annotate, you can upload it as the background (in jpg or png format).

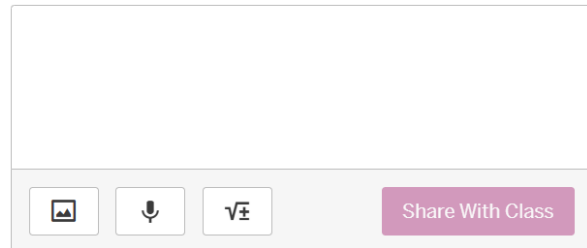
Students have the option to free write, use the text tool to type, use lines for drawing, or the math tool for typing in math equations! **Try it out!**



This is a NOTE. You can type directions in the NOTE, provide links or type out directions to an activity or assignment.

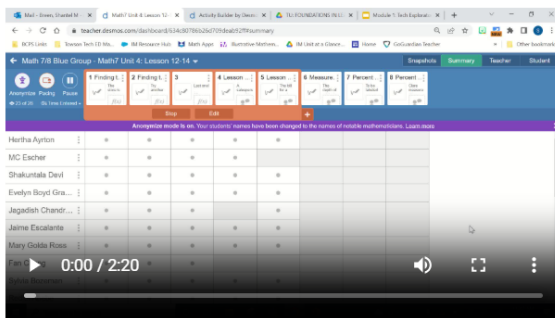
Below is an ANSWER BOX or "Free Response". Students can add an image, type in their responses, or record an audio response!

**Try it out: *What are some ways you could use the Note, Free Response, or Sketch options in Desmos?***



## Great for Monitoring Student Engagement and Formative Assessment

The teacher dashboard view of Desmos allows teachers to see student activity on each slide! Click the video to watch a short walkthrough of the teacher view on Desmos!



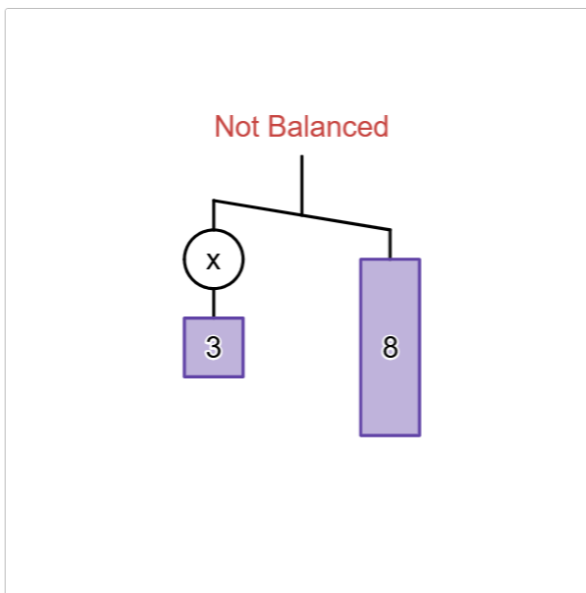
Throughout this Desmos, you will see that some questions are set to give instant feedback. This is helpful for allowing students to instantly revise their answers and responses. Some question may ask students to explain their answer. As the teacher, you also have the option to make responses visible to classmates. Try it out:

**Try it out: True or False**

*On the teacher dashboard in Desmos, the teacher can monitor the progress of every student in the class. Select True or False below!*

# DESMOS FOR SCIENCE AND MATH

## Math Example



In this problem, students have a visual to help them solve a one-step equation. The visual is showing that the scale is not balanced. When the student places the correct answer for  $x$  in the response box, the scale will show that it is balanced! It will then prompt the students to explain. I also have this set up for the student to see other classmates responses (this is an easy feature to turn off or on!)

### Try it out!

Enter a value to balance the hanger.

$x =$



Submit and Explain

Explore Polypad

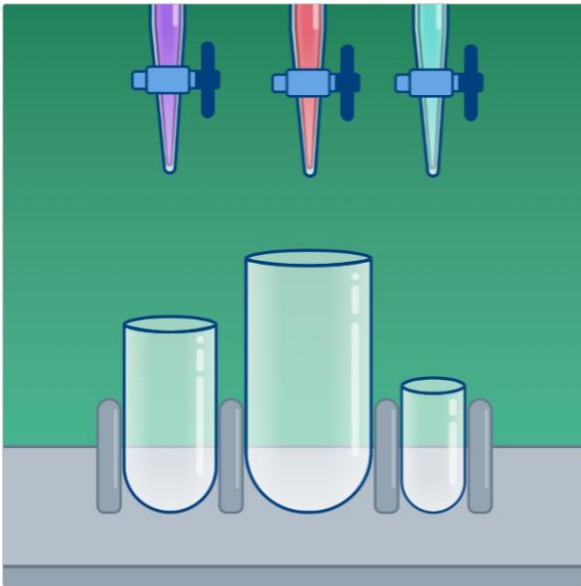
Tiles

- ⓐ **Geometry**
- Polygons and Shapes
- Polyominoes
- Tangram
- Aperiodic Tiles
- Pentagon Tilings
- 3D Solids
- Linkages
- Utensils
- Patterns and Art
- ⓑ **Numbers**
- ⓐ **Fractions**

↶  
↷  
☒  
🔍  
🔍  
☒

☞ ✎ ↶ ☒ x<sup>2</sup> 🌈

Science Example



In this example, students are practicing with scientific notation. When the students put in their answers, the test tubes fill the correct amount of liquid. For those who have forgotten how to write in scientific notation, the first one is  $1.24 \cdot 10^{-4}$ . Use the math keyboard to input your answer!

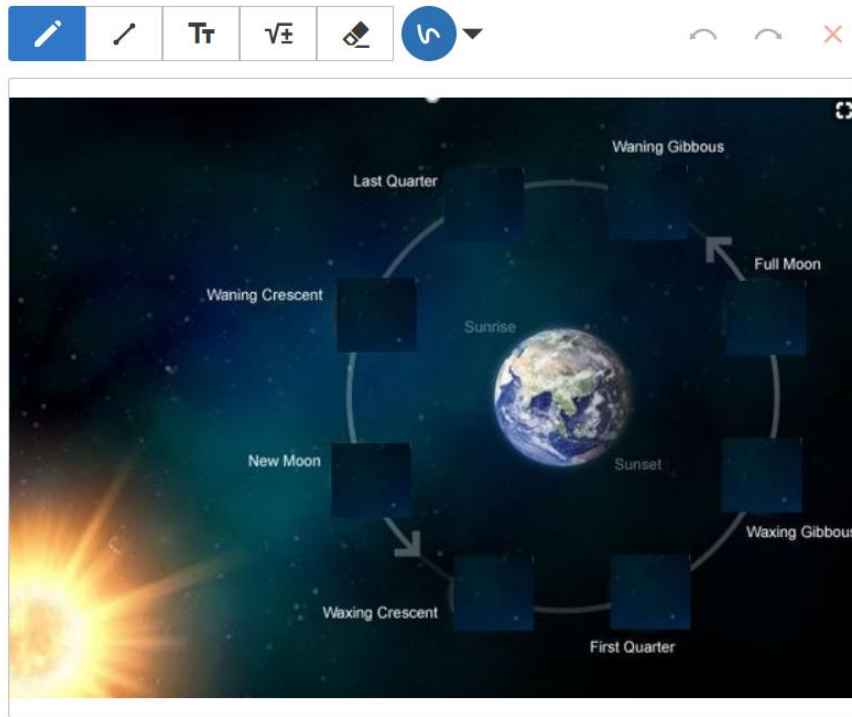
Write each number using scientific notation.

Then press "Check My Work".

Color	Volume (liters)	Scientific Notation
Purple	0.000125	
Red	0.0002	
Blue	$325 \cdot 10^{-8}$	

Check My Work

Draw each moon in the Lunar Cycle.



Student Screen Preview

Drag and match each moon to the correct phase.

You have 0 of 16 cards correct.

LAST QUARTER

FIRST QUARTER

NEW MOON

WAXING GIBBOUS

WANING CRESCENT

FULL MOON

WAXING CRESCENT

WAXING GIBBOUS

WAXING GIBBOUS

WAXING CRESCENT

WAXING CRESCENT

12 of 34 Next >

# DESMOS FOR SOCIAL STUDIES



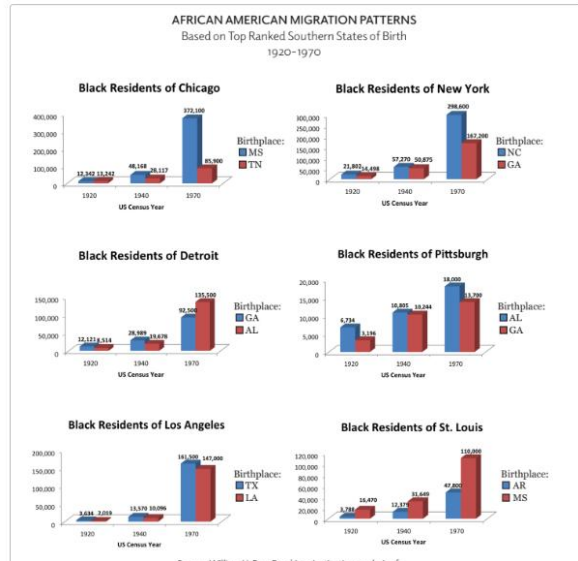
Play a few rounds of Polygraph  
with your classmates!

Start Playing >



 Polygraph is a partner game. [Learn how to play.](#)

Patterns of Migration: Using the map and data below, answer the questions that follow.



## English Example



### Sympathy

Paul Laurence Dunbar - 1872-1906

I know what the caged bird feels, alas!  
When the sun is bright on the upland slopes;  
When the wind stirs soft through the springing grass,  
And the river flows like a stream of glass;  
When the first bird sings and the first bud opes,  
And the faint perfume from its chalice steals—  
I know what the caged bird feels!

I know why the caged bird beats its wing  
Till its blood is red on the cruel bars;  
For he must fly back to his perch and cling  
When he fain would be on the bough a-swing;  
And a pain still throbs in the old, old scars  
And they pulse again with a keener sting—  
I know why he beats his wing!

I know why the caged bird sings, ah me,  
When his wing is bruised and his bosom sore,—  
When he beats his bars and he would be free;  
It is not a carol of joy or glee,  
But a prayer that he sends from his heart's deep core,  
But a plea, that upward to Heaven he flings—

### Annotation Directions

Use our Notice & Note guidelines to annotate the poem, "Sympathy", by Paul Laurence Dunbar. After you have annotated the poem, select the most appropriate theme statement below.

- Animals should not be kept captive.
- Happiness cannot exist without freedom.
- It is cruel to place people in prisons.
- People in power are responsible for ending inequities in our society.

## Writing Example

### Essay Puzzle Directions

Below, you will see the components of a body paragraph. Rearrange the sections of the paragraph to create a strong line of reasoning. Then, explain your choices in the free response below.

BEGINNING



Although it would be a stretch to say the narrator was of sound mind prior to the murder, he did show ample evidence of forethought and critical thinking when planning the crime. However, when the police arrive after the murder, he is erratic and anxious.



The narrator's guilty conscience is reflected in his chaotic and impulsive decisions after he commits the murder.

Appearing after he commits the heinous crime and refusing

FIND THE CAT! Match the prepositions that correctly describe where the cat is in each picture.

on



with

above



behind

under



inside



# DESMOS AND ART

Which of the following works are examples of IMPRESSIONISM (select all that apply)

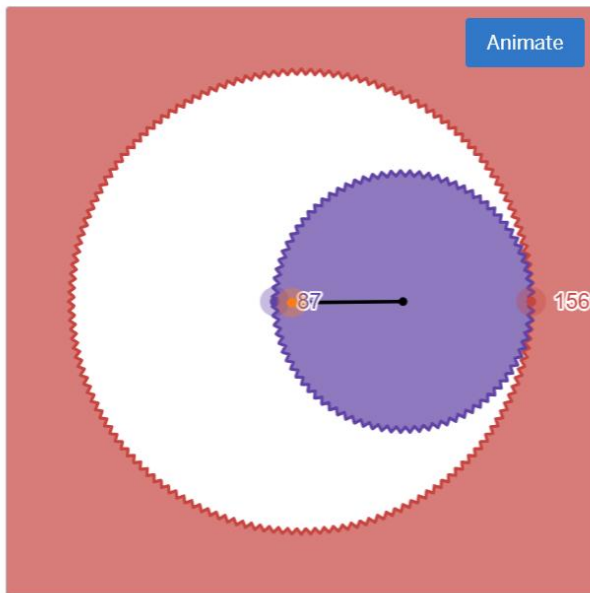
(Select all that apply.)



If you would like... upload an image of your favorite artist example of Impressionism. :) ... and share with us why it is your favorite.

🖼️ 🎤 √± Share With Class

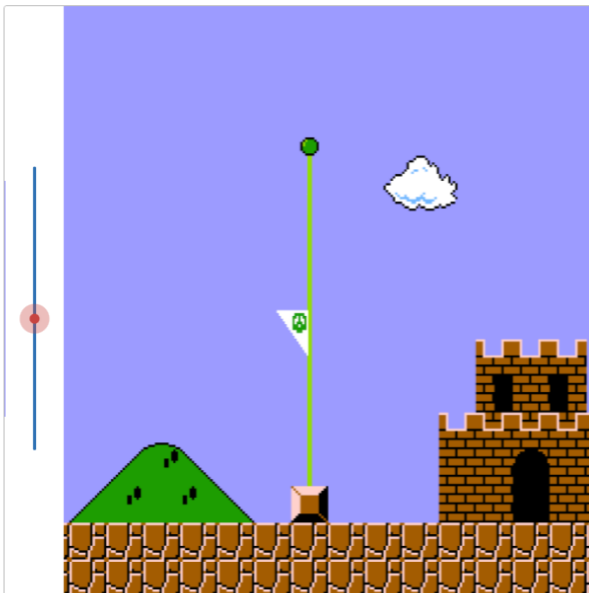
### Spirograph



Adjust the points in the graph and click the *Animate* button.

# DESMOS FOR SEL CHECK-INS

How are you feeling today?





Use the slider on the left to show me how are you feeling today.

Is there anything you would like your teacher to know about how you are feeling today?

How are you feeling today?

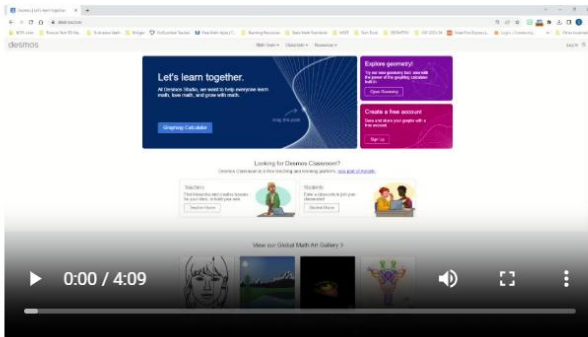


Is there anything you would like your teacher to know about how you are feeling today?



Submit

## How to Create a Desmos Activity



Watch the video for a tutorial on how to create an activity and share with students!

To create a Desmos account go to [www.desmos.com](http://www.desmos.com)  
You can use any email address to create an account.

(BCPS teachers - this is an approved site and you can log in using Google and your bcps credentials - so can your students!)

To create an activity - click on CUSTOM ACTIVITIES on the left hand side bar.

Click CREATE A NEW ACTIVITY at the top right hand corner of the screen.

Once there, you can layout your activity with slides using a variety of features!

Once you are finished, click PUBLISH then you can share with your students via a code or create a class for your students.

# CLOSURE

Did you see something you liked that you could use or adapt for your classroom?...



Share some ideas you have to use this Activity Builder platform with your students?...

   Share With Class