

The diagram illustrates a three-stage landing sequence for a red and white checkered rocket on a grey, cratered lunar surface. Stage 1, 'Entry', shows the rocket descending from the top left towards the horizon. Stage 2, 'Flip and Attitude Capture', shows the rocket performing a flip in mid-air, with its orientation controlled by 'Pitch' and 'Yaw' axes. Stage 3, 'Terminal Landing Burn', shows the rocket landing vertically at the 'Ideal Landing Location' on the surface. A vertical arrow on the left indicates the direction of gravity as $g = 1.63 \text{ m/s}^2$.

1. Entry

2. Flip and Attitude Capture

3. Terminal Landing Burn

Ideal Landing Location