

SOLAR ECLIPSES

LESSON 32

If you've ever been present for one, it's not an event you're likely to forget. You need to be in a precise location to spot one—in fact, people will travel all over the world to see them—but solar eclipses are among the most powerful astronomical events.

I. Facts about solar eclipses:

- A. A solar eclipse can only happen during a _____ moon.
- B. The moon's orbit is _____ so solar eclipses don't happen every month.
- C. Both the earth's and moon's orbits are elliptical, so the sun and moon don't always perfectly line up for an eclipse (this is called an _____ eclipse).
- D. _____ is the only planet in the solar system where total solar eclipses can occur.
- E. It is very important to wear _____ to observe an eclipse.
- F. Many ancient cultures believed eclipses were caused by _____
_____.
- G. Some people think that the darkness that occurred while Jesus was on the cross was caused by an eclipse. This is impossible for two reasons:
- i. Jesus was crucified near the time of Passover, which is always during _____.

ii. The darkness lasted for _____, while an eclipse only ever lasts a few minutes.

II. The process of a solar eclipse:

A. The penumbra: _____.

B. The umbral shadow: _____
_____.

C. It's only possible to be in the umbra for _____ minutes at most.

D. If you're in the penumbra, you'll only see a _____ solar eclipse.

E. Totality: _____.

F. Corona: _____.