## Free-fall and projectile motion

| Free-fall | Free-fall (on Earth) | Projectile motion (on Earth) |
| :--- | :--- | :--- |
| Object is subjected only <br> to gravitational force(s) | $\bullet$ Object is near surface of Earth  <br>  Object is subjected only to gravitational force exerted by  <br>  Earth (so $\overrightarrow{\mathbf{a}}=9.8 \frac{\mathrm{~m}}{\mathrm{~s}^{2}} \overrightarrow{\mathbf{u}}_{\text {DOWNWARD }}$ )  |  |
|  |  |  |

- $v_{\text {HORIZ }} \neq 0$


