

Do Now 10-7

What is the everyday definition of work?

What is the physics definition of work?

How do they compare?

Job, paid, class work, hw

Work = Force x distance

Energy: ability or capacity to do work

Unit for Work/Energy

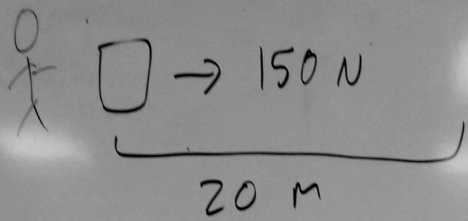
Joules

$$W = F \cdot d$$

$$[J] = [N][m]$$

Joule = Newton-meter

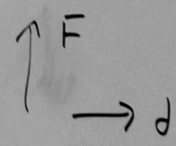
Work is measured in Joules (J)



$$W = F \cdot d = (150 \text{ N})(20 \text{ m}) = 3000 \text{ J}$$

$$1 \text{ kcal (calorie)} = 4,186 \text{ Joule}$$

No work Force & distance are perpendicular



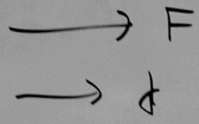
Agenda

Definition of work
Notes, CW 10-7

pg 171

1-4

Positive work Force in same direction as distance



Negative work - Force in opposite direction from distance

