Dragonfly Mission

The National Aeronautics and Space Administration's (NASA) Dragonfly mission, (which will be launched in 2026 and land in 2034) plans to fly a drone copter to **Saturn's largest moon Titan** in search of the building blocks of life.

- Dragonfly mission will study whether the moon of Saturn (Titan) could now be, or once was, home to life.
- Dragonfly will fly to dozens of promising locations on Titan looking for **prebiotic chemical** processes common on both Titan and Earth.
- This will be the first time Nasa will fly a **multi-rotor vehicle** for science on other planet.
    - Multi-rotor vehicle would have eight rotors (moving component of an electromagnetic system in the electric motor, electric generator, or alternator) and will fly like a large **drone.**
- Dragonfly will explore diverse environments from **organic dunes** (hill of loose sand built by the flow of water or air) to the floor of an impact crater where liquid water and complex organic materials (key to life)once existed together (possibly tens of thousands of years).
- The craft will land first at the equatorial **"Shangri-La" dune,** exploring the region in short trips before building up to longer "leapfrog" flights of five miles (8 kilometers).
- It will investigate the Titan's **atmospheric and surface** properties and it's subsurface ocean and liquid reservoirs and will also search for chemical evidence of past life.

Titan

- Titan is the **largest moon** of Saturn and the second largest moon in our solar system.
- It has liquid rivers, lakes, and seas on its surface (though these contain hydrocarbons like methane and ethane, not water).
- Titan's atmosphere is made mostly of **nitrogen**, like Earth's, but is four times denser.
- Unlike Earth, it has **clouds and rain of methane.**
- It is 886 million miles (1.4 billion kilometers) away from the Sun, about 10 times farther than Earth.
- Because it is so far from the Sun it's **surface temperature** is (-179 degree Celsius).
- It's **surface pressure** is also 50% higher than Earth.