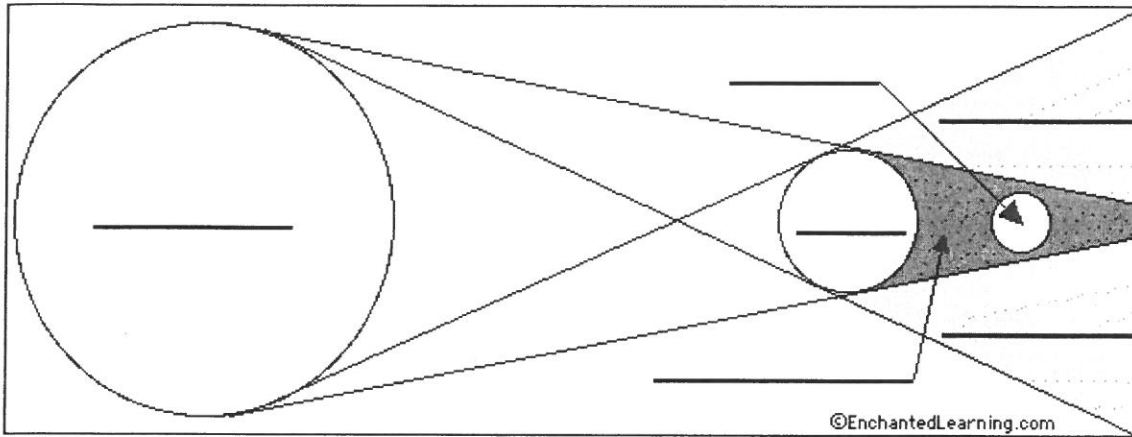


## EARTH, MOON, AND SUN STUDY GUIDE

What **type of eclipse** is shown in the picture below? \_\_\_\_\_



**Label** the following on the diagram:

**Earth      Moon      Sun      Umbra      Penumbra**

What **phase of the moon** is shown in this diagram? \_\_\_\_\_

**How do you know?** \_\_\_\_\_

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Does the **phase of the moon change** for each eclipse? **Why or Why not?**

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Would this **eclipse occur** during the **day or night**? \_\_\_\_\_

Would **all places** on Earth **experiencing the same time of day** be affected by this eclipse?  
**Why or why not?**

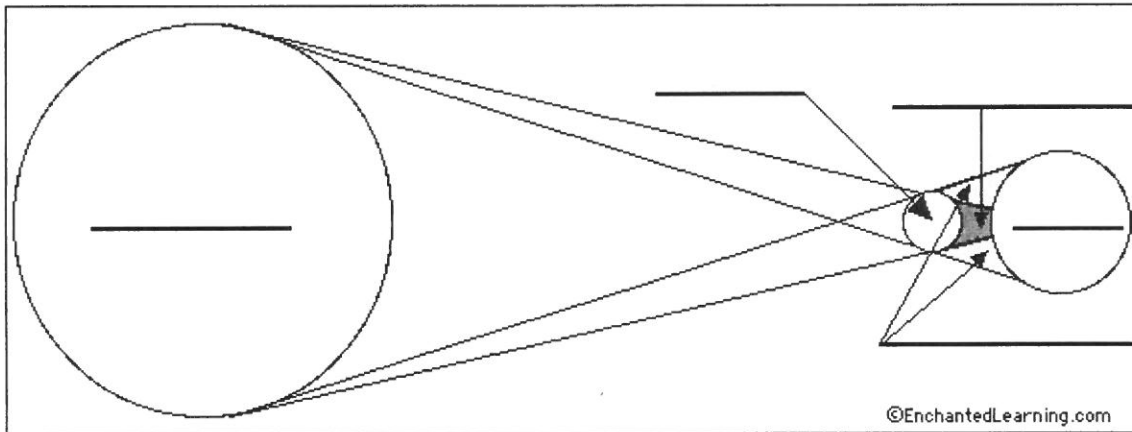
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**Earth, Moon & Sun Study Guide**

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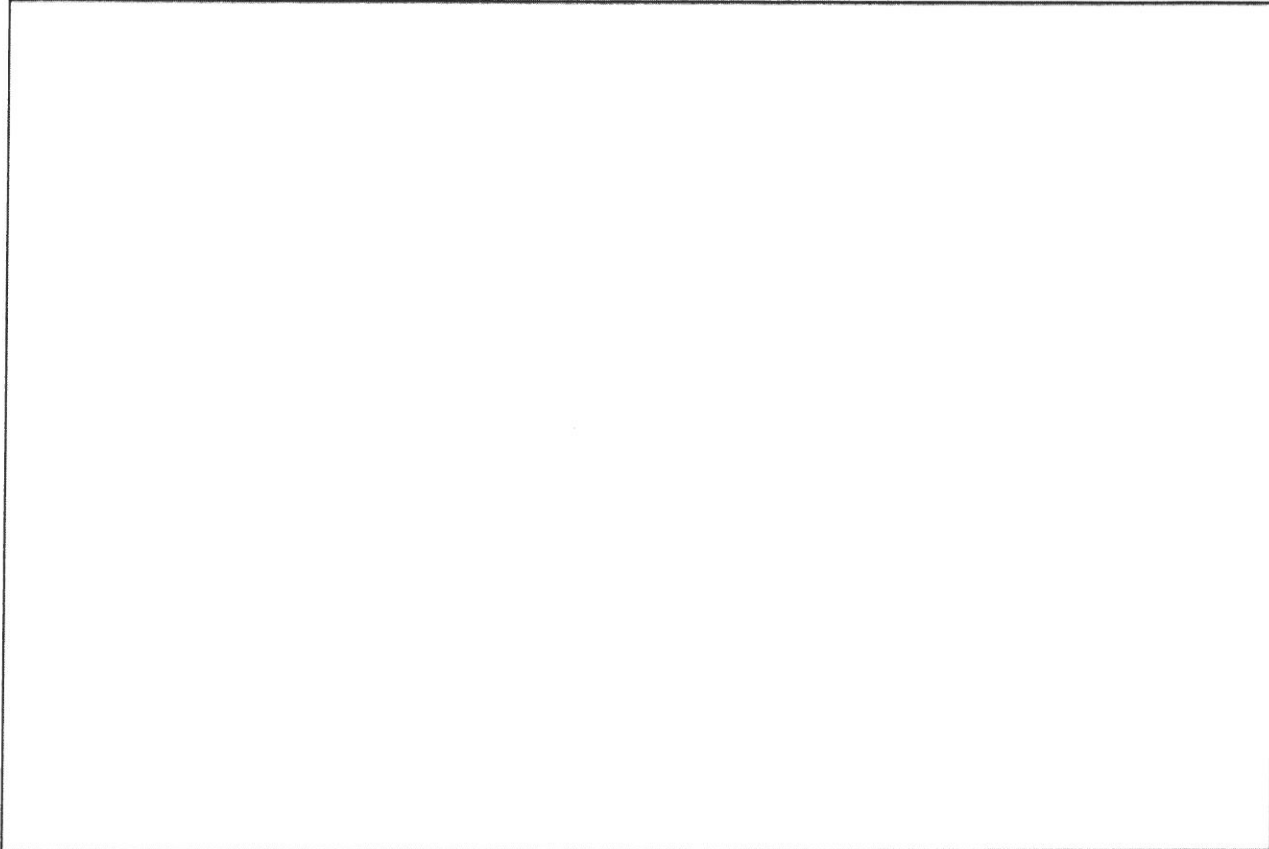
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**Earth, Moon & Sun Study Guide**

What **causes** the **phases of the moon**?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

**Draw a diagram of the phases of the moon. Include the Sun, Earth, and Moon in your diagram. Show the moon's relative position in each of the 8 phases. Label the phases at each spot.**



**How long** does it take **for the moon to complete all 8 phases**? \_\_\_\_\_

What is **the total amount of moon** that is possible to see from Earth? \_\_\_\_\_

Do we **always see the same part of the moon**? **Why or Why not?** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

How long ***in Earth days*** is a day on the moon? \_\_\_\_\_

How long ***in Earth days*** is a year on the moon? \_\_\_\_\_

## Earth, Moon & Sun Study Guide

Define/Explain the following vocabulary words:

- **Rotation-**

How long does it take for the Earth to rotate one time? \_\_\_\_\_

- **Revolution-**

How long does it take for the Earth to make one complete revolution? \_\_\_\_\_

- **Waxing-**

- **Waning-**

- **Eclipse-**

A moon in a **lunar eclipse** can sometimes appear what color? \_\_\_\_\_

- **Umbra-**

When the location on Earth during an eclipse is in the **umbra**, is it a **total** or **partial** eclipse?

- **Penumbra-**

When the location on Earth during an eclipse is in the **penumbra**, is it a **total** or **partial** eclipse?