

## **Unit Guide**

### **Fossil Fuels and Our Changing Climate**

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This unit is intended for a grade 10-12 integrated or environmental science course. The unit addresses the Next Generation Science Standards HS-ESS3-5 and HS-ESS3-2. The unit will cover the extensive evidence highlighting climate change and have students interpret data across a number of time scales. Students will form teams that focus on atmosphere, cryosphere, or hydrosphere data. They will use this information to generate predictions for the future of our earth's climate. Next students will design an experiment to model the effects of carbon dioxide concentration or surface albedo on temperature. Lastly, students will learn about the techniques used to access fossil fuels. Students will play a game where they role play elected officials that need to make decisions about which fossil fuels should be used to generate power. Their choices will all involve trade offs, and, as the game is played, they will earn or lose money, environment, social, and emissions tokens that are used to track their overall score.