

# Desmos 201 – Features Walkthrough

## *Using Platform Data to Inform Synchronous Instruction*

February 2021



# Agenda

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- **See It/Name It:**
  - How can the Dashboard & Snapshot features be used during synchronous instruction to drive discourse?
- **Do It:**
  - Part 1: Learn the Mechanics
    - The Dashboard
    - Snapshots
  - Part 2: Drive the Car
    - Putting It All Together: Leading Discourse!

# See It/Name It

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# Using Desmos to Enhance Synchronous Instruction [See It]

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Start by watching [this video](#).

In breakout rooms discuss the questions below (3 min)

- How did Katie use Desmos features to facilitate discourse and respond to data?
- What questions did Katie ask herself during the Think Alouds?



Dashboard data determines discourse.

## The Dashboard & the Snapshots tool allow teachers to continue using *already-established* best practices around discourse:

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- **Use the Dashboard to compare student responses against your exemplar**
  - What does the student response include? What is missing?
  - “Teacher Tips” – use this feature to add the teacher’s exemplar response.
- **Strategically call on students based on Dashboard data**
  - Which students have an “Almost There” “Partially There” or “Further Off” response?
  - In what order should I call on students?
- **Use the Snapshot tool to chart the discussion**
  - Present each response & have students evaluate/build

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# Do It, Part 1: Learn the Mechanics

## *The Dashboard*

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# Summary View



- Examine this "Summary View" of a Desmos dashboard.
- What do you notice? What teacher action(s) might you take? Why?

Anonymize               Pacing               Pause		7 <small>7-10-10-10-10</small>	8	9 <small>**Indepe...</small>	10 <small>Indepe...</small>	11 <small>**Indepe...</small>
11 of 17	Time Entered					
⋮		●	—			
⋮		●	—	×	×	●
⋮		●	—	×	×	●
⋮		●	—	×	✓	●
⋮			—			
⋮		●	—	×	✓	●
⋮			—	×	✓	●
⋮		●	—	✓	✓	●
⋮		●	—	×	×	●
⋮			—	×	×	●
⋮		●	—	✓	✓	●

# Summary View

Notice	Possible Actions
Byron hasn't submitted any answers.	Follow up with Byron: send a message in the chat, look for his video on Zoom, verbally check-in "Byron, are you with us?"
Most students are confused on #9.	Click on "Slide 9" to go into my Teacher View. Examine student responses to determine what the misunderstanding is.

	7	8	9 **Indepe...	10 Indepe...	11 **Indep...
	•	—			
	•	—	×	×	•
	•	—	×	×	•
	•	—	×	✓	•
Byron		—			
	•	—	×	✓	•
		—	×	✓	•
	•	—	✓	✓	•
	•	—	×	×	•
		—	×	×	•
	•	—	✓	✓	•

# Teacher View

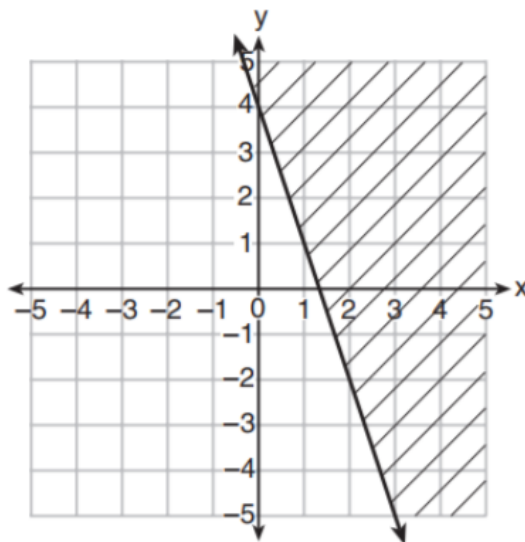


- Examine this “Teacher View” of a Desmos dashboard.
- What do you notice? What teacher action(s) might you take? Why?

\*\*Exit Ticket #4

Which inequality is represented in the graph below?

Answer Key



(1)  $y \geq -3x + 4$

(2)  $y \leq -3x + 4$

(3)  $y \geq -4x - 3$

(4)  $y \leq -4x - 3$

✓ 1

7 students

▲ 2

2 students

▲ 3

2 students

▲ 4

1 student

1 | The answer is  $y \geq -3x + 4$  because the y-intercept (0,y) is 4 and the shaded part is above the line.

1 | m=-3  
b=4  
solid line  
up

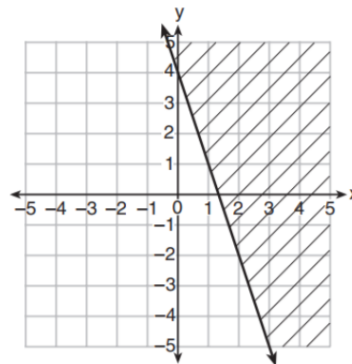
# Teacher View

Notice	Possible Actions
7/12 students have answered the MC question correctly.	Review 2-3 explanations to confirm students have justification and are not lucky guessers.
Wrong answers are split between B and C (2 students each).	Look at B and C to remind myself what error is represented by each answer choice. Review explanations from students who answered incorrectly. Snapshot 1 incorrect explanation & present to students: “What is the error and how do you know?”

\*\*Exit Ticket #4

Which inequality is represented in the graph below?

Answer Key



- (1)  $y \geq -3x + 4$                       (3)  $y \geq -4x - 3$   
 (2)  $y \leq -3x + 4$                       (4)  $y \leq -4x - 3$

✓ 1  
7 students

▲ 2  
2 students

▲ 3  
2 students

▲ 4  
1 student

1 | The answer is  $y \geq -3x + 4$  because the y-intercept (0,y) is 4 and the shaded part is above the line.

1 | m=-3  
b=4  
solid line  
up

The dashboard presents the information.  
The *teacher* decides *what to do* with that information.

# Do It, Part 1: Learn the Mechanics

## *Snapshots*

# Which work sample might you “snapshot”? Why?



Find the slope between (3,-6) and (7,-4).

Responses

Overlay

Diff slope  
 $\frac{y}{x}$

Diff slope  
 $\frac{y}{x}$   


slope  
 $4 < \frac{3}{7} > = -\frac{2}{4}$

$\frac{x}{y}$   
 $4 < \frac{3}{7} > -6 > 2$   
 $\frac{\Delta y}{\Delta x} = \frac{-2}{4} = -\frac{1}{2}$

$\frac{y}{x}$   
 $4 < \frac{3}{7} > -6 > 2$

$\frac{x}{y}$   
 $4 < \frac{3}{7} > -6 > 2$   
 $\frac{\Delta y}{\Delta x} = \frac{-2}{4} \rightarrow \frac{1}{2}$   
 $y = \frac{1}{2}x - 4$

Diff slope  
 $\frac{x}{y}$   
 $4 < \frac{3}{7} > -6 > 2$   
 $\frac{\Delta y}{\Delta x} = \frac{2}{4} = \frac{1}{2}$

Diff slope  
 $\frac{x}{y}$   
 $4 < \frac{3}{7} > -6 > 2$   
 $\frac{\Delta y}{\Delta x} = \frac{2}{4} = \frac{1}{2}$

$\frac{x}{y}$   
 $3$   
 $7$   
 $-6$   
 $-4$

$\frac{x}{y}$   
 $4 < \frac{3}{7} > -6 > 2$   
 $\frac{\Delta y}{\Delta x} = \frac{2}{4} = \frac{1}{2}$

$\frac{x}{y}$   
 $4 < \frac{3}{7} > -6 > 2$   
 $\frac{2}{4} = \frac{1}{2}$

$\frac{x}{y}$   
 $3$   
 $7$   
 $-6$   
 $-4 > 2$   
 $\frac{\Delta y}{\Delta x} = \frac{2}{4} = \frac{1}{2}$

# Which work sample might you “snapshot”? Why?

Find the slope between (3,-6) and (7,-4).

Find slope

x	y
3	-6
7	-4

+4 < 3 | -6 > +2

+2 < 7 | -4 >

$$\frac{\Delta y}{\Delta x} = \frac{2}{4} = \left(\frac{1}{2}\right)$$

- Set up an x/y table
- Found differences, and included the sign (+4 and +2, not just 4 or 2)
- Began with the slope formula
- Substituted & simplified
- Neat, clear, easy to interpret!



# Snapshots: FYI

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*If you've never used the Snapshots feature in Desmos before, here are steps to follow for how it works!*

## Snapshot 3 pieces of student work



- Click on a slide that requires student input. This will take you to the “Teacher View”
- Click on the camera icon (upper right corner of each student response) to take a snapshot. Be sure you are in the “Responses” view, not “Summary”.
- Repeat 3 times to collect 3 snapshots.

## Start a new collection of student work

- Click on “Snapshots” button – top righthand corner of Dashboard
- Drag 2 of your snapshots into this collection
- (Optional) Type in a question: “Who do you agree with? Why?”
- Press “Present”

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# Prepare for Putting It All Together

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# Prepare for Practice: Getting Set Up in Desmos

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1. Click on this Desmos dummy-lesson [link](#) from the chat
2. Follow the link, sign into your Desmos account if prompted
3. Once you are viewing the Lesson Page, click on three dots in top right corner and select “Copy and Edit”
4. This makes the lesson YOURS so you are ready to internalize it & invite students to class!

# Prepare for Practice: Internalize

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1. Decide which grade-level you'd like to teach.
2. Solve the problem on the slide. Identify which answer is correct, which answer is incorrect, and what the misunderstanding is.
3. Script your own version of the Key Takeaway / ideal student response. (This should be generalized, not problem-specific)
4. Spar with the exemplar by clicking on the "Teacher Tips" button. This is what you'll be driving towards during discourse!

BREAK! (5 min)

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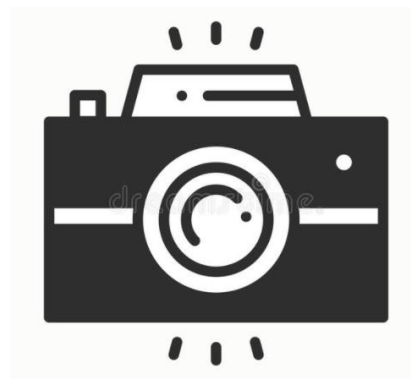


# Practice: Putting It All Together

# Maximizing Features for Synchronous Instruction [Do It]

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- Teacher will guide discourse around selected error. Be sure to:
  - Assign a timekeeper: 5 min/teacher!
  - Assign student roles:
    - Student 1: Ideal
    - Student 2: Almost/Partially There
    - Student 3: Further Off
  - Tell the students to solve & explain independently
  - Monitor the dashboard as student responses come in
  - Snapshot the student responses you'd like to “show-call”
  - Facilitate discourse by strategically calling on students based on the dashboard
- Repeat with additional teacher(s)

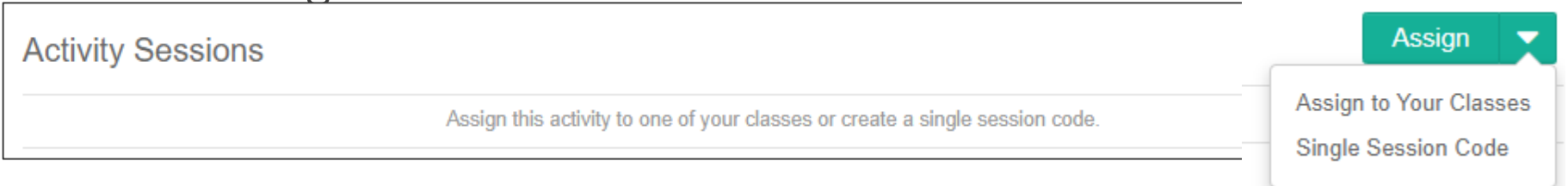




# Maximizing Features for Synchronous Instruction [Do It]

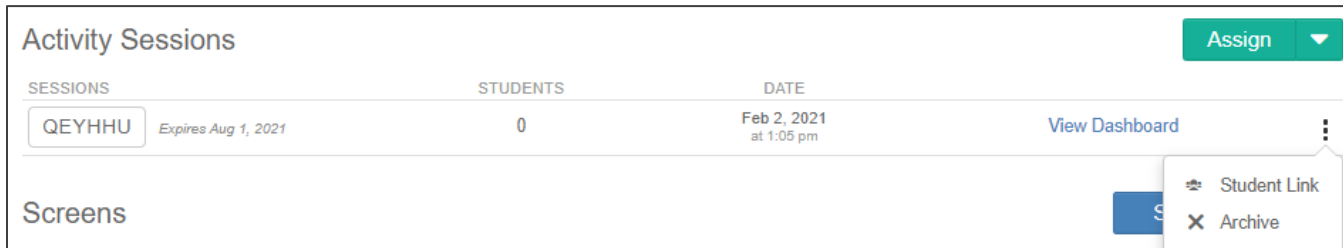
Choose your first “teacher” for practice. Teacher should:

- Click “Publish”
- Invite your peers as “students” to your class.
  - In the section titled “Activity Sessions”, click the **dropdown arrow** next to “Assign”



The screenshot shows the 'Activity Sessions' section with a green 'Assign' button and a dropdown menu. The dropdown menu contains two options: 'Assign to Your Classes' and 'Single Session Code'. Below the 'Assign' button, there is a text prompt: 'Assign this activity to one of your classes or create a single session code.'

- Click “single session code”
- Click the three dots and select “Student Link”



The screenshot shows a table with the following columns: SESSIONS, STUDENTS, and DATE. The first row contains the session code 'QEYHHU', which expires on Aug 1, 2021, and has 0 students. The date is Feb 2, 2021, at 1:05 pm. There is a 'View Dashboard' link and a 'Screens' section. A dropdown menu is open, showing 'Student Link' and 'Archive' options.

SESSIONS	STUDENTS	DATE
QEYHHU Expires Aug 1, 2021	0	Feb 2, 2021 at 1:05 pm

- Click on “View Dashboard” to monitor responses as they come in.



# Reflect

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# Reflection

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- What are your top takeaways about using Desmos features for synchronous instruction?



# Closing

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