

DART Mission

March 10, 2026 • vajiramandravi.com



DART Mission Latest News

A groundbreaking study has revealed that NASA's DART Mission not only altered the motion of a small asteroid within its system but also slightly changed the orbit of the entire asteroid pair around the Sun.

About DART Mission

- DART (**Double Asteroid Redirection Test**) was a **NASA space probe** dedicated to investigating and demonstrating one method of **asteroid deflection by changing an asteroid's motion** in space through **kinetic impact**.
- It was **launched** on November 24, **2021**.
- It was the **first-ever space mission** to demonstrate **asteroid deflection by a kinetic impactor**.
- It was the **world's first planetary defense technology demonstration**.
- It was aimed at finding out whether or not we could **redirect the trajectory of a near-Earth object** simply by **crashing into it**.

- The **target** of DART was a **binary asteroid system** consisting of a **smaller moonlet, Dimorphos, orbiting** around a **larger asteroid, Didymos**.
 - Because the two were **linked by gravity**, the **theory went, knocking** little **Dimorphos off-kilter would affect both objects**.
- DART spacecraft **successfully collided with Dimorphos** on 26 September **2022**.
 - Weighing in at over 1,000 pounds, the spacecraft's collision with Dimorphos was as energetic as an explosion of over three tons of TNT.
 - DART's collision **shortened the orbit** of the **asteroid by around 33 minutes**.
 - The collision **also slightly altered the orbit of the Didymos system around the Sun**.
 - Researchers found that the **solar orbital period changed** by about 0.15 seconds.
- The mission was a success. **For the first time**, humans have successfully **demonstrated** the **ability to change the motion of an asteroid** in space.

Source: **MC**

Source: <https://vajiramandravi.com/current-affairs/what-is-the-dart-mission/>

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