

Episode 3

Strand 6.3	Standard 6.3.4	Big Idea: Earth's atmosphere and unequal heating keeps temperatures stable enough to sustain life.
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Episode 3 Why isn't the whole earth the same temperature?	Time 30 min	CCCs Patterns Energy and Matter	Practice Develop a model
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Phenomenon: *If I want to vacation somewhere that is warm, I tend to head south.*

Gathering

Use Models to Gather Data

Students will be asked about where they might travel if they wanted to visit somewhere warm and where they might travel if they wanted to visit somewhere cold. Students will look at data from NASA's app Earth-Now (only available on desktop) or NASA's computer program Nasa's Eyes. Students will use Earth's air temperature model and data to observe patterns and make a list of questions they have.

Reasoning

Use Models to Predict and Develop Evidence

Students will use their models of seasons and indirect and direct light to construct an explanation to describe what is causing the pattern of colder temperatures at the poles and warmer temperatures toward the equator. Students will discuss how energy from the sun is transferred, why Earth is unequally heated, and why areas near the equator are warm and areas near the poles are cold.

Communicating

Communicate Information

Students will construct an explanation and use their models to describe why Earth is unequally heated.

Assessment: Students need to discuss direct/indirect light from the sun and how this causes unequal heating of the earth.	Materials, resources, handouts, etc. NASA's app Earth-Now Average Temperature Map Click here for Climate Key .
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