

INTERNAL ENERGY:

"SUM OF KE + PE OF ALL PARTICLES IN A SUBSTANCE."

- RAISE TEMP \rightarrow KE

- CHANGE STATE \rightarrow PE

CHANGING TEMP:

($\Delta\theta$)

$$E = m \times SHC \times \Delta T$$

SPECIFIC HEAT CAP

* IF SOLID MELTS AND TEMP \uparrow ,

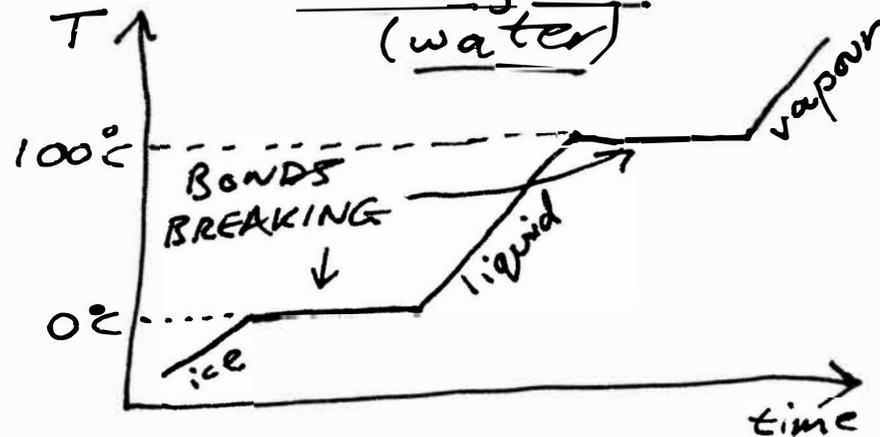
$$E = m ((SHC \times \Delta T) + SLH)$$

* CONDUCTION: HEAT TRANSFERRED THROUGH VIBRATIONS

* CONVECTION: HOT SUBSTANCE RISES, COLD SUBSTANCE FALLS

* RADIATION: INFRA-RED EM WAVE ABSORBED.

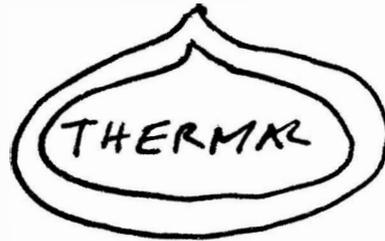
Heating Curve (water)



CHANGING STATE:

$$E = m \times SLH$$

SPECIFIC LATENT HEAT (FUSION/VAPOURISATION)



WHEN CHANGING STATE, ENERGY/HEAT DOES NOT INCREASE KE, ONLY PE BY BREAKING PHYSICAL BONDS (NOT CHEMICAL)