



GREETINGS EARTHLINGS,

I HOPE THIS MESSAGE FINDS YOU WELL. WE HAVE BEEN STUDYING YOUR PLANET FOR A LONG TIME AND HAVE SEEN QUITE AN INCREASE IN AIR POLLUTION OVER THE YEARS. EVER SINCE YOU INVENTED CARS, TRUCKS, ELECTRICITY, AND FACTORIES, MORE AND MORE POLLUTION ENTERS THE ATMOSPHERE EVERYDAY. THIS POLLUTION, ALONG WITH OTHER NATURAL CAUSES LIKE VOLCANIC ERUPTIONS, WILDFIRES, AND DUST STORMS, HAS BEEN CAUSING THE COMPOSITION OF YOUR ATMOSPHERE TO CHANGE. IT SEEMS THAT THERE IS MORE AND MORE CARBON DIOXIDE IN YOUR ATMOSPHERE. THIS IS NOT GOOD SINCE YOU NEED OXYGEN TO BREATHE.

WE THINK WE CAN HELP. SHORTLY, YOU WILL RECEIVE 2 BOXES FROM US. INSIDE THESE BOXES ARE WAYS TO "GO GREEN" AS WE LIKE TO CALL IT ON OUR PLANET. IT SHOULD HELP YOU AND YOUR ATMOSPHERE. BECAUSE WE DON'T WANT THESE SOLUTIONS TO GET INTO THE WRONG HANDS, THEY WILL BE LOCKED INSIDE THE BOXES. YOU HAVE 40 MINUTES TO UNLOCK THE BOXES OR THE SOLUTIONS WILL AUTOMATICALLY DISSOLVE.

GOOD LUCK. LET US KNOW IF WE CAN FURTHER ASSIST YOU IN THE FUTURE.

YOUR FRIENDS FROM PLANET X

Teacher Directions and Answer Key

Set-up

- Small Lock Box
 - Outside = 3 digit lock
 - Inside = reduce, reuse recycle paper with recycle underlined in invisible ink, blacklight
- Large Lock Box
 - Outside = hasp with key lock, 4 digit lock, directional lock, and word lock
 - Inside = you can put a file folder labeled "HOW TO SAVE PLANET EARTH FROM POLLUTION"
- Put the "song" that is to the tune of "The Wheels on the Bus" on the table with 2 lock boxes. This will help students answer the 3 digit lock.
- For the "Common Questions about Air Pollution," (goes with the directional lock clue) cut the questions and answers apart into a total of 10 strips of paper. Mix up the questions and answers. Place them in an envelope. Hide the envelope under a chair or table in the classroom. This will help students answer the directional lock. *Suggestion: print the questions and answers on cardstock for more "poster like" look. Also, you could put the questions and answers in different locations.
- For the key lock, use the reduce, reuse, recycle poster. Using the invisible ink pen, underline or circle recycle. Tape the key to the recycling bin in your room. Place this picture inside the small lock box along with a blacklight. **If you do not have a recycling bin, print a picture of the recycling bin and tape the key to that.
- For the word lock, cut up the 3 pictures of trees found in the PDF in the google folder. Crumble them up and place them around the room. On the outside of the first one write "MAKE," the next "MORE," and finally "OXYGEN." The website is hidden in the trees. They must put them in order and use the website to find the clue. Place them around the room to look like trash. Students will have to put them in order and type in the address correctly. *For teacher knowledge, the full website to the link is <http://geogreeting.com/view.html?yzvkvxD>
 - Suggestion...you might also want to add 1, 2, and 3 to the trees in order to ensure students put the website in the correct order
- Hide the clue for the 4 digit lock underneath the large lock box. Students will have to add the pollutants in each row and subtract the solutions in order to get the answers for each.
- To begin, either read the scenario to the whole class before beginning OR place the scenario in an envelope on top of the boxes (addressed to your class)

Supplies:

- Envelope (or plastic bag would work also)
- Recycling bin or picture of the recycling symbol
- USB or a hidden clue to the website <http://bit.ly/2w8TeOi>
- Computer
- Pictures of trees hanging around the room
- Printables from PDF in google folder:
 - Trees for word clue
 - Song for the 3 digit clue
 - Reduce, reuse, recycle poster for the key lock
 - Pollutants add and Solutions subtract for the 4 digit lock
 - Common Questions about Air Pollution for the directional lock

Answers to Locks:

3 Digit Lock = 475

- Students will have to use the “song” with the tune of “The Wheels on the Bus” to determine the number of letters in each of the words that are repeated. There are 4 letters in smog, 7 letters in chopped, and 5 letters in smoke. Students might try to count how many times each word is said, but it is the letters in the word that will answer this clue.
- This will open the 3 digit lock on the small lock box.

Key Lock = taped to recycling bin or picture of the recycling symbol

- Students will find the key based on the clue found in the small box with the word RECYCLE underlined or circled in invisible ink. This will lead them to the recycling bin in the room (or picture of one). Recycling can help the Earth.

Directional Lock = up, down, left, up, down

- Students will be able to solve this clue by matching the correct answer to the correct question. Once they are in order by question/answer, they will have to see that there are directions in italicized words. If all the answers are matched correctly, the directional clue will be solved.

4 Digit Lock = 4273

- Students will be able to solve this clue by adding the pollutants in each row and subtracting the solutions in order to get the answers for each row. Students will need to look for the hidden arrows to know that the problems go across the page from left to right.

Word Lock = PLANT

- Students will be able to solve this clue by finding the hidden website hidden in the tree pictures around the room (the ones crumbled and labeled). The link will take them to a geogreeting that spells out PLANT. <http://bit.ly/2w8TeOi>

Sources of pictures (not needed for Breakout set-up) *all pictures found from Google Clipart

<http://www.freestockphotos.biz/stockphoto/15685>

<https://pixabay.com/en/plus-sign-green-mark-icon-symbol-24844/>

https://commons.wikimedia.org/wiki/File:Factory_1b.svg

<https://pixabay.com/en/button-gui-minus-green-colour-24843/>

<https://pixabay.com/en/cartoon-green-happy-tree-1296497/>

<https://commons.wikimedia.org/wiki/File:Volcano.svg>

<https://pixabay.com/en/alien-smiley-emoji-emotion-41608/>

<http://maxpixel.freegreatpicture.com/Flying-Saucer-Spaceship-Ufo-Alien-Cosmic-155732>

https://pixabay.com/en/photos/alien/?image_type=vector

<https://s-media-cache-ak0.pinimg.com/originals/e9/1a/2b/e91a2b42fda01d20d1fa73d243231ed7.jpg>

https://commons.wikimedia.org/wiki/File:USDOT_highway_sign_bicycle_symbol_-_black.svg

<http://www.publicdomainpictures.net/hledej.php?hleda=forest>

<https://thumbs.dreamstime.com/x/earth-cartoon-mascot-switch-off-13786858.jpg>