Science On a Sphere – Educator Resource Guide

**Show Title:** *Sun, Earth, & Moon*

**Recommended Grade Range:** 4th, 6th

**Presentation Time:** 20 minutes

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|  | **SEEd Standards Focus Alignment** |
| Standard 4.4.1 | Differences in the apparent brightness of the Sun compared to other stars. |
| Standard 4.4.2 | Observable patterns that provide evidence of Earth’s rotation. |
| Standard 6.1.1 | Patterns of lunar phases. |

**Summary:**

“Sun, Earth, & Moon” is designed to supplement 4th and 6th grade standards on the sections regarding observable patterns in the sky, as well as structure and motion within the Solar System. Students will observe changes in when and where sunlight on Earth occurs and explore the Sun, Earth & Moon system in order to describe this phenomenon. Students will also gain an understanding of how distances between Earth, the Sun and stars affects the brightness of what we see.

**Data visualizations explored in this topic:**

* [Earth and Earth’s Clouds](https://sos.noaa.gov/catalog/datasets/blue-marble/)
* [Blue Marble and Nighttime Lights](https://sos.noaa.gov/catalog/datasets/blue-marble-and-nighttime-lights/)
* [Moon](https://sos.noaa.gov/catalog/datasets/moon/)
* [Moon Phases](https://sos.noaa.gov/catalog/datasets/moon-phases/)
* [Sun: STEREO/SDO (ionized helium) - Real-time](https://sos.noaa.gov/catalog/datasets/sun-stereosdo-ionized-helium-real-time/)

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| Science language used or introduced | Model, orbit, sphere, moon, axis, rotation, revolution, appearance, planets, star, distance, scale, sun, reflection, phases of the moon |



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