## ESCAPE BOX CORN



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## Escape Box (Corn)

## Intro

In order for a farmer to unlock the potential of a growing season, he/she must find the right combination of weather, soil fertility, hybrids, pest management, marketing, equipment used, etc. If any one of those parts fail, the crop could be lost.

Your challenge is to unlock this box to find the farmer's keys to the combine. Something as simple as this can derail an entire growing season.

Students Need: scratch paper and a pen or pencil

## Instructions

1. After 10 minutes have passed you may ask for a hint. Only two hints are allowed for the entire activity.
2. One combination will open the small box, which holds the clue needed to solve another combination.
3. You must have all combinations solved before attempting to open the main box.
4. No chromebooks or smartphones allowed.

## Materials Needed:

One small box with lock
One large box with three locks

## Groups

1 envelope of clues
1 table at which to work
At least 1 table on which to spread out other clues
1 blank answer key

## Which Resources Go with Which Clues

-3\# Lock: Corn Stalk, words (tassel, leaf, ear) and value table
-Directional Lock: broom corn graph, coordinates in small locked box
-Letter Lock: scrambled words, letters, Ag Mag
-4\# Lock: Terra Nova, U.S. Map, table of annual corn production (http://www.worldofcorn.com/\#us-corn-production-by-state)

## What to Include in envelopes:

- Value Table
- Broom Corn Graph
- Letters cut and in envelope
- Corn Ag Mag—Highlight various facts about ethanol
- Field Corn Terra Nova—Highlight on page 2 "Illinois, lowa, Indiana ... Raise $62 \%$ of corn in the United States." Highlight on last page " 91.9 million acres planted".
- US Map
- Table of annual corn production (will need to print directly from link provided above)
- Any other corn related papers that will serve as red herrings: I included a brochure about popcorn and field corn.


## What to include as additional clues:

- Scrambled words
- Picture of corn stalk
- Additional red herrngs: corn resources /books with pages tagged or passages highlighted


## What to lay on the work table:

- Envelope of clues
- Blank answer key
- Strip of paper with words: Tassel, Leaf, Ear


## Breaking down the clues: <br> 3\# Lock

- Students will need the picture of the corn stalk, the values table and the paper with the words "tassel, leaf, and ear." Each piece of the corn stalk has a value. The answer is:
- Tassel: valued at 4 and there is one in the picture $=4$
- Leaf: valued at 1 and there are nine in the picture $=9$
- Ear: valued at 3 and there are two in the picture $=6$


## Directional Lock

- Students will need to solve the 3\# Lock in order to find the coordinates to the 'broom corn' graph. The handles on the broom serve as the compass point. Handle pointing up is north, down is south, etc.


## Letter Lock

- Students will need to unscramble the question: Where do you put corn in a car?
- They can use the envelope of individual letters to find the answer, although many will just come up with it.
- Corn Ag Mag with highlighted passages about Ethanol can serve as a hint.
- Answer:Tank


## 4\# Lock

- Students will need the US Map, table of 2015 US Corn production (see link) and Field Corn Terra Nova.
- In the Terra Nova, students will find a map highlighting the top five corn producing states. They will also see highlighted on the back page " 91.9 million acres planted."
- Students will need to identify the states on the US Map provided and add together the corresponding acres planted from the table to find the final combination.
- States starred are: Utah, Oklahoma, Florida, Kentucky and New Hampshire.
- Answer: 1865


## Answer Key



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| Parts of a <br> Corn Plant | Value |
| :--- | :--- |
| Tassel | 4 |
| Roots | 2 |
| Leaf | 1 |
| Ear | 3 |
| Stalk | 5 |
| Silk | 0 |
| Pollen | 8 |



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