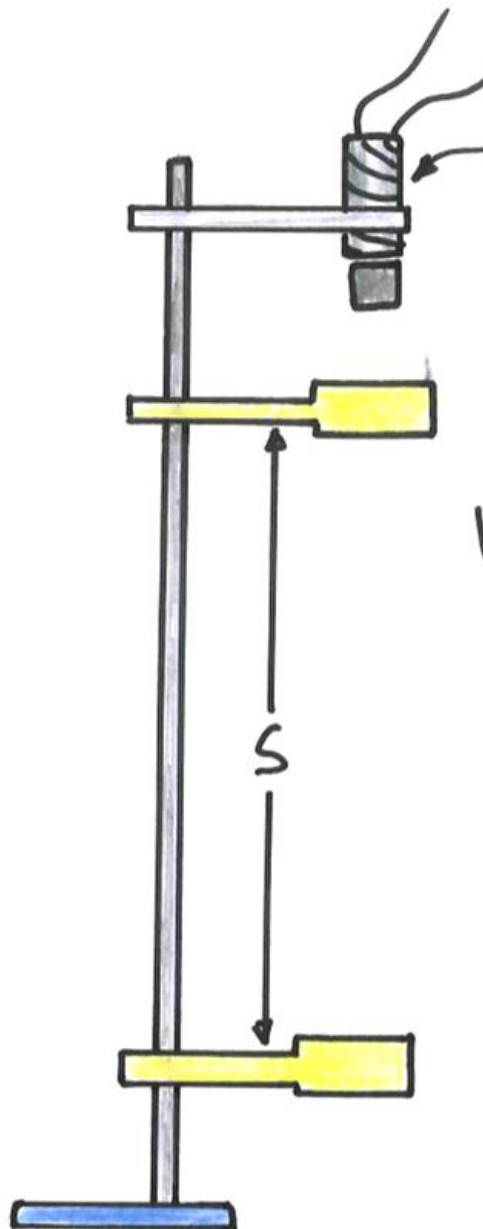


# A Level Physics Online

## Measuring $g$ using a Free Fall Method

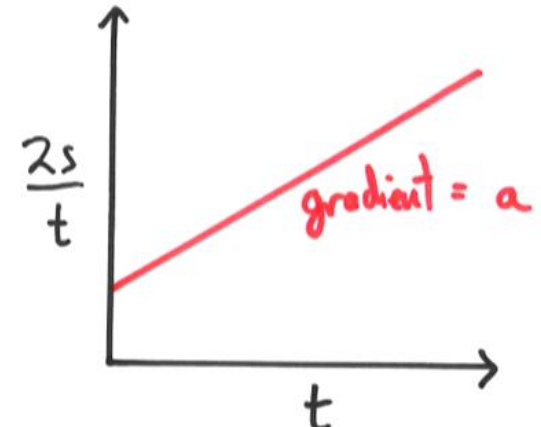


electromagnet

light gates

$s$

Beware falling objects!

$$s = ut + \frac{1}{2} at^2$$
$$2s = 2ut + at^2$$
$$\frac{2s}{t} = 2u + at$$
$$\frac{2s}{t} = at + 2u$$
$$y = mx + c$$


$\frac{2s}{t}$

$t$

gradient =  $a$

$$a \approx 9.8 \text{ m s}^{-2}$$
