Science On a Sphere – Educator Resource Guide

**Show Title:** *Weather and Climate Patterns*

**Recommended Grade Range:** 5th, 6th

**Presentation Time:** 20 minutes

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|  | **SEEd Standards Focus Alignment** |
| Standard 5.1.4 | Interactions between Earth’s systems including the geosphere, biosphere, hydrosphere, and/or atmosphere. |
| Standard 6.3.2 | Interactions between air masses that cause changes in weather conditions. |
| Standard 6.3.3 | Models used to show the effects of unequal heating of Earth’s systems, including causes of patterns of atmospheric and oceanic circulation. Regional climates. |

**Summary:**

“Weather and Climate Patterns” is designed to supplement 5th and 6th grade standards on the sections regarding the characteristics and interactions of Earth’s systems, and Earth’s weather patterns and climate. Students will observe variations and changes in Earth’s biosphere then investigate each of Earth’s major systems to explain their initial observation. Additionally, basic knowledge of regional climates will be gained.

**Data visualizations explored in this topic:**

* [Earth and Earth’s Clouds](https://sos.noaa.gov/catalog/datasets/blue-marble/)
* [Global Vegetation](https://sos.noaa.gov/catalog/datasets/vegetation-seasonal-changes-apr-2012-apr-2013/)
* [Climate Classifications](https://sos.noaa.gov/catalog/datasets/koppen-geiger-climate-classification-2007/)
* [Average Rainfall](https://sos.noaa.gov/catalog/datasets/rainfall-monthly-nasa/)
* [Earth’s Topography](https://sos.noaa.gov/catalog/datasets/etopo1-topography-and-bathymetry/)
* [Sea Surface Temperatures](https://sos.noaa.gov/catalog/datasets/sea-surface-currents-and-temperature-gray-land/)

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| Science language used or introduced | absorption, atmospheric circulation, climate, climate classification, clouds, condensation, conduction, continental, convection, elevation, latitude, longitude, model, ocean current, polar, vapor, precipitation, reflection, temperate, temperature, topography, tropical, vegetation, water cycle. |



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