

PHY100S - The Magic of Physics - Class 4

"Nature and Nature's laws lay hid in night;
 God said Let Newton be! and all was light."
 -- Pope's Epitaph for Newton

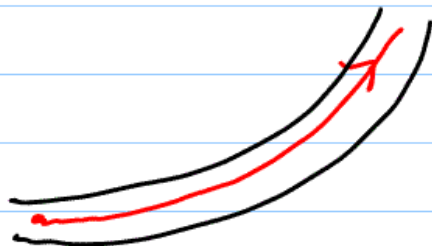
1 kg gold. Near Earth's
 surface.

$$\begin{aligned} \text{Weight} = F &= ma = mg \\ &= 1 \text{ kg} \times 9.8 \text{ m/s}^2 \\ &= \boxed{9.8 \text{ N}} \end{aligned}$$

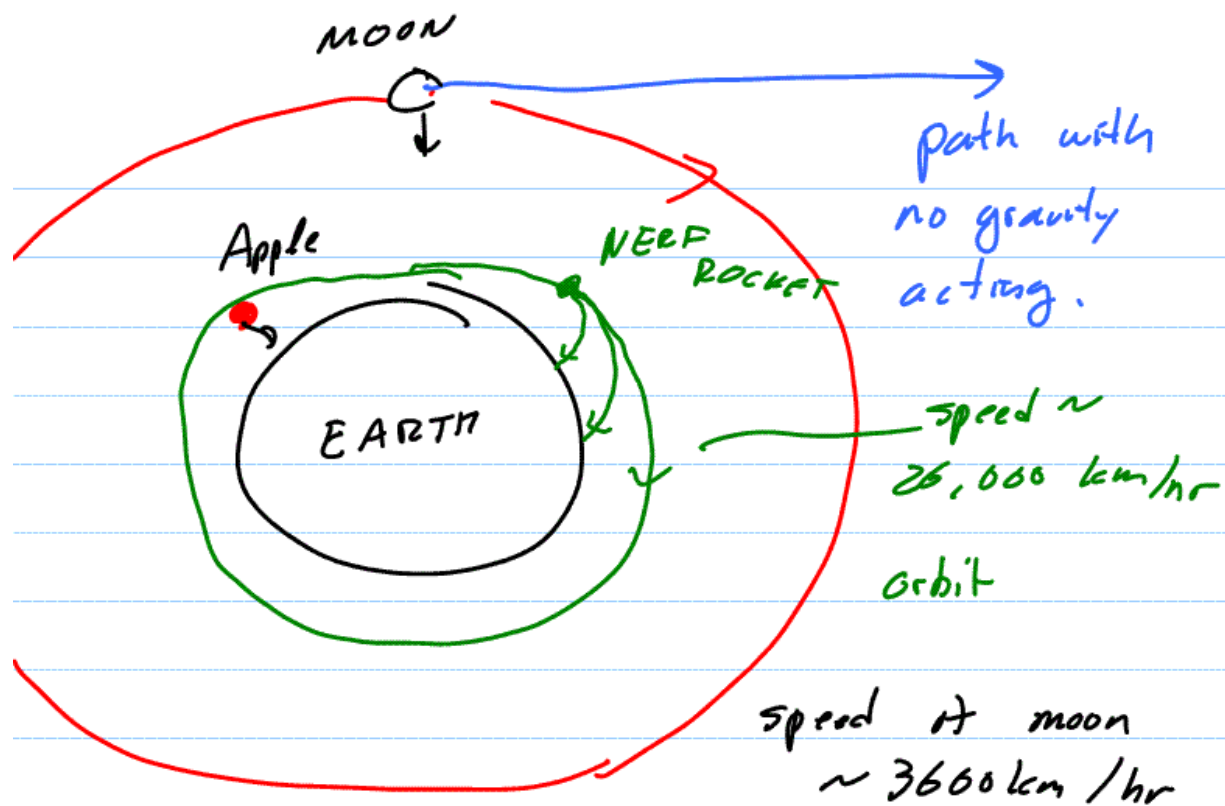
§ 5.1 - Idea of Gravity

Newton's 2nd Big Contribution

Worldview rocked society



car - moving
 at const. 100 km/hr



Same laws here \ddagger in the heavens.

\rightarrow million words on alchemy
 "As above, so below."

§ 5.2 - Law of Gravity

Near Earth

1 kg

10 kg

weights

9.8 N

98 N

