

Satellite facts

TYPE OF SATELLITE	PURPOSE	ALTITUDE	INCLINATION	PERIOD	INFORMATION PROVIDED	USES OF INFORMATION
Earth observation satellite	gather data about Earth, eg photography, sea temperatures, volcanic activity ...	low Earth orbit	polar	approximately 90 min	high resolution data at low altitudes	covers all of Earth's surface quickly to give 'current' images
weather satellite (1)	gather global weather details	low Earth orbit	almost polar	approximately 90 min	high resolution data at low altitudes	covers all of Earth's surface quickly to enable accurate forecasting
weather satellite (2)	gather local weather details	geostationary orbit	equatorial	24 h	constant monitoring of weather patterns for the same location	provides information to accurately predict weather patterns in a region
navigational satellite eg GPS	transmit radio time signals to mobile receivers on the ground to determine their exact location	low Earth orbit	various inclinations, usually 55° to equator	approximately 90 min	intersecting radio time signals from coordinated satellites	provides an accurate global positioning system for navigational purposes
astronomical satellite, eg Hubble Space Telescope	observation of planets, galaxies and distant space objects	low Earth orbit	almost equatorial	approximately 90 min	astronomical observations and measurements, free of distortion by Earth's atmosphere	improves scientific research by providing high resolution images of astronomical objects
communication satellite	provide tele-communications with a specific region of Earth	geostationary orbit	equatorial	24 h	communication with a specific region of Earth	communication and transfer of information with a specific region of Earth
communication satellite networks, eg telephone and computer networks	provide tele-communications with all parts of Earth, using multiple satellites	low Earth orbit	various	approximately 90 min	communication with all parts of Earth	global communication and transfer of information