

NEA Scout spacecraft

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In news- NASA recently announced that its new spacecraft NEA Scout, has completed all required tests and has been safely tucked inside the Space Launch System (SLS) rocket.

About the Near-Earth Asteroid Scout (NEA Scout) spacecraft-

- NEA Scout is one of several payloads that will hitch a **ride on Artemis I**, which is expected to be launched in November, 2021.
- Artemis I will be an uncrewed testflight of the Orion spacecraft and SLS rocket.
- It is a miniaturized spacecraft, known as a **CubeSat**, developed under **NASA's Advanced Exploration Systems Program**.
- CubeSats are miniaturized spacecraft with great potential for space-based science, exploration, engineering support, Earth observation, and relay communication.
- It is about the size of a big shoebox.
- The NEA Scout will serve as a robotic reconnaissance mission to fly by and return data from an asteroid representative of near-Earth asteroids.
- NEA Scout will **use stainless steel alloy booms and deploy an aluminum-coated sail** measuring 925 square feet.
- The spacecraft will take about two years to cruise to the asteroid and will be about 93 million miles away from Earth during the asteroid encounter.
- NEA Scout is equipped with special cameras and can take pictures ranging from 50 cm/pixels to 10 cm/pixels.
- It can also process the image and reduce the file sizes before sending them to the earth-based Deep Space Network via its medium-gain antenna.
- It will deploy from the Space Launch System after the

Orion spacecraft is separated from the upper stage.

- It will be America's first interplanetary mission using a **special solar sail propulsion**.