New concept: Entropy (S)

- A measure of "disorder"

- A property of a system (just like p, V, T, U)
  - ➔ related to number of number of different "states" of system

- Examples of increasing entropy:
  - ➔ ice cube melts
  - ➔ gases expand into vacuum

- Change in entropy:
  - ➔ $\Delta S = Q/T$
    - » >0 if heat flows into system (Q>0)
    - » <0 if heat flows out of system (Q<0)