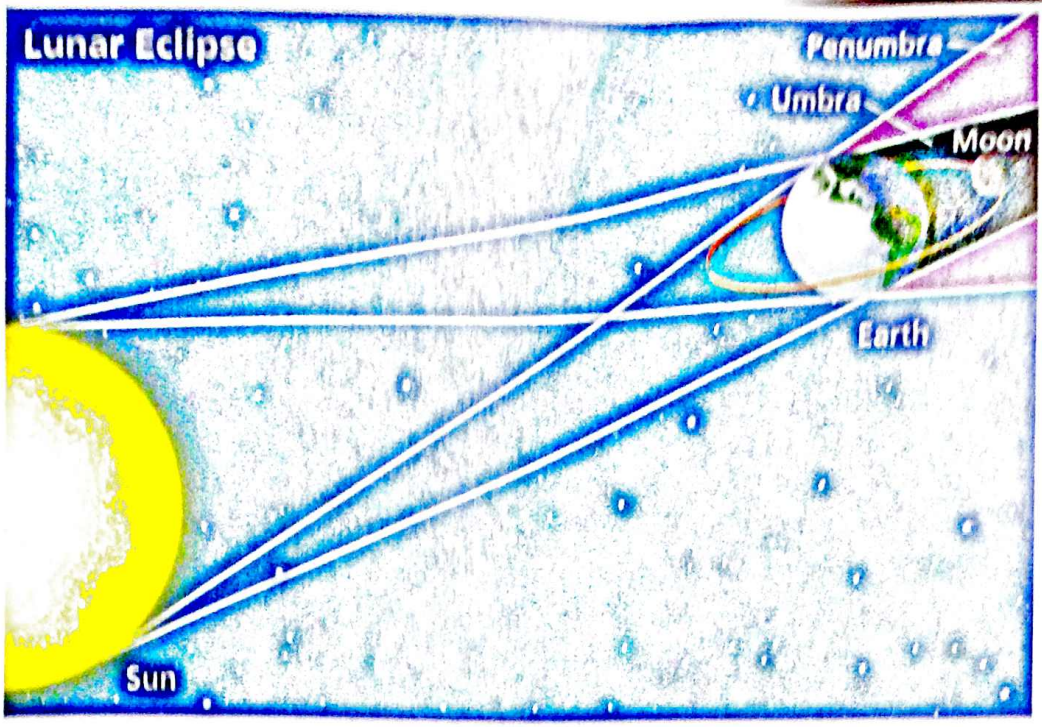


**When Do Lunar Eclipses Occur?** During most months, the moon moves near Earth's shadow but not quite into it. A **lunar eclipse** occurs at a full moon when Earth is directly between the moon and the sun. You can see a lunar eclipse in Figure 14. **During a lunar eclipse, Earth blocks sunlight from reaching the moon.** The moon is then in Earth's shadow and looks dim from Earth. Lunar eclipses occur only when there is a full moon because the moon is closest to Earth's shadow at that time.

**Total Lunar Eclipses** Like the moon's shadow in a solar eclipse, Earth's shadow has an umbra and a penumbra. When the moon is in Earth's umbra, you see a total lunar eclipse. You can see the edge of Earth's shadow on the moon before and after a total lunar eclipse.

Unlike a total solar eclipse, a total lunar eclipse can be seen anywhere on Earth that the moon is visible. So you are more likely to see a total lunar eclipse than a total solar eclipse.

**Partial Lunar Eclipses** For most lunar eclipses, Earth, the moon, and the sun are not quite in line, and only a partial lunar eclipse results. A partial lunar eclipse occurs when the moon passes partly into the umbra of Earth's shadow. The edge of the umbra appears blurry, and you can watch it pass across the moon for two or three hours.

**Reading Checkpoint** **During which phase of the moon can lunar eclipses occur?**

**FIGURE 14**
During a lunar eclipse, Earth blocks sunlight from reaching the moon's surface. The photo of the moon above was taken during a total lunar eclipse. The moon's reddish tint occurs because Earth's atmosphere bends some sunlight toward the moon.
**Interpreting Diagrams** *What is the difference between the umbra and the penumbra?*

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