

PLANET CATEGORIZATION: CELESTIAL BODIES DATA SHEET

PLANETS AND DWARF PLANETS

Name	Diameter (km)	Mean Distance to Sun (millions of km)	Mass (kg)	Composition	Known Moons	IAU Category (Late 2006)	Location
Mercury	4,880	57.9	3.30×10^{23}	Rock	0	Planet	Inner Solar System
Venus	12,100	108.2	4.87×10^{24}	Rock	0	Planet	Inner Solar System
Earth	12,756	149.6	5.97×10^{24}	Rock	1	Planet	Inner Solar System
Mars	6,787	227.9	6.42×10^{23}	Rock	2	Planet	Inner Solar System
Ceres	950	413.7	9.5×10^{20}	Rock	--	Dwarf Planet	Main Asteroid Belt
Jupiter	143,200	778.3	1.9×10^{27}	Gas	63	Planet	Outer Solar System
Saturn	120,000	1,427	5.68×10^{26}	Gas	56	Planet	Outer Solar System
Uranus	51,800	2,871	8.68×10^{25}	Gas	27	Planet	Outer Solar System
Neptune	49,528	4,497	1.02×10^{26}	Gas	13	Planet	Outer Solar System
Pluto	2,330	5,913	1.27×10^{22}	Rock & Ice	3	Dwarf Planet, Trans-Neptunian Object	Kuiper Belt*
Eris	3,000	6,000 to 15,000	?	?	1	Dwarf Planet, Trans-Neptunian Object	Scattered Disc**

OTHER CELESTIAL BODIES

Charon	1,184	5,913	1.90×10^{21}	Rock & Ice	--	Satellite, Trans-Neptunian Object	Kuiper Belt
Sedna	1,700	10,000 to 150,000	$2-6 \times 10^{21}$	Rock & Ice ?	--	Trans-Neptunian Object	Kuiper Belt?
Moon	3,476	149.6	7.34×10^{22}	Rock	--	Satellite	Inner Solar System
Comet Halley	--	100 to 5,000		Ice and Dust	--	Comet	Inner Solar System to Outer Solar System
Theoretical Earth-like Exoplanet	13,000	150 (to its star)	6×10^{24}	Rock	0	--	Inner Solar System

* The Kuiper Belt is a region of objects found beyond Neptune. Objects in this belt are about 4.5 to 7.5 billion km from the Sun.

** The Scattered Disc is a region of objects found beyond the Kuiper Belt.

Sources: NASA, Bill Arnett

PLANET CATEGORIZATION: ARE THESE PLANETS?

Use these celestial bodies to test a planetary definition

Name	Diameter (km)	Mean Distance to Sun (millions of km)	Mass (kg)	Composition	Known Moons	Category (Late 2006)	Location
Charon	1,184	5,913	1.90×10^{21}	Rock & Ice	--	Satellite, Trans-Neptunian Object	Kuiper Belt

Notes: The IAU had considered classifying Charon and Pluto as a "binary planet system" because neither clearly orbits the other. The "center of mass" is found between the two objects, not within one as is usually the case with a planet-satellite system like Earth-Moon.

Sedna	1,700	10,000 to 150,000	$2-6 \times 10^{21}$	Rock & Ice ?	--	Trans-Neptunian Object	Kuiper Belt?
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Notes: Sedna is a likely candidate for the "dwarf planet" designation. Under the current IAU planetary definition, it is possible that dozens of other objects could also be called "dwarf planets."

Moon	3,476	149.6	7.34×10^{22}	Rock	--	Satellite	Inner Solar System
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Notes: The Moon is more massive than other satellites and dwarf planets, but it clearly orbits the Earth.

Comet Halley	--	100 to 5,000		Ice and Dust	--	Comet	Inner Solar System to Outer Solar System
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Notes: The core of Halley's comet has a small diameter and it orbits the sun with a "short" 76-year-long period (on average).

A Theoretical Earth-like Exoplanet	13,000	150 (to its star)	6×10^{24}	Rock	0	--	Inner Solar System
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Notes: Of the 200 "exoplanets" recently found by astronomers in other star systems, most are more massive than the Earth. The August 2006 IAU decision does not apply to objects outside of the solar system. In 2003, the IAU would have called this a "planet."