



Kansas Corn: The Class Garden Breakout Box

This breakout is made possible with the support and content contributions of the Kansas Corn Commission.



Kansas Corn: The Class Garden Breakout Box

Grade Level: 3rd Grade

Overview

This lesson can be used as a standalone lesson to introduce vocabulary necessary for the Kansas Corn Lesson: Staying Alive. In this breakout, students will test their math knowledge, learn grade-appropriate science vocabulary, and test their cardinal directions, all while working on their collaboration skills.

Kansas College and Career Ready Standards

Science

- **3-ESS2-2.** Obtain and combine information to describe climates in different regions of the world.

Math

- **3.OA.1.** Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, (e.g. by using drawings and equations with a symbol for the unknown number to represent the problem).

Reading

- **W.3.9.** Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories. (3-LS4-1)
- **RI.3.7.** Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

Learning Objectives

- Students will identify and match vocabulary words with their definitions.
- Students will identify and solve math problems.
- Students will read and identify the order of events in a text.

Materials

- All It Needs Is Water, Sunlight and Soil Worksheet
- Farmer John's Field Map
- Corn-Dinal Directions Sheet
- The School Garden Worksheet
- Sweet Corn Growing Day Calendar
- "Corn-Gratulations You Broke Out" Certificate

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Breakout Edu Tips

If this is your first time using a Breakout Edu box, you are in for a treat. Once you've done one breakout box your students will be ready for the next time.

- You can use breakout boxes as a whole class, in addition to small group.
- You have the opportunity to give students hints. Every box comes with at least two hint cards. If you have a higher performing group, you may want to challenge them with less hints, while a different group may need more hints.
- Having a visual timer for students while they are working is really helpful. It allows them to budget their time and when they may want to use their hints.
- As the teacher, you have the discretion to hide things wherever best fit in your room. Feel free to make adjustments! Just make sure the clues for the locks don't change, otherwise students may not be able to get in.
- Do note, when programming the locks, there is a starter ring that has mini-teeth. This ring needs to come first.

Background

Your students are going to work on a Breakout that will introduce key vocabulary from the lifecycle of a plant. This will also integrate standards across the third-grade curriculum. Students will work on word problems related to math and cardinal directions.

Game Name

The Class Garden

Game Designer

Kansas Corn Commission, Josh Runyan and Shane Fairchild

Content Areas

Science

Recommended Ages

2nd - 3rd grade

Ideal Group Size

Groups of 3-4

Suggested Time

30 minutes

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Story

Mr. Chadwick loves teaching about farms and how they operate. This year, he is starting a classroom garden and having his students help. Unfortunately, the seeds for their garden have been accidentally locked in the garden toolbox. The combinations have been encrypted on tasks he planned on assigning to his students. Help Mr. Chadwick get his classroom garden going by unlocking the toolbox.

Lock Combinations

The following codes will open the locks on the box:

3-Digit Lock - 3 Numbers

5, 4, 6

4-Digit Lock - 4 Numbers

8, 4, 2, 0

Shape Lock

○, ◇, ○, △, ⇨

Word Multi Lock

GROWS

Setup Instructions

Steps

1. Print off the following resources: All It Needs Is Water Sunlight and Soil Worksheet, Corn-Dinal Directions Sheet, Farmer John's Field Map, The School Garden Worksheet, and Sweet Corn Growing Day Calendar. The resources need to be printed in color and enough copies per the number of boxes you plan on using. Print enough copies for each group.
2. Change the locks to the appropriate lock combinations found in the lesson plan. If you are unsure on how to change the locks, please watch the official breakout videos on YouTube entitled, "Setting Breakout EDU Locks."
3. Place the resource entitled, "Corn-Gratulations You Broke Out", inside the larger breakout box. Once complete, place the multi-lock mechanism on the bigger breakout box.
4. If you are planning on a breakout reward (Twizzlers are a fun corn-based product to use), set it in the box before placing the locks.
5. Once you have placed the multi-lock mechanism on the larger breakout box, you are ready to start placing the locks associated with the lesson on the multi-lock mechanism. It is always a good idea to double check your locks before beginning to lock them.

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6. *Optional* Project a copy of the locks to give a visual representation. Explain to the students how to use the locks. You can also either read the Class Garden Story out loud or project it.
7. The beginning. We have found using a visual representation of the breakout timer to be running in the background to be helpful. This can be found on YouTube by searching, "Breakout EDU Timer".






Reflection and Conclusion

Questions

1. What were some vocabulary words that you learned or read? (germinate, air, water, etc.)
*Follow up: What do we think would be a good definition for the word? What would be a good example?
2. Do we think it is important to water crops through irrigation on every farm? Why or why not?
3. I'm thinking of the word, germinate. What causes a seed to germinate? (Leading to answer, water)
*Follow up: Do you think a seed can only germinate in water? (Leads into the Staying Alive lesson.)
4. Can plants germinate or grow without sunlight?
5. Can plants grow in all conditions well?

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Lock Type	Lock Combination	How will they know the combo?	Where will it lead?
 <p>4-Digit Lock</p>	8420	Using the Sweet Corn Growing Day Calendar, the combination can be found by adding the number of days needed to germinate and mature, 70 days, and counting from day one of Kourtney planting to harvest on 8-4-19.	By unlocking this lock, they are one step closer to opening all of the combinations to the larger breakout box.
 <p>3-Digit Lock</p>	546	Using The School Garden Worksheet, students will answer the math problems and write the answers in the spaces provided at the bottom of the worksheet. The combination will unlock with the numbers in the squares.	By unlocking this lock, students are one step closer to opening all of the combinations to the larger breakout box.
 <p>Shape Multi-Lock</p>	Circle, Diamond, Circle, Triangle, Right Arrow	Using the Corn-Dinal Directions Sheet, the combination can be figured out by following the farmers directions of checking soil moisture around the plants (shapes) on the Farmer John's Field Map.	By unlocking this lock, they are one step closer to opening all of the combinations to the larger breakout box.
 <p>Word Multi-Lock</p>	GROWS	Using the All It Needs Is Water, Sunlight, and Soil Worksheet, the combination can be figured out by filling out the crossword puzzle. Then, students can figure out how what word can be spelled using the letters that are bolded. If you need help, use the provided answer key.	By unlocking this lock, students are one step closer to opening all of the combination in the larger breakout box.
 <p>Large Lock Box</p>	The purpose of this box is to conceal the Twizzlers or reward that you have locked away.	There is only the larger lock box for this lesson.	