Sub-orbital space flight

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In news- Recently, a six member crew aboard Virgin Galactic's VSS Unity spaceship completed a brief trip to the "edge of space" which is known as Suborbital Flight.

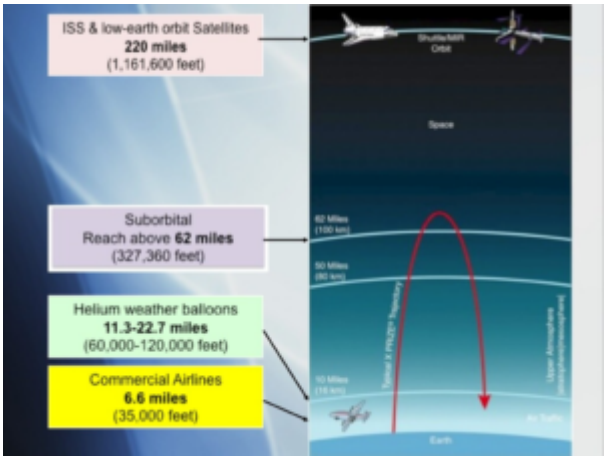
About Suborbital Space Flight-

- Virgin Group founder Richard Branson and five others undertook a brief trip to the "edge of space", taking off on the VSS Unity spaceship from New Mexico and **reaching an altitude of 85 km from Earth before returning**.
- This trip is called a **"suborbital flight".**
- Branson's flight was first carried off the ground by a larger aeroplane to an altitude of around 15 km.
- From here, the vehicle blasted off the plane, achieving a height of around 85 km, where it momentarily reached zero vertical velocity.
- These are suborbital flights, because **they will not be travelling fast enough to orbit Earth once they reach there.**

What is Suborbital?

- Suborbital means that while these **vehicles will cross the ill-defined boundary of space**, they will not be going fast enough to stay in space once they get there.
- If a spacecraft – or anything else, for that matter reaches a speed of 28,000 km/h or more, instead of falling back to the ground, it will continuously fall around the Earth.
- That continuous falling is what it means to be in orbit and is how satellites and the Moon stay above Earth.
- Anything that launches to space but **does not have sufficient horizontal velocity to stay in space**, like these rockets – comes back to Earth and therefore flies

a suborbital trajectory.



The Suborbital flights would be far less expensive than carrying experiments and people to the International Space Station. They could also be an alternative to parabolic flights in aeroplanes that space agencies currently use to simulate zero gravity.

More information- **Unity 22 mission – JournalsOfIndia**