

# Asteroid 2018VP1

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**In News:** According to the Center for Near Objects Studies at NASA's Jet Propulsion Laboratory, an asteroid named 2018VP1 that is on a collision course with Earth could come very close to the planet.

## About Election Day Asteroid

- The Election Day Asteroid is dubbed as Asteroid 2018VP1
- The asteroid is expected to collide the planet earth on a day before the US will vote in its presidential elections, hence dubbed as the 'Election Day Asteroid'.
- It was first discovered at the Palomar Observatory in California's San Diego County in 2018.
- It has a diameter of 2 metres, around the size of a small automobile, and would likely burn up into an impressive fireball after entering the Earth's atmosphere before reaching the ground.
- Discovered- The asteroid was first discovered at the Palomar Observatory in California's San Diego County two years ago
- Asteroid 2018VP1 is very small (approx. 6.5 feet) and poses no threat to Earth.
- According to NASA, it currently has a 0.41% chance of entering our planet's atmosphere, but if it did, it would disintegrate due to its extremely small size.

## NASA space missions

- Several NASA space missions have also flown by and observed asteroids. The NEAR Shoemaker spacecraft landed on Eros, an asteroid near Earth, in 2001.
- The Dawn spacecraft traveled to the asteroid belt in 2011 to orbit and study the second largest object there, Vesta.
- In 2016, NASA launched the OSIRIS-REx spacecraft to

study an asteroid near Earth named Bennu.

## **Deflecting Asteroids Mission**

### **Asteroid Impact and Deflection Assessment (AIDA)**

- This includes NASA's Double Asteroid Redirection Test (DART) mission and the European Space Agency's (ESA) Hera.
- The mission's target is Didymos, a binary near-Earth asteroid, one of whose bodies is of the size that could pose the most likely significant threat to Earth.

### **Double Asteroid Redirection Test (DART) Mission**

- NASA in 2018 has announced that it had started the construction of DART, scheduled to be launched in 2021
- Aim to slam into the smaller asteroid of the Didymos system in 2022.

### **Hera mission**

- It is the asteroid deflection mission of European Space Agency (ESA) that is scheduled to be launched in 2024 to measure the impact crater produced by the DART collision and study the change in the asteroid's orbital trajectory.
- It will arrive at the Didymos system in 2027

### **What is Asteroid?**

- Apart from the stars, planets and satellites, there are numerous tiny bodies which also move around the sun. These bodies are called asteroids. They are found between the orbits of Mars and Jupiter.
- Asteroids are left over from the formation of our solar system. Our solar system began about 4.6 billion years ago when a big cloud of gas and dust collapsed.

### **Features**

- Asteroids aren't all round like planets. They have jagged and irregular shapes.
- Some asteroids are hundreds of miles in diameter, but many more are as small as pebbles.
- Most asteroids are made of different kinds of rocks, but some have clays or metals, such as nickel and iron

