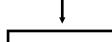


Tools Used to Study the Universe

BRAIN POP Satellites & ISS





Probes

Satellites

Telescopes

Space Shuttle

DEFINITION:

A probe is a spacecraft that travels through space to collect science information. Probes do not have astronauts Probes send data back to Earth for scientists to study.

DEFINITION:

*Any object that revolves around another object *A moon, planet, or machine that orbits a planet or star *GPS, Cell Phones, TV, Pictures: Weather Distant stars & galaxies

DEFINITION:

*A tool that captures and magnifies light that allows you to see far away things in detail (by the use of lenses or mirrors) *Best locations = high up and away from city lights OR in space above the atmosphere *Often have a tool called a SPECTROGRAPH that breaks light into a spectrum

DEFINITION:

*As of 1981, what NASA used to deliver people and supplies to space *Reusable (land like an airplane)

Examples:

- -Voyager 1 & 2 (outer planets, Saturn's rings) -Huygens (explore
- Saturn's moon Titan)
- -Stardust (comet tail) -Deep Impact (Comet)
- -Dawn (asteroid belt)
- -Mariner 10 (Mercury
- & Venus)

Examples:

-International Space Station: Large artificial satellite where people can live and work for long periods of time -Some are geosynchronous: rotate once per day to stay directly over the same area of Earth

Examples: *Hubble Space Telescope (mirrors - reflector) *Optical (lenses &mirrors) Keck Observatory Hawaii NON - Optical *Radio (radio waves - alone or together) Parkes Observatory Australia

*X-Rays, Gamma Rays, Infrared - FERMI in space

Examples:

*Challenger, Discovery, Atlantis, Endeavour, STS#

Landers / Rovers

-Small Robots that explore Mars (Spirit & Opportunity

- -Natural = Earth & Moon
- -Sputnik 1 was 1st
- -Explorer (cosmic rays)
- -TIROS (TV pic of Earth from space)

