Liquids and Solids

Changes of State

B. Heating Curves

Heat Capacity

\_\_\_\_\_\_\_\_\_\_\_\_ required to raise the temp of 1 gram of a substance by 1°C

Temperature Change

change in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

depends on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Heat of Fusion (ΔHfus)

energy required to melt 1 gram of a substance at its m.p.

Phase Change

change in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_ remains constant

Heat of Vaporization (ΔHvap)

energy required to boil 1 gram of a substance at its b.p.

usually larger than ΔHfus…why?

C. Phase Diagrams

Show the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of a substance at different \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.



What condition is necessary for water to sublime?

D. q = mcΔT Problems

Sample

How much heat energy is needed to raise a 55 g sample of aluminum from 22.4˚C to 94.6˚C ?