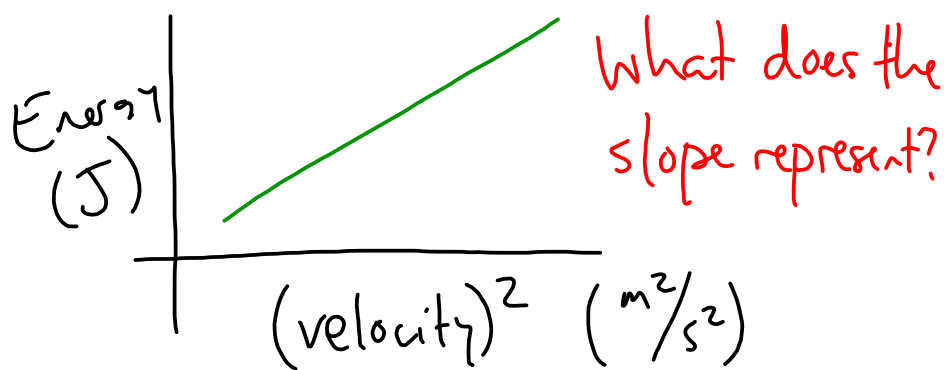
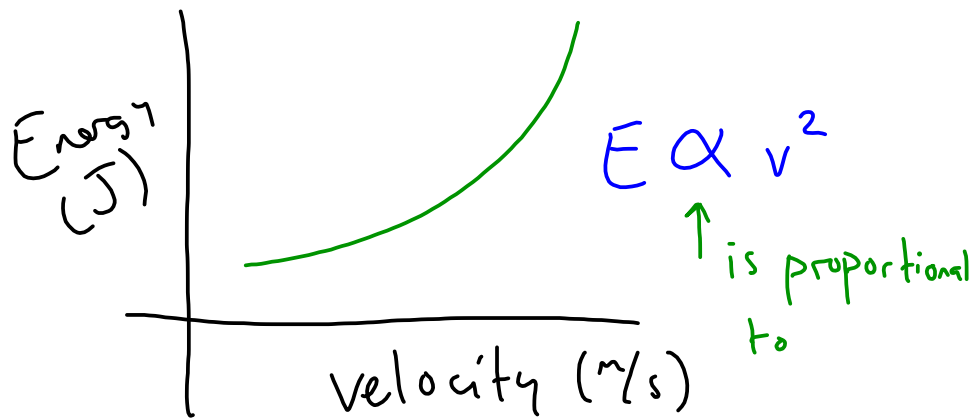


ESTM Transfer Lab 1

- Energy in springs $\rightarrow E_{E1} = \frac{1}{2}k(\Delta x)^2$
- Kinetic Energy \rightarrow energy of moving
 - mass
 - velocity
- Change the displacement of the spring and "measure" velocity
- Data $\rightarrow E_{E1}$, ^{maximum} velocity
- Graph \rightarrow
 - \downarrow y-axis
 - \downarrow x-axis
- Function of best fit and equation

Graphing:

- $R^2 \rightarrow$ "goodness of fit" of function to data
- - Number from \emptyset to 1 .
 - $\emptyset \rightarrow$ fit is terrible
 - $1 \rightarrow$ fit is perfect



$$\text{slope} = \left[\frac{\text{J}}{\frac{\text{m}^2}{\text{s}^2}} \right] = \left[\frac{\text{kg} \cdot \frac{\text{m}^2}{\text{s}^2}}{\frac{\text{m}^2}{\text{s}^2}} \right] = \text{kg}$$

$$\text{J} = \text{kg} \frac{\text{m}^2}{\text{s}^2}$$

$$\text{slope} = \frac{1}{2} m$$

$$\frac{E}{v^2} = \frac{1}{2} m$$

$$E_K = \frac{1}{2} m v^2$$