

# Topic: Modern Astronomy

**Aim:** What are the characteristics of objects in our Solar System?

## The Sun

- an average-sized star
- cooler dark spots known as sunspots reappear cyclically every 11 years

	Mercury, Venus, Earth, Mars	Jupiter, Saturn, Uranus, Neptune
<b>Characteristic</b>	<b>Terrestrial Planets</b>	<b>Jovian Planets</b>
<i>Distance from Sun</i>	inner planets (closest to Sun)	outer planets (farthest from Sun)
<i>Period of Revolution</i>	shorter	longer
<i>Average Temperatures</i>	warmer	very cold
<i>Period of Rotation</i>	longer	shorter (spin fast)
<i>Equatorial Diameter (size)</i>	smaller	larger
<i>Mass</i>	less massive	more massive
<i>Density</i>	more dense	less dense
<i>Composition</i>	solid rock	gases

## Mercury

- no atmosphere – lacks protection against meteorite impacts – many craters from meteorite impacts

## Venus

- experiences greenhouse effect because of a thick atmosphere of CO<sub>2</sub> gas - hottest temperatures (900°F)
- “day is longer than year” (rotation takes longer than revolution)

## Saturn

- entire planet is less dense than water (has a density of 0.7g/ml)

### Other “space junk” that would be found in our Solar System:

**the asteroid belt** - rocks orbiting Sun between Mars and Jupiter

**comets** - masses of rocks, ice, and gas that travel in highly elliptical orbits around the Sun

**meteoroids** – small rocks freely floating through space

**meteors** - rocks burning up in Earth’s atmosphere – “shooting stars”

**meteorites** - rocks that hit the Earth’s surface