

Topic: Earth Motions

Aim: What are some other Laws of Planetary Motion?

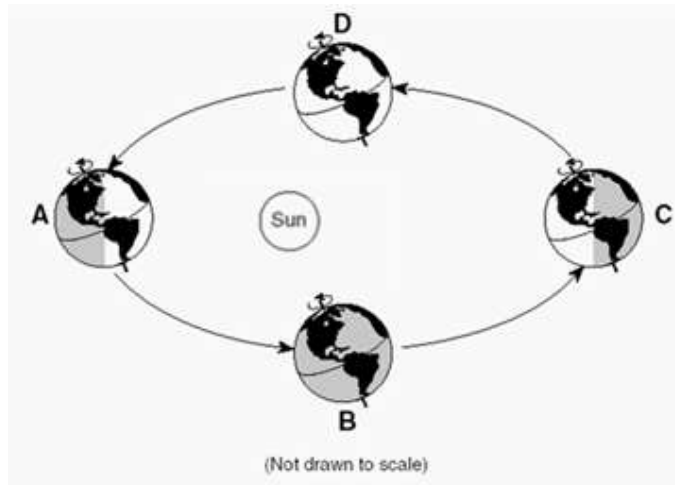
Law II:

When orbiting the Sun, a planet sweeps out equal areas in an equal amount of time.

This REALLY means ...

- When a planet is closer to the Sun, it has a greater orbital velocity .
- When a planet is farther away from the Sun, its orbital velocity is slower.

Sun has a **greater apparent diameter** (looks bigger) when viewed from Earth at **perihelion** because it is closer.



Sun has a **smaller apparent diameter** when viewed from Earth at **aphelion** because it is farther.

Law III:

Outer planets have a longer period of revolution than inner planets.

- 1 - Outer planets have longer orbits.
- 2 - Outer planets travel slower.

Law of Universal Gravitation: (Isaac Newton)

The gravity between two celestial objects is **GREATEST** when:

1. the objects are closer together
2. The objects have a greater mass