

Asteroid 2024 YR4

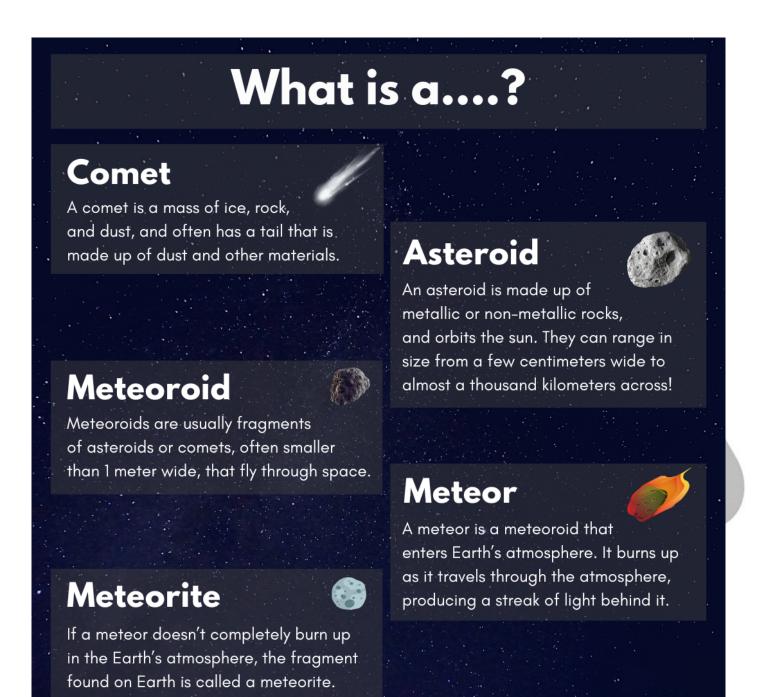
Source: TH

The <u>National Aeronautics and Space Administration (NASA)</u> has updated its assessment of <u>Asteroid 2024 YR4</u>, initially considered a potential Earth threat, now indicating a **3.8% chance** of it colliding with the **Moon** on **December 22, 2032**.

- This collision with the Moon could result in the formation of a **large crater** and pose a significant risk to **lunar missions**.
- Asteroid 2024 YR4: It was first discovered in December 2024, by the <u>Asteroid Terrestrial-impact Last Alert System (ATLAS) telescope</u> in Chile.
 - It is a <u>Near-Earth asteroid (NEA)</u> with an orbit that brings it within 1.3 Astronomical Units (1 AU is the average distance from Earth to the Sun) of Earth.
 - It is estimated to be 53-67 meters wide, about the size of a 15-story building.

Asteroid:

- About: Asteroids are rocky, airless remnants from the early solar system, formed about 4.6 billion years ago.
- Location & Size: Mostly found in the Asteroid Belt between Mars and Jupiter, some also follow Earth-crossing orbits. They range in size from a few meters to hundreds of kilometers.
- Classification: They are classified as Main Belt (between Mars and Jupiter), Trojans (sharing a planet's orbit at <u>Lagrangian points</u>), and <u>Near-Earth Asteroids</u> (whose orbits bring them close to or intersect Earth's path).
- Initiatives Related to Monitoring of Near-Earth Objects:
 - ESA's Hera Mission
 - NETRA Project & Space Junk



Read More: Asteroid 2024 YR4, Double Asteroid Redirection Test (DART) Mission

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