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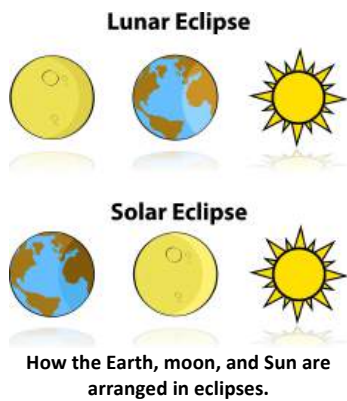
6th, 7th, 8th Grade Reading Mega Bundle

Reading Comprehension Passage & Questions

- ✓ Over 115 Readings! Covers all Science Topics
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Solar and Lunar Eclipses



Eclipses happen when one space object (like a planet or moon) casts a shadow on another. On Earth, we see two types of eclipses: solar and lunar. **Solar eclipses**¹ happen when the moon passes between the Sun and the Earth and all three objects line up. The moon casts its shadow on the Earth and blocks the Sun from our view. **Lunar eclipses**² happen when the Earth passes between the moon and Sun, casting a shadow on the moon. Solar eclipses happen at the new moon and lunar eclipses happen at the full moon. There are between four and

Did You Know?

Around 35% of solar eclipses are partial, and about 35% of lunar eclipses are total.

seven eclipses per year.

Solar Eclipses

Solar eclipses can be total, partial, annular, or (rarely) a hybrid between annular and total. There are two to five solar eclipses per year, but some happen over places with few to no people.

TWF SAMPLE



10-15 seconds before and after totality. You can see the Sun's **corona**³ (outer atmosphere) around the edges of the moon as well as a single point of sunlight at one end. It looks like a ring set with a single diamond. You can see Bailey's beads about 5 seconds before and after totality. They are small pinpoints of light all around the moon, caused by sunlight shining through valleys and gaps between the moon's mountains. During totality, the Sun is completely covered, with only the corona visible around the edges of the moon. This full cover can even cause the temperature to drop. Animals often



The diamond ring effect occurs before and after totality.

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In partial solar eclipses, the moon covers only part of the Sun. In this case, the Sun, moon, and Earth do not perfectly line up. Partial solar eclipses are most



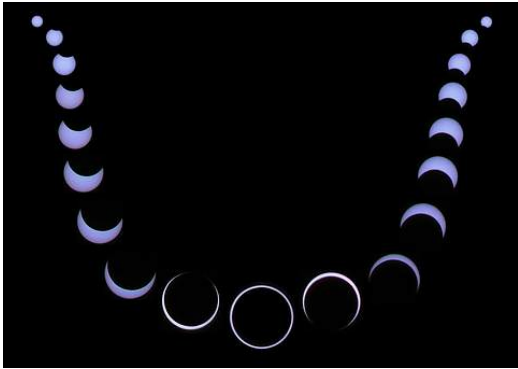
Partial solar eclipses occur when only part of the Sun is obscured.

¹ **Solar eclipse:** an eclipse that happens when the moon blocks the Sun from Earth.

² **Lunar eclipse:** an eclipse that happens when the Earth blocks the Sun from the moon.

³ **Corona:** the Sun's outer atmosphere.

common near the poles. The next partial solar eclipse will be on February 15, 2018. It will be visible in most of Antarctica and some of South America.



In an annular solar eclipse, the moon covers the center of

parts of Malaysia and Indonesia.

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Lunar Eclipses

Lunar eclipses can be total, partial, or penumbral. Lunar eclipses may not happen every year, but there can be up to three per year. Most years have two. Unlike solar eclipses, people on the entire night side of the Earth can see lunar eclipses.



In a total lunar eclipse, the Earth fully shadows the moon.

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⁴ **Annulus:** the visible part of the Sun during an annular eclipse, which appears as a ring around the moon.

⁵ **Apogee:** the farthest away the moon gets from Earth.

A partial lunar eclipse happens when the Earth, Sun, and moon are not perfectly lined up during a full moon. Only part of the moon is covered. The next partial lunar eclipse will happen between July 16 and 17, 2019, and will be visible throughout South America, Africa, Asia, Australia, and most of Europe.

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Eclipse Viewing

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Simply make a small, smooth, round hole in the middle of one of the pieces, then allow the sun to shine through the hole onto the second sheet. Lunar eclipses, on the other hand, are perfectly safe to view with the naked eye.

Reading Comprehension Questions

1. What is an eclipse?
2. What is
3. What
4. During what phases
5. What are the four types of solar eclipse?
6. What is an
7. What are the
8. Why do people confuse penumbral lunar eclipses with regular full moons?

Extension Question

9. The moon
10. Create an infographic about

TIME

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