## Intro to Renewable FuelsTarget Grade Level: 7th-8th Grade

## Full Lesson Plan: <https://www.iowaagliteracy.org/Article/Intro-to-Renewable-Fuels>

This document is meant for you, the teacher, to use to convert the lesson plan into a virtual learning module for your students. You can use the steps outlined below to create different elements of a Google Classroom or other online learning module. You can also send the steps directly to your students in a PDF, present them in a virtual meeting, or plug them into any other virtual learning platform you use. Find more virtual lessons here: [Virtual Learning.](https://www.iowaagliteracy.org/Tools-Resources/Other/Virtual-Learning)

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| Engage | Ask a parent, guardian, or older sibling what they use to fill up their car. Do they use gas? Ethanol? Diesel? Do you think it is better to use soy diesel and/or ethanol and why/why not? Send your teacher a message with your parent/guardian/sibling’s answer and your thoughts.  |
| Explore | Using credible resources, do research and answer the questions on the Renewable Fuels worksheet linked below. You will have to make a copy of it. When you are done, turn it in. * [Renewable Fuels Worksheet](https://drive.google.com/file/d/1bv1zvZ6GSWS2YfRi05Hdiil2HiUPJcYY/view?usp=sharing)
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| Explain | After turning the Renewable Fuels Worksheet in, look at this document. You don’t need to turn it in, as you will not type on it, so don’t make a copy of it. It is simply good information for you to have, as the class would have gone through the answers in person if it was possible. Keep this document open, as you will need it later on in the lesson.* [Renewable Fuels Information](https://drive.google.com/file/d/1bv1zvZ6GSWS2YfRi05Hdiil2HiUPJcYY/view?usp=sharing)
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| Elaborate | After reading that information, answer these questions and send your teacher a message with your answers. * After reading and researching, would you still agree with your original opinion on whether renewable fuels are good or bad?
* Do you think these industries have a negative or positive impact on your country? What about Iowa? Your community?
* Do you think renewable fuels or non-renewable fuels have a more negative impact on the environment?
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| Evaluate | Finally, you are going to write a paper. The instructions for the paper are on the last page of the Renewable Fuels Information document. Make sure to review the guidelines for the paper before starting your paper. * The paper should be a two-page research paper with a works cited page (in addition to the two pages). Your paper should discuss terms, crops, processes, and impacts of renewable fuels.
* There will be an opportunity to discuss some of your opinions in the paper, but the majority of the content will need to be fact-based and cited correctly to get credit.
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