

Quick Reference - Objects in the skies

Asteroid:

A small planetary body in orbit around the Sun, usually from a belt between the orbits of Mars and Jupiter (but also many from beyond the orbit of Neptune [Kuiper Belt Objects]). Larger than a meteoroid (50m) but smaller than a planet.

Black Hole:

A black hole is a region of Spacetime where gravity prevents anything, including light, from escaping. It is called "black" because it absorbs all the light that hits the event horizon, reflecting nothing.

Centaur:

Centaur are an unstable orbital class of minor planets that behave with characteristics of both asteroids and comets.

Cepheid Variable:

A Cepheid is a member of a class of very luminous variable or pulsating stars. The pulses can be anything from a day, to many months. They are used for establishing Galactic and extragalactic distances, by using the variable luminosity and very regular pulsation periods.

Comet:

A relatively small, extra-terrestrial body consisting of a frozen mass of ice and rock, that travels around the sun in a highly elliptical orbit. Can be differentiated from an Asteroid, by its coma.

Constellation:

These are patterns formed by prominent stars within apparent proximity to one another on Earth's night sky. There are 88 standard constellations recognized by the International Astronomical Union (IAU) since 1922. The majority of these go back to the 48 constellations defined by Ptolemy in his Almagest (2nd century AD). The remaining ones were defined in the 17th and 18th century.

Double Stars (Binary, Multiple, Real & Apparent):

A grouping of stars. This grouping can be apparent, where the stars just seem close together, or physical, such as a binary system, which revolve around a common centre of gravity.

Dwarf Planet:

A dwarf planet is a celestial body that (a) is in orbit around the Sun, (b) has sufficient mass for its self-gravity to overcome rigid-body forces so that it assumes a hydrostatic equilibrium (nearly round) shape, (c) has not cleared the neighbourhood around its orbit, and (d) is not a satellite.

Galaxy:

A galaxy is a massive, gravitationally bound system that consists of stars, stellar remnants, an interstellar medium of gas and dust. The word is derived from the Greek "galaxias", literally "milky", a reference to the Milky Way galaxy.

Globular Cluster:

A tight, spherical grouping of hundreds of thousands of old stars.

Kuiper Belt:

The Kuiper belt is a region of the Solar System beyond the planets, extending from the orbit of Neptune (at 30 AU) to approximately 50 AU from the Sun. It is similar to the asteroid belt, although it is far larger - 20 times as wide and 20 to 200 times as massive. Like the asteroid belt, it consists mainly of small bodies, or remnants from the Solar System's formation. While most asteroids are composed primarily of rock and metal, Kuiper belt objects are composed largely of frozen gases.

Meteor:

The visible streak of light produced when a meteoroid.

Meteorite:

The remaining parts of a Meteoroid that has landed on Earth.

Meteoroid:

An object that drifts around our solar system, sized between a grain of sand and about 50m.

Milky Way:

The Milky Way is a barred spiral galaxy 100,000–120,000 light-years in diameter, containing 200–400 billion stars. It is the galaxy that contains the Earth. The Milky Way appears like a band in the sky, is because it is a disk-shaped structure being viewed from inside.

Minor Planet:

A minor planet is an astronomical object in direct orbit around the Sun that is neither a dominant planet nor originally classified as a comet. Minor planets can be dwarf planets, asteroids, trojans, centaurs, Kuiper belt objects, and other trans-Neptunian objects.

Moon:

Any natural satellite of a planet, that shines by the sun's reflected light.

Nebulae:

An interstellar gas cloud.

Neutron Star:

A neutron star is a type of stellar remnant that can result from the gravitational collapse of a massive star during a supernova event. Such stars are composed almost entirely of neutrons, which are subatomic particles without electrical charge. Neutron stars are very hot and typically have a mass between about 1.4 and 3.2 solar masses, but with a corresponding radius of about 12 km. This density is approximately equivalent to the mass of the human population condensed to the size of a sugar cube.

Open Cluster:

A collection of young stars that formed together.

Planet:

A planet is a celestial body that (a) is in orbit around the Sun, (b) has sufficient mass for its self-gravity to overcome rigid-body forces so that it assumes a hydrostatic equilibrium (nearly round) shape, (c) has cleared the neighbourhood around its orbit, and (d) is not a satellite.

Planetoid:

Another term for a minor planet.

Plutoid:

Plutoids are celestial bodies in orbit around the Sun at a semi-major axis greater than that of Neptune that have sufficient mass for their self-gravity to overcome rigid body forces so that they assume a hydrostatic equilibrium (near-spherical) shape, and that have not cleared the neighbourhood around their orbit. Satellites of plutoids are not plutoids themselves. Naming started when Pluto was downgraded to a Dwarf Planet.

Protostar:

A protostar is a large mass that forms by contraction out of the gas of a giant molecular cloud in the interstellar medium. The protostellar phase is an early stage in the process of star formation. For a one solar-mass star, it lasts about 100,000 years.

Pulsar:

A rapidly rotating neutron star that emits energy along its gravitational axis. It is an extremely dense collapsed star where the electrons have been forced into the protons.

Quasar:

An unusually bright object found in the remote areas of the universe. They release incredible amounts of energy and are among the oldest and farthest objects in the known universe.

Satellite:

A smaller body attending and revolving round a larger one; commonly a secondary planet round a primary one.

Sun:

The star at the centre of our solar system.

Supernova (Remnants):

Supernovae are extremely luminous and cause a burst of radiation that often briefly outshines an entire galaxy, before fading from view over several weeks or months. During this short interval a supernova can radiate as much energy as the Sun is expected to emit over its entire life span. The explosion expels much or all of a star's material at a velocity of up to 30,000 km/s, driving a shock wave into the surrounding interstellar medium. This shock wave sweeps up an expanding shell of gas and dust called a supernova remnant. Nova comes from the latin, meaning New - as in New Star in the sky.

Trojan:

A trojan is a minor planet or natural satellite (moon) that shares an orbit with a planet or larger moon, but does not collide with it because it orbits around one of the two Lagrangian points of stability (trojan points).

UFO:

Yes they are real! ANY object in the sky that cannot be identified, **IS** an - UNIDENTIFIED FLYING OBJECT.

Variable Star:

A star is classified as variable if its apparent magnitude as seen from Earth changes over time, whether the changes are due to variations in the star's actual luminosity, or to variations in the amount of the star's light that is blocked from reaching Earth. Variables are one of two types: **Intrinsic variables**, whose luminosity actually changes; for example, because the star periodically swells and shrinks. **Extrinsic variables**, whose apparent changes in brightness are due to changes in the amount of their light that can reach Earth; for example, because the star has an orbiting companion that sometimes eclipses it.