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| **Article Title/Source** | **As Zika Virus Threat Grows, Science Steps Up the Fight Against Mosquitoes From NEWSLELA:** <https://newsela.com/read/zika-mosquitoes/id/14847/> |
| **Standards Addressed** | **NGSS**HS-LS3-1 Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.**Common Core State Standards Connections:****ELA/Literacy –** RST.11-12.1 Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. (HS-LS3-1),(HS-LS3-2)RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. (HS-LS3-1)WHST.9-12.1 Write arguments focused on discipline-specific content. (HS-LS3-2) |
| **Objective**Science *and* English skills covered | I can understand and explain how genetic engineering can solve a world problem by:1. Analyzing an article
2. Discussing it
3. Writing a paragraph summarizing what we have learned
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| **Hook (5 minutes)**Grab their attention/maintain engagementStudents arranged in groups of about 4 | Show the following image (from <https://journosdiary.com/2016/02/16/curious-case-of-larvicides-causing-microcephaly/>)C:\Users\mmacive1\Pictures\microcephaly.pngQuestions to class (pose verbally and show on Power Point or board):What do you see in this picture? What do you think microcephaly means? What do you think caused the differences between these two babies?HAVE SMALL GROUPS DISCUSS AND SHARE OUT TO FULL CLASSToday we are going to learn more about what scientists think may be causing this condition in many babies in certain parts of the world, and what they are trying to do to stop it. |
| **Building/Connecting to Required Content Knowledge****(10 minutes)**Teach/review background knowledge will they need to understand this article | Even if you don’t think you will become a scientist yourself, learning science is important for understanding problems (like diseases) in our country and other countries and for being a good citizen in helping make good public decisions.We are going to read an article about Zika (the disease that is causing microcephaly) today and discuss it in small groups. By the time we finish today, you will understand this well enough to write a paragraph of your own about it.Before we go into our small groups, I am going to get you started by giving you a preview and some questions to think about. This article talks about a new biological weapon – a lethal weapon. It helps us to understand why we have been learning about genetics, and how understanding genetics is helping scientists fight diseases. ***Depending on how this lesson fits into what has come previously, teacher gives some background on science of genetic engineering and genetically modified organisms – Requires teacher prep.*** |
| **Small Group Discussion****(30 minutes)**Provide questions/ activities that allow them to analyze and critique the article with their peers | As you get into your small groups to read the rest of the article, here are the questions you will be focusing on (written for students on handout with the article)What does it mean to be a “lethal weapon”?Why does it seem strange to view mosquitos as a “lethal weapon” against Zika? How do mosquitos get to be a “lethal weapon” against Zika? How do mosquitos work as a “lethal weapon” against Zika? What are the benefits of this method of fighting Zika? Why do you think people might be opposed to this method of fighting Zika? After you have discussed these questions, work together as a group to write out answers to the questions. Take turns so that each group member writes at least one of the answers. |
| **Large Group Review/ Summary****(10 minutes)**Check for misunderstandings, reinforce key takeaways, connect back to science classroom content | Ask first group to share their answer to first question. Ask other groups to chime in with additional thoughts.Ask second group to share their answer to second question. Ask other groups to chime in with additional thoughts.And so on. |
| **Homework/Follow-Up Assignment Assessment** | Students individually write a paragraph that addresses the discussion questions. |

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**Zika Article Discussion Questions**

What does it mean to be a “lethal weapon”?

Why does it seem strange to view mosquitos as a “lethal weapon” against Zika?

How do mosquitos get to be a “lethal weapon” against Zika?

How do mosquitos work as a “lethal weapon” against Zika?

What are the benefits of this method of fighting Zika?

Why do you think people might be opposed to this method of fighting Zika?

HOMEWORK: Write a paragraph that summarizes the main point of this article. Use at least some of the questions you discussed in class to help organize your paragraph.