Rockets and Satellites

A Rocket is a space vehicle which obtains thrust from a rocket engine to enable it to move into space, it operate by the combustion of its contents thereby providing thrust as the burnt gases are ejected at a very high velocity.

The Rockets consists of i) the body, which is a hollow cylinder, the launch lug, the fins (which provide stability), the engine holder, the rocket engine, the nose cone, the recovery device (used to return the rocket to the ground after it has reached its highest point, tail nozzle.

Mode of Operation

Gases burnt within the combustion chambers of the rocket engine are expelled downward through the exhaust or tail nozzle at a very high velocity, the rocket is given a thrust by an equal and opposite momentum, and it then moves upward.

Uses Of Rockets

1) Rockets carry robotic probes to study other planets
2) They carry artificial satellites such as weather and communication satellites
3) They are used to carry astronauts to space
4) They are used to carry portable laboratories to perform scientific research

Satellites

These are bodies that move in orbits round a planet or an astronomical body, there are natural and artificial satellite

Parts of Satellites and their functions

1) **Satellite transponder**: This does frequency conversion
2) **Antenna subsystems**: The antennas help receive and transmit the signals from the earth and towards earth respectively.
3) **Solar cell and battery backup:** It keeps satellite running in space. Solar cell converts solar energy to the electrical energy for satellite operation. During sun light conditions it is very useful. During the absence of sun light battery will take care of providing power to the satellite for its operation.

Uses of Satellites

1) For communication
2) For photography
3) For mapping
4) For geographic information system and geographical position system
5) For weather forecast
6) For defense