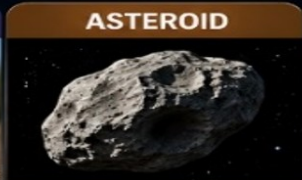


Comet 10P/Tempel 2 - Appearance in Bengaluru sky

Prelims: Current events of national and international importance | Government policies and interventions

Why in News?

COMET vs METEOR vs METEORITE vs ASTEROID Know the Differences				
	COMET	METEOR	METEORITE	ASTEROID
				
	Icy bodies that orbit the Sun and develop a glowing coma and tail near the Sun.	The streak of light seen when a space rock burns up in Earth's atmosphere.	A space rock that survives its journey through the atmosphere and lands on Earth.	Rocky or metallic bodies that orbit the Sun, mostly found in the asteroid belt.
📍 DEFINITION	Icy, dusty bodies that release gas and dust to form a coma and tail.	The visible streak of light caused by a meteoroid burning in the atmosphere.	A meteoroid that reaches the ground without burning up completely.	Rocky or metallic objects that orbit the Sun; do not produce a coma or tail.
🧪 COMPOSITION	Ice, dust, rock, and frozen gases.	Usually small pieces of rock or dust (meteoroids).	Rocky or metallic; similar to asteroids or comets.	Mostly rock and metal; little or no ice.
📍 LOCATION	Mostly from the Kuiper Belt and Oort Cloud.	Occurs in Earth's atmosphere.	Lands on Earth's surface.	Mainly in the Asteroid Belt between Mars and Jupiter.
☀️ APPEARANCE	Bright coma and tail when near the Sun.	A brief streak of light (shooting star).	No light in the sky; found as a rock on ground.	Looks like a small star (point of light) in the sky.
➡️ MOVEMENT	Orbits the Sun in long, elliptical paths.	Very fast (tens of thousands of km/h) through atmosphere.	Falls to Earth after surviving atmospheric entry.	Orbits the Sun; much slower than meteors.
📏 SIZE	From a few kilometers to tens of kilometers.	Usually tiny (grain-sized to pebble-sized).	From small pebbles to large boulders.	From meters to hundreds of kilometers.
🌟 EXAMPLE	Halley's Comet, Hale-Bopp	Perseid meteor, Shooting star	Tunguska meteorite, Hoba meteorite	Ceres, Vesta, (99942) Apophis
💡 IN SIMPLE WORDS: Comet makes the tail, Meteor makes the streak, Meteorite makes it to the ground, Asteroid stays in space and orbits the Sun.				

- It was last visible from Earth five-and-a-half years ago.
- It was discovered in the year 1873.
- It completes one orbit around the Sun every 5.5 years. Its last sighting was in 2021.
- Comet 10P/Tempel 2 is a periodic comet.
- Although it returns every 5.5 years, it is not always easily visible from Earth.
- Its visibility depends on how close it comes to Earth during that return, and its position relative to the Sun in our sky.
- Depending on how bright it becomes during that apparition, some returns are excellent, while others are much less favourable.
- When the comet is closest to the Sun, the Sun's heat causes more ice to

vaporise.

- This creates the comet's coma (the fuzzy cloud around the nucleus) and tail, making it brighter and easier to observe.
- It is best to observe the comet from a dark location away from city lights on a clear, moonless night.

Asteroids, Comets, Meteors & Meteoroids: What's the difference?

Asteroids, comets and the meteors that sometimes come from them are leftovers from the formation of our Solar System 4.6 billion years ago.



Meteoroid:

much smaller rocks or particles in orbit around the Sun.



Meteor:

If a meteoroid enters the Earth's atmosphere and vaporizes, it becomes a meteor, which is often called a shooting star.



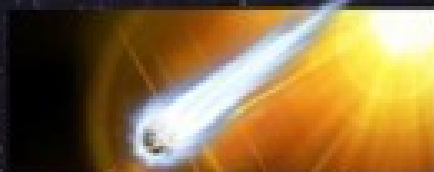
Meteorite:

If a small asteroid or large meteoroid survives its fiery passage through the Earth's atmosphere and lands on Earth's surface, it is then called a meteorite.



Asteroid:

These rocky fragments are leftovers from the beginning of our solar system.



Comets:

Cosmic snowballs of gas and dust that make sweeping orbits around our sun.



estimates there are currently 839,880 known asteroids and 3,596 known comets.

[The Hindu | Comet 10P/Tempel 2](#)

