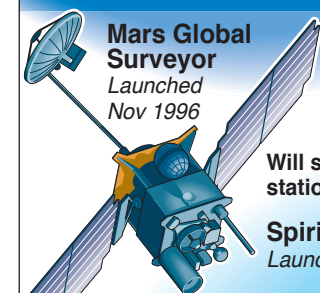


Mars – the not so lonely planet

2004 will be a bumper year for Martian research, with three orbiting craft and three robots exploring the planet's surface. Europe's *Mars Express* will join NASA's *Global Surveyor* and *Odyssey* and the *Beagle 2* lander will be followed by twin American rovers, *Spirit* and *Opportunity*



Mars Global Surveyor

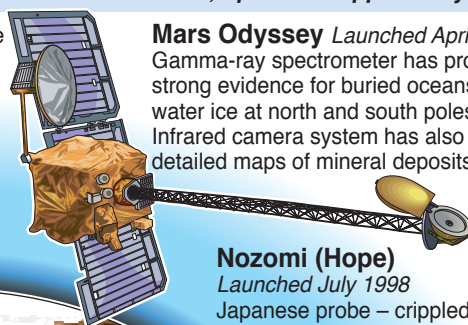
Launched
Nov 1996

Global Surveyor has sent back more than 130,000 high-resolution images to date. Significant findings include evidence of possibly recent liquid water at Martian surface

Will serve as communications relay station for *Spirit* and *Opportunity* rovers

Spirit, Opportunity

Launched June, July 2003

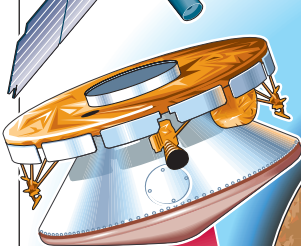


Mars Odyssey

Launched April 2001
Gamma-ray spectrometer has provided strong evidence for buried oceans of water ice at north and south poles. Infrared camera system has also provided detailed maps of mineral deposits

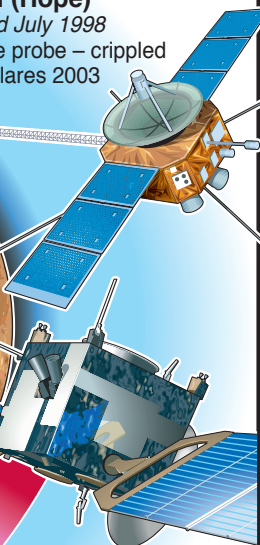
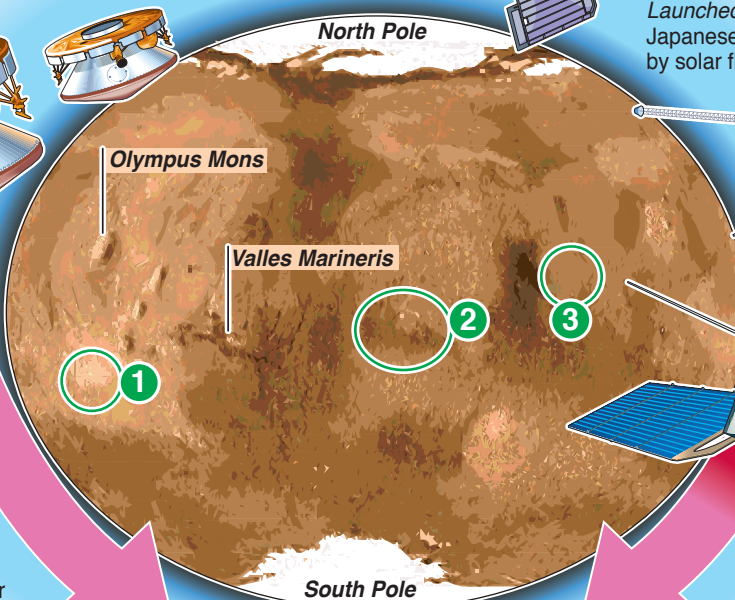
Nozomi (Hope)

Launched July 1998
Japanese probe – crippled by solar flares 2003



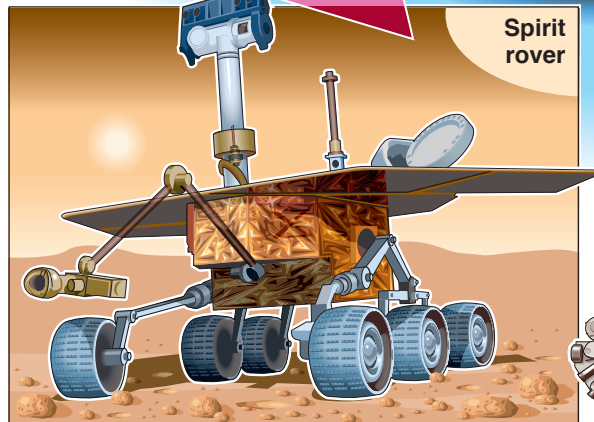
Landing sites:

1. **Gusev Crater** – impact crater which may once have held a lake
2. **Terra Meridiani** – contains large deposits of hematite, a mineral typically formed in standing water



Mars Express

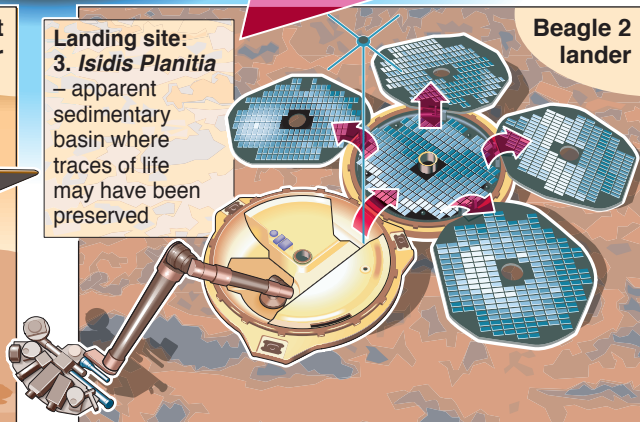
Launched June 2003



Spirit rover

Landing site:

3. **Isidis Planitia** – apparent sedimentary basin where traces of life may have been preserved



Beagle 2 lander