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| **Lesson Title :** Surviving A Plane Crash | **Unit #:**1 | **Lesson #:**3 | **Activity #:**3 |
| **Activity Title:** Plane Crash Survival Activity |

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| **Estimated Lesson Duration:** | 1, 45 minutes class period |
| **Estimated Activity Duration:** | 1, 45 minute class period |

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| **Setting:** | Inside the school classroom. |

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| **Activity Objectives:** SWBAT work together as a group to list the importance of items they would take with them in a plane crash.SWBAT explain why they chose their items and describe the importance of each item they kept with them.SWBAT analyze what other teams picked and give them feedback on their choice of items.  |
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| **Activity Guiding Questions:** 1. With only the clothes on your back and the items pulled from the wreckage, do you think you would be able to survive?
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| **Next Generation Science Standards (NGSS)**  |
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| **Science and Engineering Practices (Check all that apply)**  | **Crosscutting Concepts (Check all that apply)** |
| [x]  Asking questions (for science) and defining problems (for engineering) | [ ]  Patterns |
| [ ]  Developing and using models | [x]  Cause and effect |
| [x]  Planning and carrying out investigations | [ ]  Scale, proportion, and quantity |
| [ ]  Analyzing and interpreting data | [ ]  Systems and system models |
| [ ]  Using mathematics and computational thinking | [ ]  Energy and matter: Flows, cycles, and conservation |
| [x]  Constructing explanations (for science) and designing solutions (for engineering) | [ ]  Structure and function.  |
| [x]  Engaging in argument from evidence | [ ]  Stability and change.  |
| [ ]  Obtaining, evaluating, and communicating information  |  |

| **Ohio’s New Learning Standards for Science (ONLS)** |
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| **Expectations for Learning - Cognitive Demands (Check all that apply)** |
| [x]  Designing Technological/Engineering Solutions Using Science concepts **(T)** |
| [x]  Demonstrating Science Knowledge **(D)** |
| [x]  Interpreting and Communicating Science Concepts **(C)** |
| [ ]  Recalling Accurate Science **(R)** |

| **Common Core State Standards -- Mathematics (CCSS)** |
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| **Standards for Mathematical Practice (Check all that apply)** |
| [x]  Make sense of problems and persevere in solving them | [ ]  Useappropriate tools strategically |
| [ ]  Reason abstractly and quantitatively | [ ]  Attendto precision |
| [x]  Construct viable arguments and critique the reasoning of others | [ ]  Look for and make use of structure |
| [ ]  Model with mathematics | [ ]  Look for and express regularity in repeated reasoning |

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| **Unit Academic Standards (NGSS, ONLS and/or CCSS):** The following standards go along with the entire RET unit and will be achieved at the end of the unit. This activity is meant to guide the learning of the students as we go along in our quest of survival.-BIO.912.7b- Match two organisms in the same classification-BIO.912.7c-Sort plants and animals according to their classification-BIO.912.8a- Describe how plant/animal population changes in relation to the availability of certain resources-BIO.912.8b- Identify how a population would change in relation to predator/prey relationships-BIO.912.8c-Match a plant/animal to a resource it uses from its environment  |

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| **Materials**: See attachment called “Plane Crash Survival Activity”. |

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| **Teacher Advance Preparation:** Teachers will have to put their students into groups and print and pass out the handout which is called “Plane Activity”. |

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| **Activity Procedures:** 1. Split students up into groups of 3-4.
2. Read aloud the scenario on the Plane Survival handout.
3. Have students work in their groups to rank the items in importance from 1 to 18 while having them state why these items are important.
4. Have each group share their
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**Formative Assessments:** The assessment in this activity will be when the groups come together with an explanation on why they chose what they chose as well as getting up in front of the class and correctly explaining why they chose the items they chose.

**Summative Assessments:** Optional.

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| **Differentiation:** In this activity I used differentiation when making the groups. I made sure the groups had individuals with different achievement levels. In each groups I had a high achiever, medium achiever and lower achiever. |

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| **Reflection:** This lesson worked really well. The next time I do it I would not have the groups share their results because I do not think it was necessary or I would have groups pair up and share with one another instead of going through every group to make this a little shorter of an activity. |