



Curriculum Units by Fellows of the Yale-New Haven Teachers Institute
2015 Volume III: Physics and Chemistry of the Earth's Atmosphere and Climate

How Does A Solar Oven Work?

Guide for Curriculum Unit 15.03.05
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At Conte West Hills School of Exploration and Innovation, our students learn through doing, seeing, questioning, and experiencing. As a sixth-grade science teacher, it is my job to inspire my students about the scientific and biological world that surrounds them, and about how they can influence their planet as they grow older. This unit focuses on Earth's position in the Solar System and how that position affects how the planet moves and revolves, with subsequent effects on climate and weather. In order for students to gain a solid understanding of these concepts, we must not only analyze how Earth's location in the universe affects climate and weather, but also analyze the Sun's role in life on Earth and how we can harness this to improve energy options in the United States.

The students will explore the Sun's power by creating a solar oven, and will also consider climate change. Students will come to appreciate the complexity of this subject, for example the roles of both natural and manmade interactions and factors. The students will learn about how scientists analyze past climates, and how they make predictions for Earth's climate in the near future. We will of course touch upon the natural cycles such as the Greenhouse Effect, as well as the carbon and water cycles, and how humans interact with and disrupt these natural processes. The culmination of the unit will call upon the students to identify human error and negative interactions with our environment and work together to create plans for local and community action to help lessen their own and their families' carbon footprints. This unit fits perfectly with New Haven's mandated grade-six science unit, analyzing weather in Connecticut and our interactions with it.

(Recommended for Science, grade 6)

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