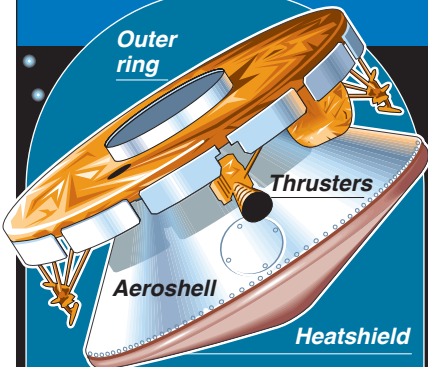


# Twin rovers head for Red Planet



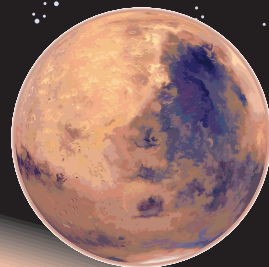
**Spacecraft:** Protective shell – aluminium honeycomb between graphite epoxy sheets, with phenolic heat dissipation layer

Two robotic rovers will blast off for Mars aboard Delta II rockets. Once on the planet's surface they will search for signs of water – and the possibility that life once existed on the planet

Seven-month voyage culminates in six-minute descent into Martian atmosphere

① At around 130km above surface, aeroshell slows from 16,000km/h to 1,600km/h in just one minute

② At 10km above planet's surface, parachute opens to slow descent



③ Heatshield detaches and falls away

④ Lander lowered on *zylon* braid tether. Communications are established by two low-gain antennae on aeroshell

⑤ At 10m-15m above surface, retro-rockets fire from aeroshell to stop descent

⑥ **Vectran** airbags – twice as strong as Kevlar – inflate to entirely surround lander

⑦ Lander and airbags detach from parachute and drop to ground, bouncing on impact

⑧ Airbags deflate and lander "petals" open to right the stowed vehicle

## Mars Rover

On landing, each vehicle's solar panels open, to provide power for working lifespan of 90 Martian days. Speed: 0.05m/s (maximum), 0.01m/s (typical)

