

FAQs

NASA's Ingenuity Mars Helicopter

Q. Why is it in News?

Recently, NASA's miniature robot helicopter Ingenuity performed a successful takeoff and landing on Mars. It was the first powered, controlled flight on another planet.

- The first powered flight on Earth was achieved by the Wright brothers in 1903 in Kitty Hawk, North Carolina.

Q. What are some key details about ingenuity?

- Ingenuity is the first helicopter to fly on Mars.
- It was carried by NASA's rover called Perseverance that was launched in July 2020.
- Ingenuity is able to fly using counter-rotating blades that spin at about 2,400 rpm (Rotations Per Minute).
- It has a wireless communication system, and is equipped with computers, navigation sensors, and two cameras.
- It is solar-powered, able to charge on its own.

Q. What are missions of the Helicopter?

- The helicopter's mission is experimental in nature and completely independent of the rover's science mission.
- It will help collect samples from the surface from locations where the rover cannot reach.

Q. Why is this flight so important?

- Its performance during these experimental test flights will help inform decisions about small helicopters for future Mars missions where they can perform a support role as robotic scouts, surveying terrain from above, or as full standalone science craft carrying instrument payloads.

Q. What are some details about NASA's Perseverance Rover?

- Perseverance landed at the Jezero Crater (an ancient river delta that has rocks and minerals that could only form in water) of Mars in February 2021.
- It will remain on the Red Planet for about two years and look for finding past signs of life.
- The rover is designed to study signs of ancient life, collect samples that might be sent back to Earth during future missions and test new technology that might benefit future robotic and human missions to the planet.