

## Science Study Guide: *(the quiz will be multiple choice, matching, fill-in-the-blank and short answer)*

### Sun and Shadows Vocabulary & Questions

- **shadow** - a dark area where an object has blocked light.
- **penumbra** - the lighter area around the edges of a shadow.
- **umbra** - the darker area in the middle of a shadow.
- **Sun** - the star in our solar system that appears to rise in the East each morning and appears to cross the sky and set in the West at night.
- **compass** - a tool used to determine direction.
- **cardinal directions** - the four main points on a compass: North, South, East & West
- **day** – the time when the Sun appears in the sky, and it is light outside.
- **night** – the time when there is no Sun in the sky, and it is dark outside.
- **sundial** – a timekeeping tool used long ago

- The direction in which the sun appears to travel each day: **rises in the East (morning) and sets in the West (evening)**
- The time of day when the Sun appears at its highest point in the sky: **noon (high noon)**
- How long it takes the Earth to orbit the Sun? **one year or 365 days**
- How long it takes the Earth to rotate on its axis? **one day or 24 hours**
- Why does your shadow appear to move throughout the day? **Earth's rotation around the Sun.**

### Scale Model of Earth, Moon, Sun

- **diameter** - the width of a sphere
- **universe** - everything that exists in space including planets, moons, and stars.
- **scale model** – is either a zoomed in version of something that is very small or a zoomed out version of something that is very large.

#### Facts to know:

- The Moon is much closer to the Earth than the Sun. That is why the Sun appears to be the same diameter in the sky.
- The Earth's diameter is **12,742 km**
- The Moon's diameter is **3,474 km**
- The Moon is **384,400 km** from the Earth.
- The Sun is **150,000,000 km** from the Earth
- **1 million** Earths could fit inside the Sun.
- The distance of the Earth to the Sun is about **390 times further** than the distance of the Earth to the Moon.