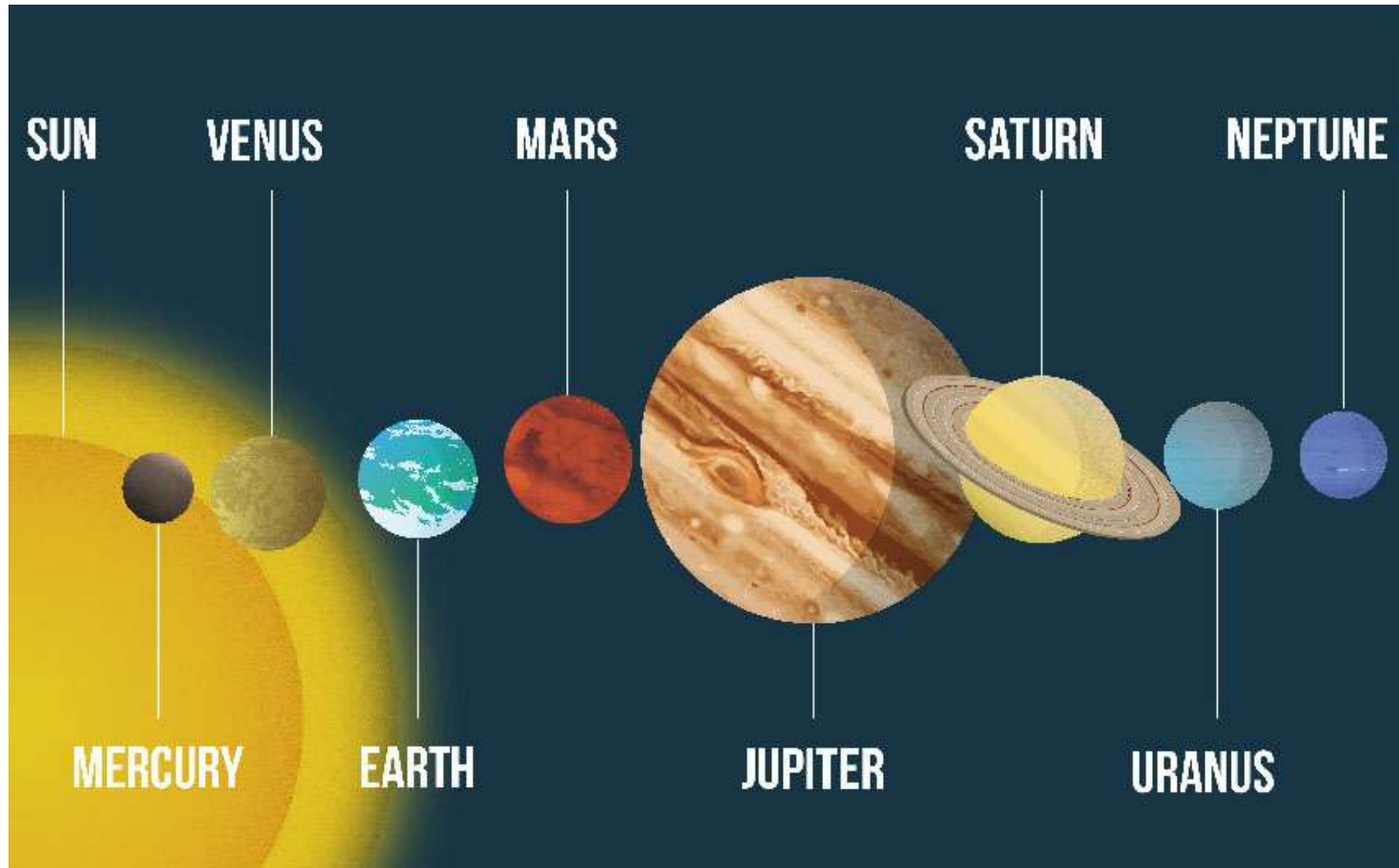
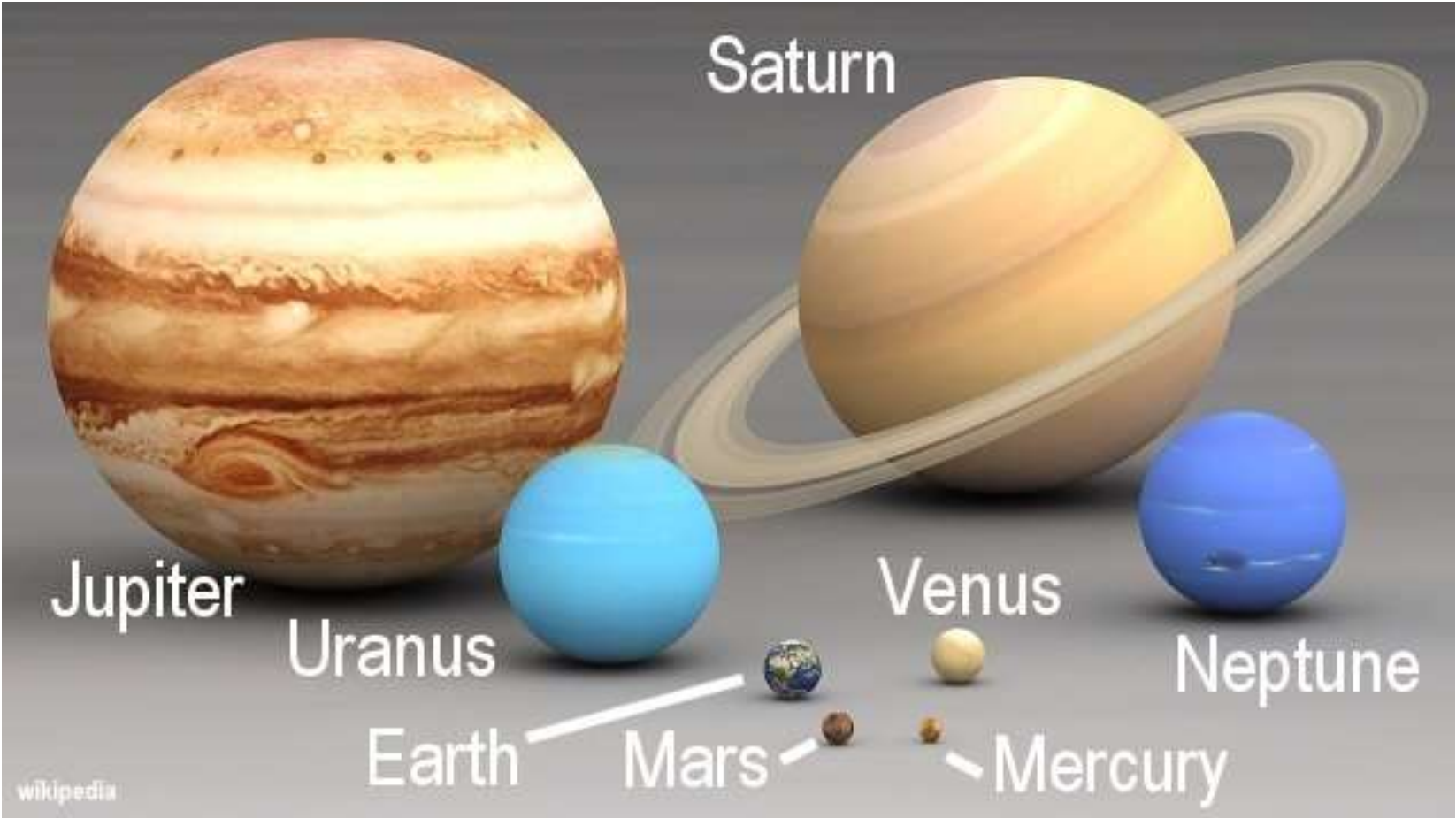




Sequence of Planets from the Sun



Relative sizes of the planets



Characteristics of the Planets in our Solar System

Dear students ,

Before you read the table given on next page, you may need an explanation of the term '**Apparent size from earth**' given in the **7th column** of the table. In this column you will find that apparent sizes are written in **arc seconds**.

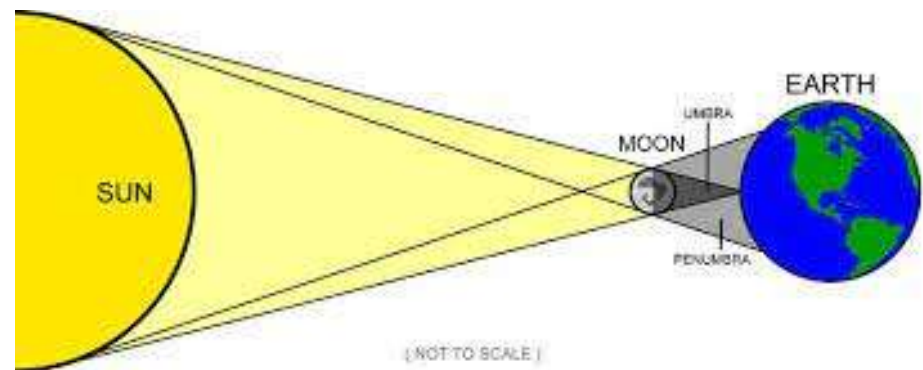
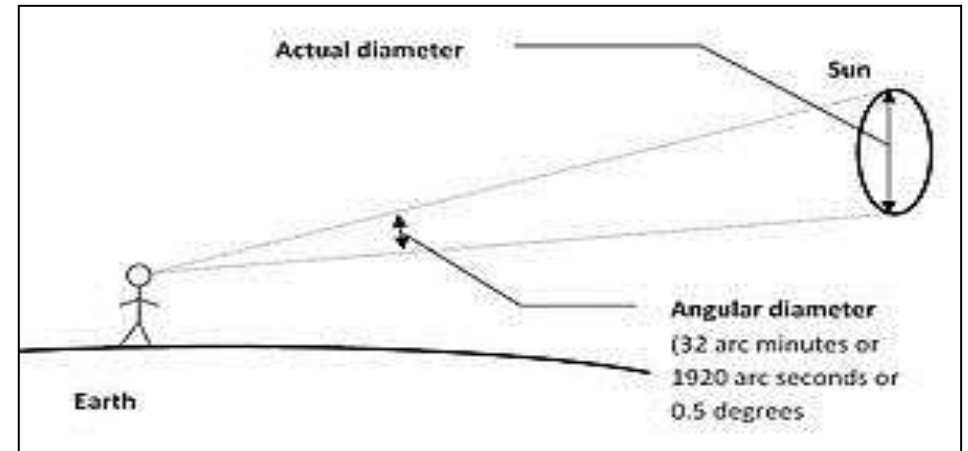
What is arc second? 1 arc degree= 60 arc minutes, 1 arc minute= 60 arc seconds.

When we see a planet from the Earth, the angle subtended by the planet's diameter (angular diameter) to our eye is expressed in **arc second**.

Thus the value of arc seconds depends on the diameter of an object and the object's distance from the Earth.

An example, the Sun and the Moon appear to be of the same size in Earth's sky. That is because the Sun's diameter is about 400 times greater than that of the Moon, but the sun is also about 400 times farther away.

The total eclips of the Sun occurs because of the same apparent sizes of the Sun and the Moon as seen from earth.



Planet (or Dwarf Planet)	Distance from the Sun (Astronomical Units miles km)	Period of Revolution Around the Sun (1 planetary year)	Period of Rotation (1 planetary day)	Mass (kg)	Diameter (miles km)	Apparent size from Earth	Temperature (K Range or Average)	Number of Moons
Mercury	0.39 AU 36 million miles 57.9 million km	87.96 Earth days	58.7 Earth days	3.3×10^{23}	3,031 miles 4,878 km	5-13 arc seconds	100-700 K mean=452 K	0
Venus	0.723 AU 67.2 million miles 108.2 million km	224.68 Earth days	243 Earth days	4.87×10^{24}	7,521 miles 12,104 km	10-64 arc seconds	726 K	0
Earth	1 AU 93 million miles 149.6 million km	365.26 days	24 hours	5.98×10^{24}	7,926 miles 12,756 km	Not Applicable	260-310 K	1
Mars	1.524 AU 141.6 million miles 227.9 million km	686.98 Earth days	24.6 Earth hours =1.026 Earth days	6.42×10^{23}	4,222 miles 6,787 km	4-25 arc seconds	150-310 K	2
Jupiter	5.203 AU 483.6 million miles 778.3 million km	11.862 Earth years	9.84 Earth hours	1.90×10^{27}	88,729 miles 142,796 km	31-48 arc seconds	120 K (cloud tops)	67 (18 named plus many smaller ones)
Saturn	9.539 AU 886.7 million miles 1,427.0 million km	29.456 Earth years	10.2 Earth hours	5.69×10^{26}	74,600 miles 120,660 km	15-21 arc seconds excluding rings	88 K	62 (30 unnamed)
Uranus	19.18 AU 1,784.0 million miles 2,871.0 million km	84.07 Earth years	17.9 Earth hours	8.68×10^{25}	32,600 miles 51,118 km	3-4 arc seconds	59 K	27 (6 unnamed)
Neptune	30.06 AU 2,794.4 million miles 4,497.1 million km	164.81 Earth years	19.1 Earth hours	1.02×10^{26}	30,200 miles 48,600 km	2.5 arc seconds	48 K	13
Pluto (a dwarf planet)	39.53 AU 3,674.5 million miles 5,913 million km	247.7 years	6.39 Earth days	1.29×10^{22}	1,413 miles 2,274 km	0.04 arc seconds	37 K	4

Courtesy www.enchantedlearning.com