

# Cure for the Zombie Plague: Making Math Social

*Presented by:*

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**April 4, 2019**

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**National Council of Teachers of Mathematics**  
**San Diego, CA**



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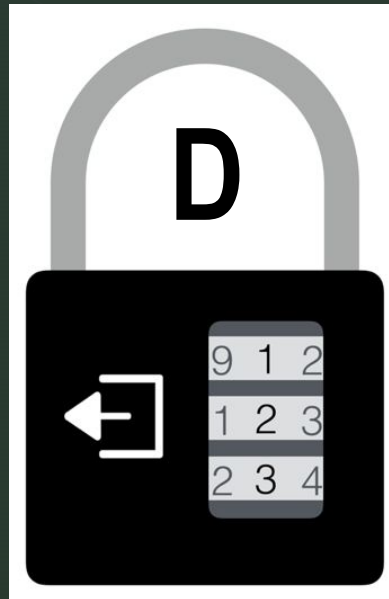
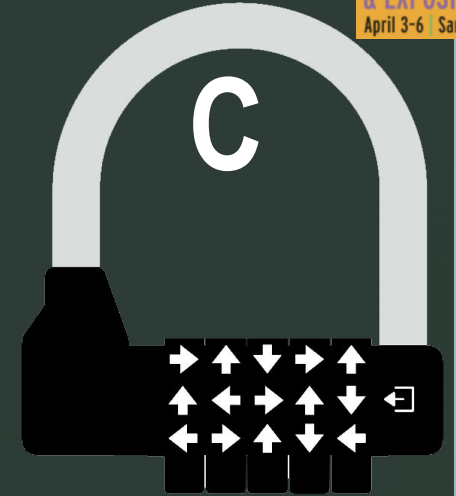
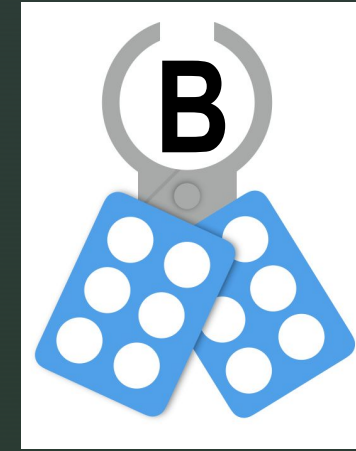


# Materials:

Intro Video

Breakout Box with locks

- A. Lockable box
- B. Hasp
- C. Directional multilock
- D. 3-Digit lock
- E. Alphabet multilock
- F. Key lock
- G. Prize!



# WARNING



Extreme awesomeness  
is about to occur  
in this room.  
Are you prepared?

If you are not ready, it's actually too late to leave.

@krissyvenosdale

Activity created by Mario Martinez



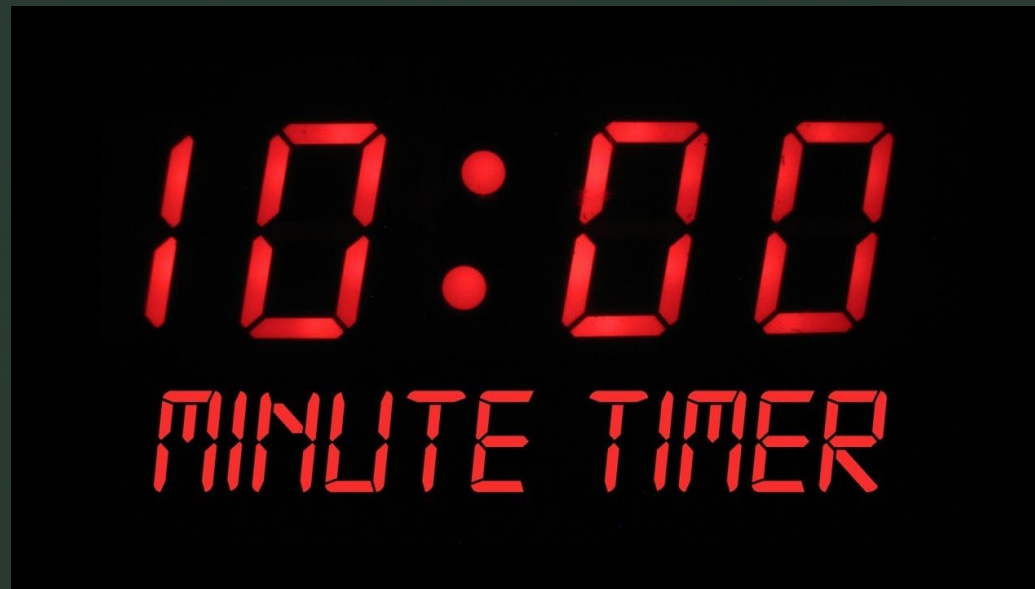


▀ Your Mission:

Open the breakout box to retrieve the antidote to save the world.

Your Restriction:

You have **10 minutes** to work with your team to open the box.



<https://www.online-stopwatch.com/countdown-timer/>



When someone thinks of a teacher gift, they think of this **fruit**; but what if they thought of the **electronic fruit** instead?!

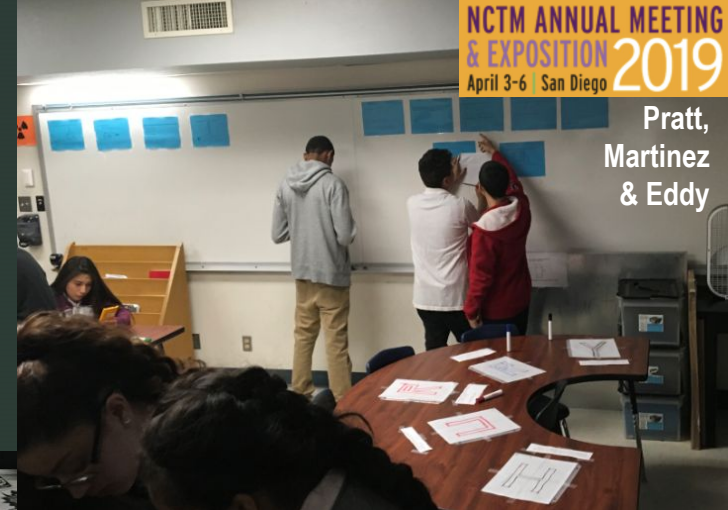
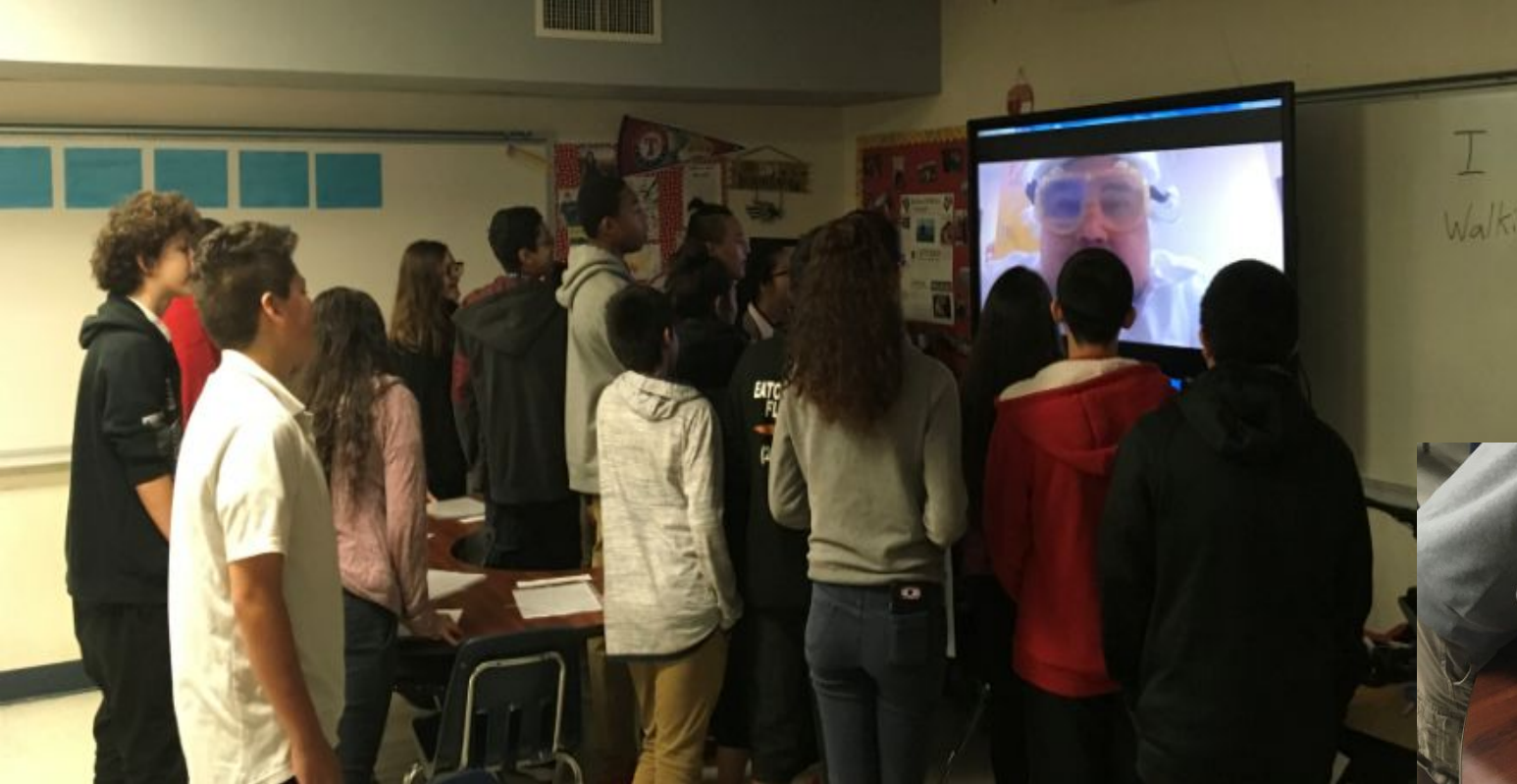
# Debrief of Cure for the Zombie Plague

- Take note of which problem(s) the students are struggling to answer
  - Plan enough time to discuss the problems
  - Debrief each task as needed
- Reflect on learning (using a reflection card question)
  - Conclude with a quick write using a reflection card

Students Engage in Making Math Social

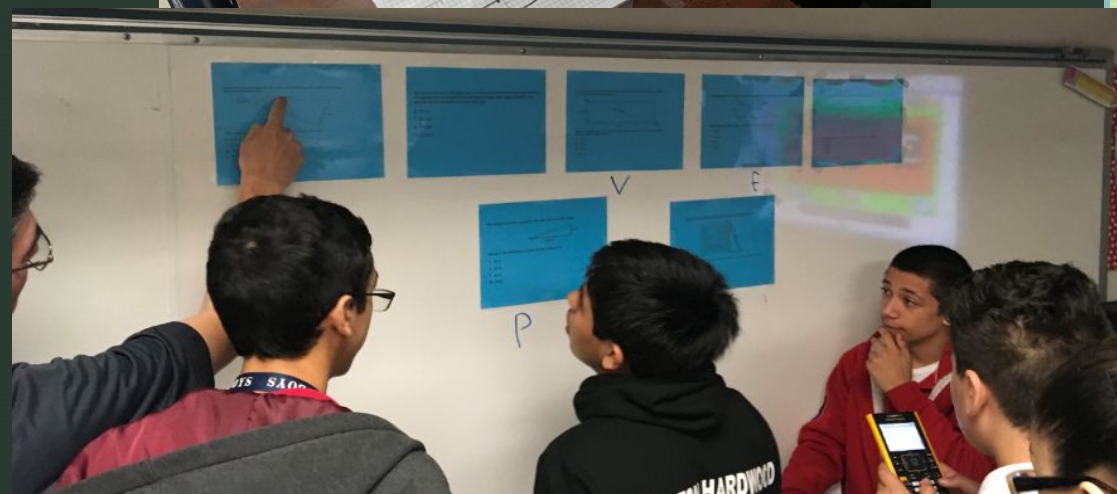
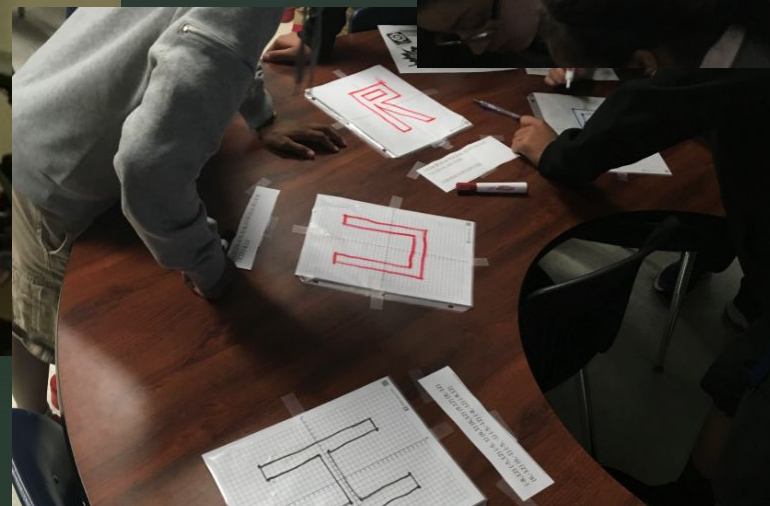
# Classroom Example





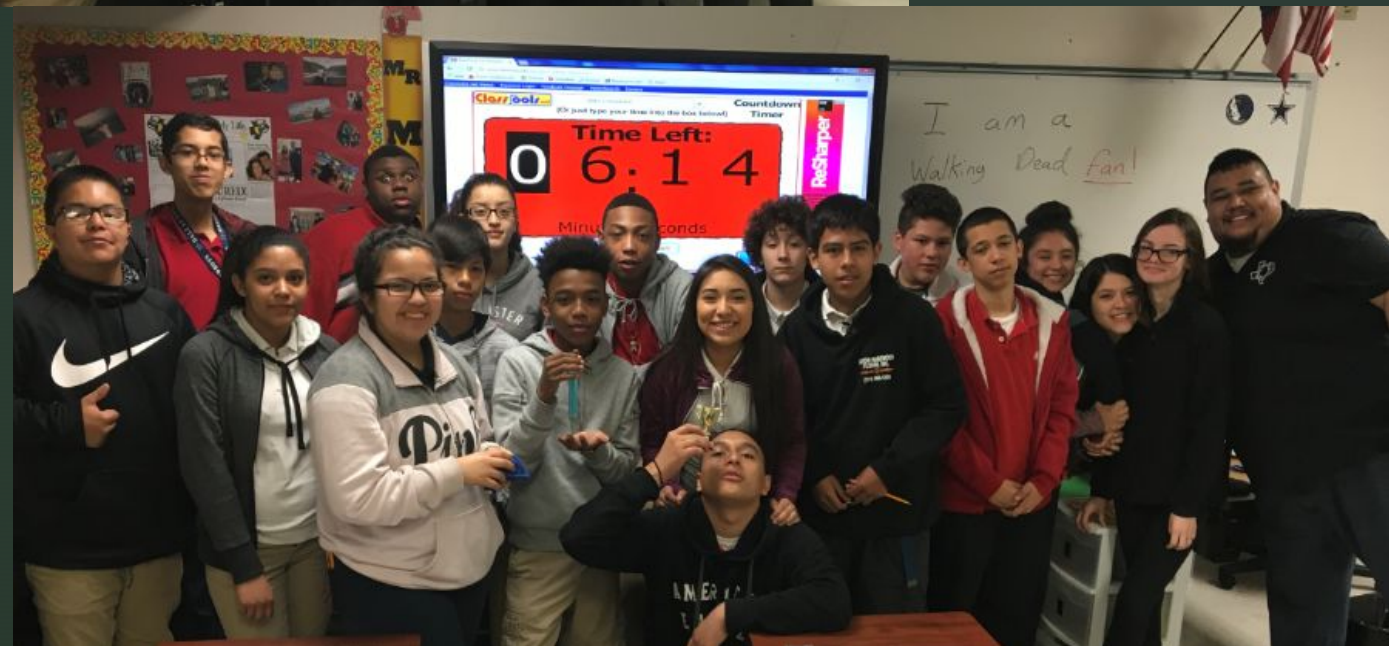
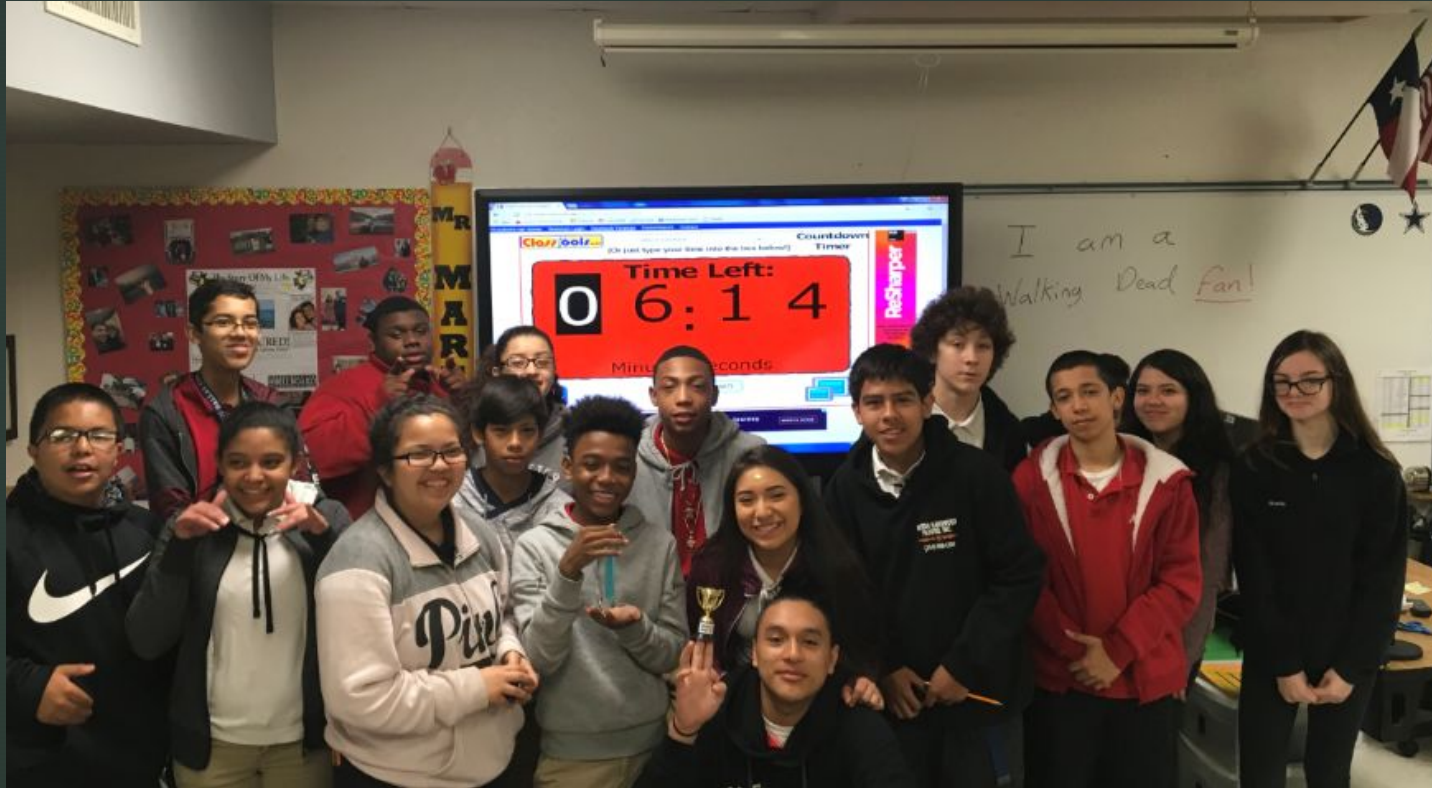
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Pratt,  
Martinez  
& Eddy





1<sup>st</sup>  
Place!!!



Let's Discuss

# Creating your own Mathematical Escape

# Using a Breakout Box in the Classroom

## The Students:

- self-select a task
- work with others
- check answers
- are independent of direct involvement from the teacher

## The Teacher:

- monitors
- prompts with questions
- encourages or redirects the approach to solving a task
- redirects students to other tasks if need scaffolding



# Planning for Making Math Social

## Preparations

- Determining Objectives & Tasks
- Selecting a Theme
- Preparing Main Box & Locks
- Creating Answers to Match Locks
- Deciding if Using Ancillary Box
- Creating an Introduction
- Using Hint Cards
- Planning Questions
- Accessing Resources

# Preparations

- **Determining Objectives & Tasks**

- Decide which objective(s) to review before a test or at the beginning of a unit to activate prior knowledge
- Choose a variety of question types (multiple choice, word answer, numerical answer)
- Select a range of tasks from easy to difficult



- **Selecting a Theme**

- Base the theme on age-appropriate topic
- Select one that would allow for the answers to questions to connect to the theme

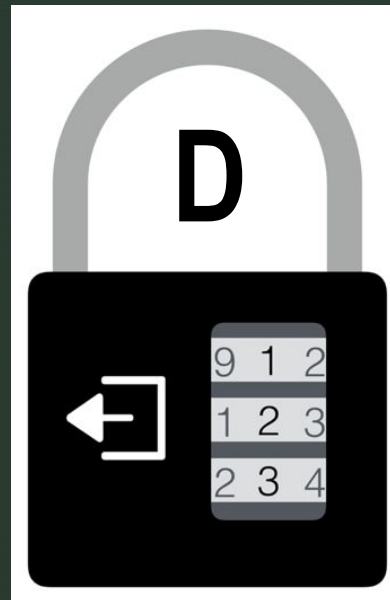
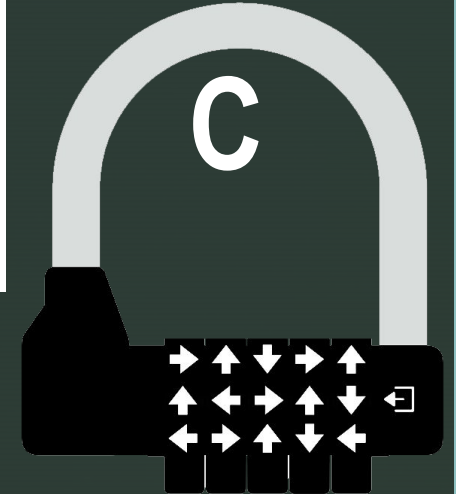
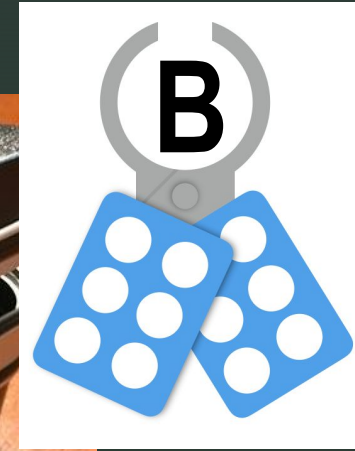
# Preparations

## ■ Preparing Main Box & Locks

- A. Lockable box
- B. Hasp
- C. Directional multilock
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- G. Prize!



## ■ Creating Answers to Match Locks



# Preparations

## ■ Deciding if Using Ancillary Box

- Place items for students to share in pairs or groups, like:
  - Formula charts
  - Calculators (1 for every 3 students)

## ■ Creating an Introduction

- Make it brief (about 1 minute)
- Make it entertaining
- Relate it to the theme
- Provide the end goal of the challenge
  - Example: Scientist says the antidote against the zombie attack is in the box





# Preparations

## ■ Using Hint Cards

- Provide lock combination or key to open the small zipper box that contains the black light
  - Give to quietest kid and whole class must agree to ask for the hint Triangles numbered in order with the black light marker
  - Riddle one, easier riddle provided
  - May use one or two, or not at all – if not used it forces teacher to walk around and prompt their thinking
- — — — —

## ■ Planning Questions

- Allow for the intentional use of discourse to focus on the mathematics
- Select reflective questions that relate to the objectives to bring the focus back to the mathematics as well as provides opportunities for students to reflect on what they learned and hear what others gained. For example:
  1. What was the most challenging task in the game? What made it difficult?
  2. Describe something new that you learned with one of the tasks.
  3. Describe a moment when your team became frustrated. How did your team overcome this frustration?

# Preparations

- **Resources**

- Kindle Book: *Breaking into Breakout Boxes: Escape Rooms in Education*, by H. Johnson, 2017
- BreakoutEDU ([www.breakoutEDU.com](http://www.breakoutEDU.com))
- Pinterest
- Teachers Pay Teachers

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**What questions  
do have about the  
Breakout Box  
Activity?**

