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| **Lesson Title : Understanding Disaster Relief** | **Unit #:1** | **Lesson #:1** | **Activity #:1** |
| **Activity Title: Essential Question** |  |  |  |

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| **Estimated Lesson Duration:** | **2 Class Periods** |
| **Estimated Activity Duration:** | **1 Class Period** |

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| **Setting:** | **Classroom** |

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| **Activity Objectives:**  |

Upon completion of the activity, students will be able to:

1. Explain the global relevance and societal challenges of disaster relief planning
2. Articulate the Big Idea for the Unit in written form
3. Develop an Essential Question based upon our Big Idea
4. Develop a Guiding Question based upon our Challenge

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| **Activity Guiding Questions:** |

1. Based on Disaster Relief, what are some essential questions that interest you?
2. What are some challenges when planning for disaster relief?
3. What are some guiding questions you need to have answered before we begin?

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| **Next Generation Science Standards (NGSS)**  |  |
| **Science and Engineering Practices (Check all that apply)**  | **Crosscutting Concepts (Check all that apply)** |
| ☒ Asking questions (for science) and defining problems (for engineering) | ☐ Patterns |
| ☐ Developing and using models | ☒ Cause and effect |
| ☒ 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 |
| ☐ Constructing explanations (for science) and designing solutions (for engineering) | ☐ Structure and function.  |
| ☐ Engaging in argument from evidence | ☐ Stability and change.  |
| ☒ Obtaining, evaluating, and communicating information  |  |

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

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| **Common Core State Standards -- Mathematics (CCSS)** |  |
| **Standards for Mathematical Practice (Check all that apply)** |  |
| ☒ Make sense of problems and persevere in solving them | ☒ Useappropriate tools strategically |
| ☒ Reason abstractly and quantitatively | ☒ Attendto precision |
| ☒ 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):** |

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| **Materials**: (Link Handouts, Power Points, Resources, Websites, Supplies) |

<https://www.youtube.com/watch?v=fW2qCK0I6cw>

<https://www.youtube.com/watch?v=QfmRf8iOBkI>

 <https://www.youtube.com/watch?v=Fn9vFlIuxbs>

<https://www.youtube.com/watch?v=59dgVe3MRx0>

Essential Question Worksheet

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| **Teacher Advance Preparation:** |

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| **Activity Procedures:** |

1) Introduce the topic of disasters and disaster relief planning by hooking student interest with the videos.

2) Discuss the global relevance of disaster relief efforts.

3) Have a classroom discussion on the Big Idea, Essential Questions, Challenges, and Guiding Questions.

4) Have students show their work and brainstorming on the Challenge Worksheet.





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| **Differentiation:** Describe how you modified parts of the Lesson to support the needs of different learners.Refer to Activity Template for details. |

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| **Reflection:** Reflect upon the successes and shortcomings of the lesson. |

This Essential Questions activity went very well. The students were hooked by the videos and completely engaged with developing essential questions and guiding questions. When I do this activity next year, I will refine some of the requirements of Activity #4 based on the essential questions and guiding questions from the year before. For this year, it felt as though the students developed essential questions and guiding questions that were very detailed and then the challenge was very broad.