

Scenes from the Classroom

Gina Tesoriero



Classroom Overview

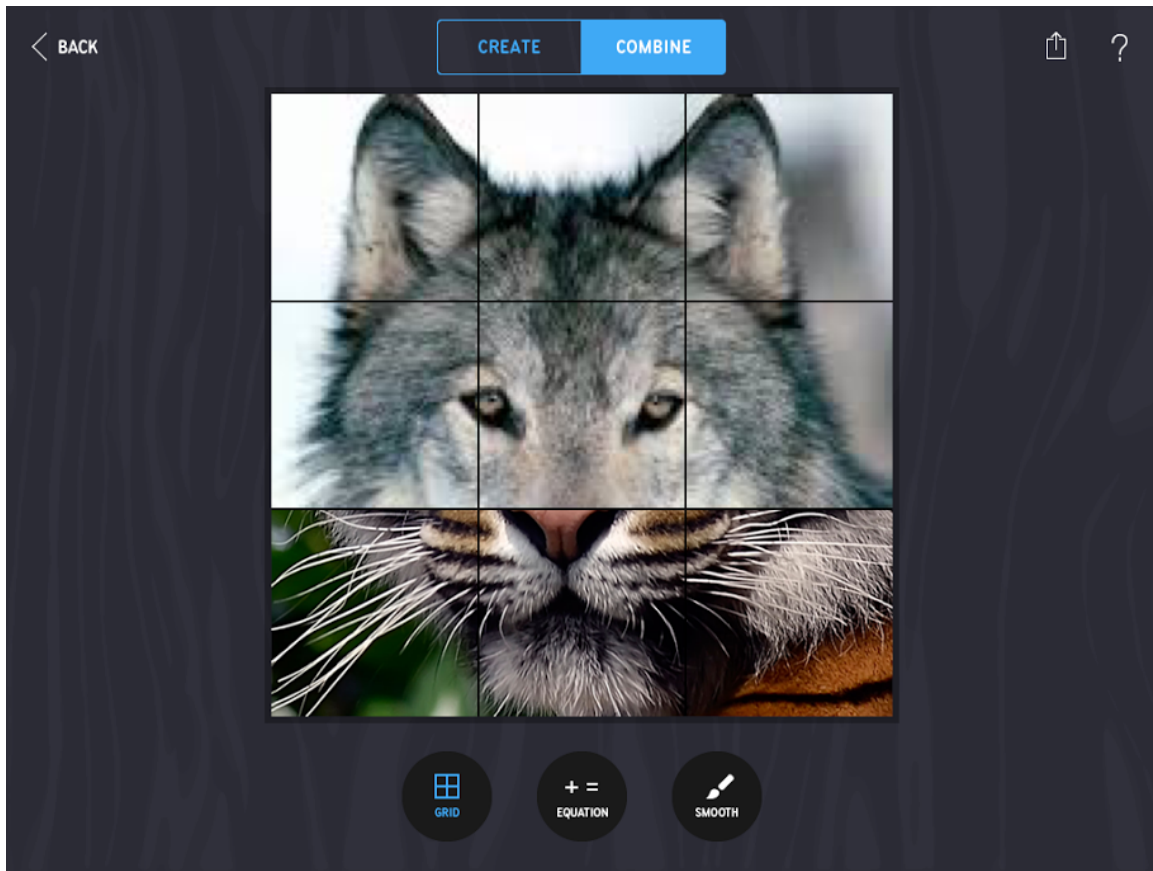
- 7th grade self-contained class with 12 students (12:1) located in New York City
- Number of iPads used: 3 iPad minis
- Number of class periods spent on the activity: 3

Gina began by training one student on the use of Fraction Mash. That student trained three additional students, and those four students acted as support for the rest of the class. Gina did an initial demonstration to model expectations and then let students work in small groups.

In her words:

- **What activity did you implement?**

Students created an innovated species by mashing up two different organisms. Then they created equations and ratios that represented their image. This activity was a modification of the “Paraffe, Pandaphant, Pengorse” lesson found on the Noticing Tools website.



- **Describe any changes you made to the existing activity.**

I modified the worksheet that was suggested in the “Paraffe, Pandaphant, Pengorse” lesson and modeled the task before students had a chance to work with the tool. I had students practice using the math involved with the model I created. I encouraged students to brainstorm and create descriptions of their organism before using the iPads.

- **How would you do things differently next time?**

I would provide more time for students to work with the tools. Also, I would prefer to have more iPads and I’d rather work with full sized iPads instead of the minis. Additionally, I would locate images for the students that would work best with the tool (transparent/white backgrounds, similar size and orientation)

- **What successes did you encounter? Why do you think that is?**

Students were super engaged on the task and appeared to understand ratios without direct instruction- which I have never encountered before. I saw a great deal of collaboration for such an early time of year. Additionally, students remained on task without playing with other apps or surfing the web.

- **How did Fraction Mash affect dynamics in the classroom?**

Students that typically struggled with math were able to shine and become leaders for their peers. The collaboration was inspiring. I'd like to include more activities like this into my math curriculum.

- **What role did you play in the classroom?**

I led a demonstration of the task and the math involved but a few students actually taught the class how to use the app. I also worked in a small group with students that struggle with focus. I prompted students by asking questions like:

- What denominator will you use?
- Why do you chose that denominator?
- Which image did you chose?
- Why did you chose that image?

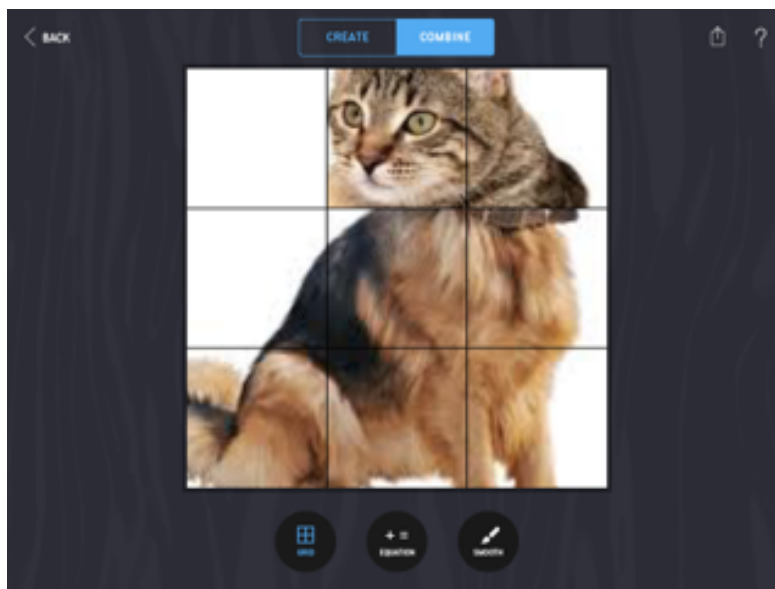
The students loved the tool- they were impressed that they were being introduced to a new topic through an engaging app. I heard one student say "Is this how you're teaching us ratios?" They were on task the entire time.

Tips

- Teach a few students how to use the app so they can lead a small group.
- Pre-identify pictures that would work well with the challenge you're presenting (try to find images with white or transparent backgrounds to make the smoothest mash-up)

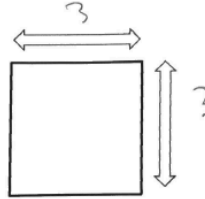
Student Work Example 1

Organism 1 Dog	+	Organism 2 Cat	=
Innovated Organism Cat Dog	Description: Catdog is a special animal because it could sense anything and see in the dark.		



D	C	C
Your image here	D	D
D	D	D

How many boxes are in your grid?



$$3 \times 3 = 9$$

denominator $\frac{\quad}{9}$

Write an equation for your image:

$$\frac{2}{9} + \frac{7}{9} = \frac{9}{9}$$

Write ratios for your image:

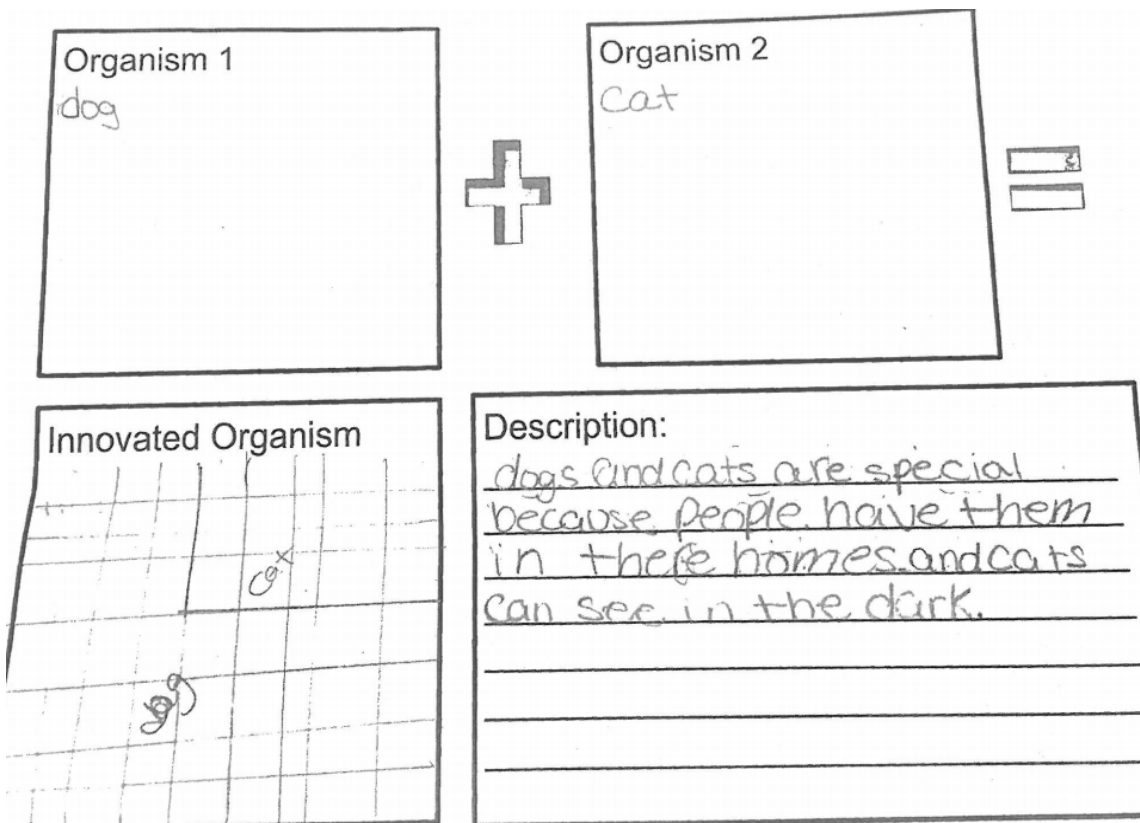
cat : dog $\frac{2}{7}$

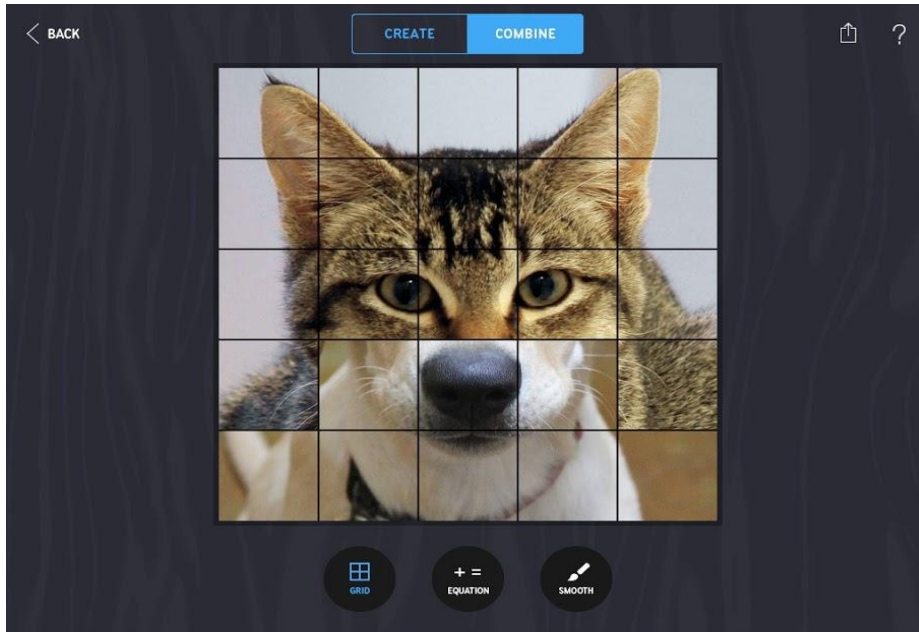
dog : cat $\frac{7}{2}$

dog : whole $\frac{7}{9}$

cat : whole $\frac{2}{9}$

Student Work Example 2





C	C	C	C	C
C	C	C	C	C
C	C	C	C	C
C	D	D	D	C
D	D	D	D	D

Your image here

How many boxes are in your grid?

denominator $\frac{\quad}{25}$

Write an equation for your image:

$$c \quad d \quad wh$$

$$\frac{8}{25} + \frac{17}{25} = \frac{25}{25}$$

Write ratios for your image:

C : D = 8 : 17

D : C = 17 : 8

C : wh = 8 : 25

D : wh = 17 : 25