

Unit 8: Ch 13 – Phase Changes & Phase Diagrams

PHASES THAT REQUIRE ENERGY:

➤ MELTING (POINT) →

- Heat of Fusion (_____) - _____ required for change.

- **CHANGE:** _____

➤ BOILING (POINT) →

- Heat of Vaporization (_____) - **CHANGE:** _____

➤ SUBLIMATION →

- EX: _____

ENERGY CHANGES:

- Added heat _____ molecules _____ apart from each other.

- **RESULT:** _____ IMF's

- _____ of the substance _____ change _____ the phase changes.

- _____ phase changes are _____ changes.

PHASES THAT RELEASE ENERGY:

➤ **FREEZING (POINT) →**

- **Heat of Solidification (_____) - CHANGE: _____**

➤ **CONDENSATION →**

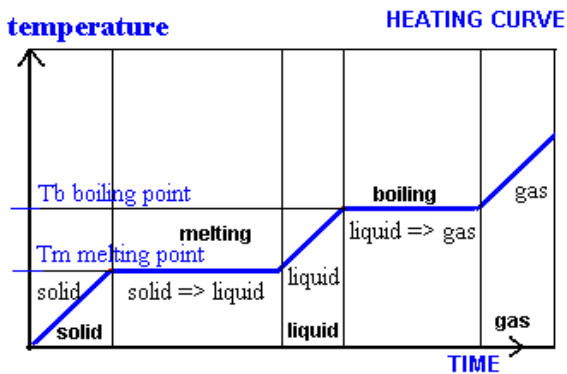
- **Heat of Condensation (_____) - CHANGE: _____**

➤ **DEPOSITION →**

- EX: _____

HEATING & COOLING CURVES:

➤ **HEATING CURVE:**

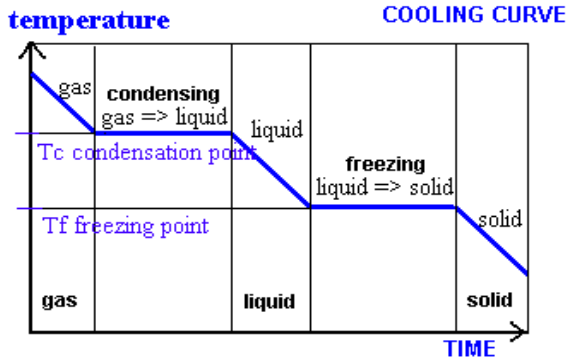


- Temperature remains _____ during the phase change between _____ → _____ and _____ → _____.

- A **heating curve** summarizes the changes of:

- _____ → _____ → _____

➤ **COOLING CURVE:**

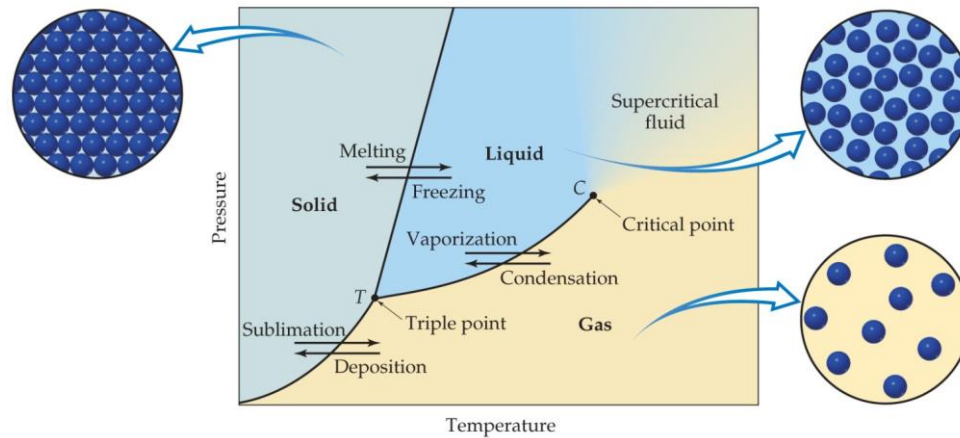


• Temperature remains _____ during the phase change between _____ → _____ and _____ → _____.

• A **cooling curve** summarizes the changes of:

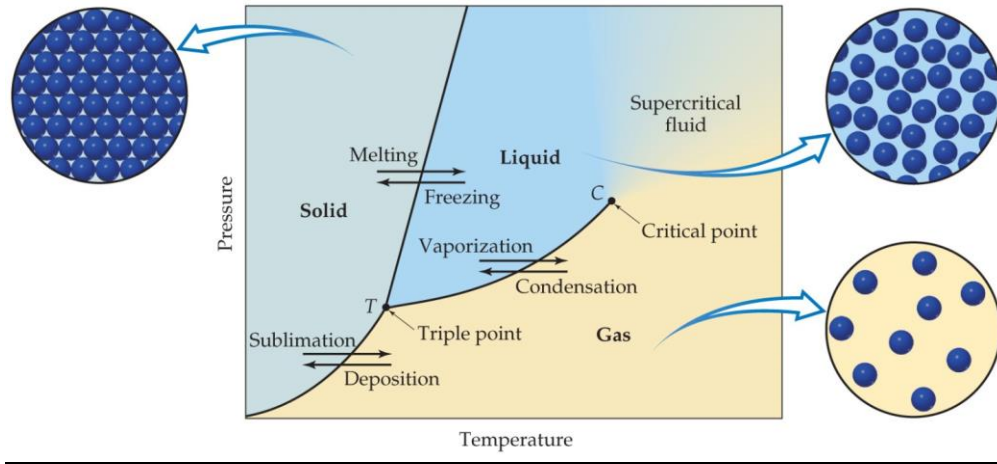
○ _____ → _____ → _____

PHASE DIAGRAMS:

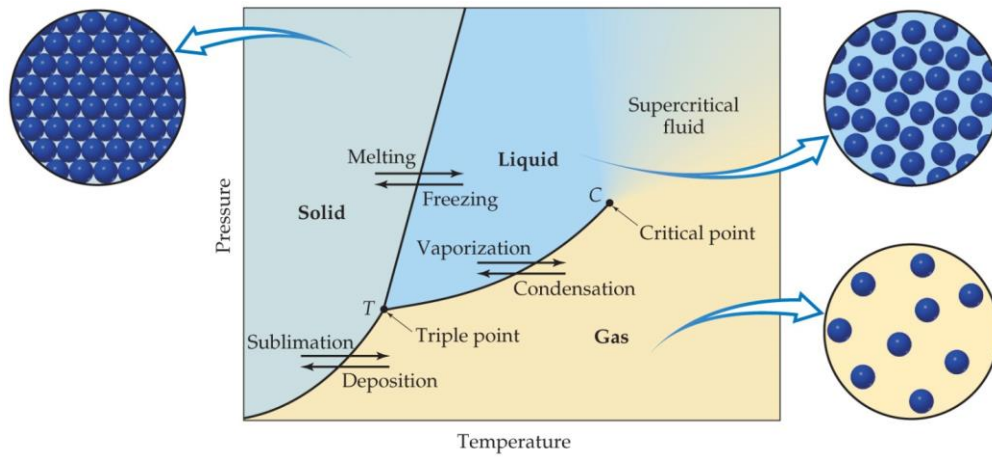


➤ Graph of _____ versus _____ that shows which _____ a substance exists under _____ conditions.

- The circled line in diagram above is the _____ interface.
- It STARTS at the _____, the point at which all _____ states are in _____ (*co-exist*).
- It ENDS at the _____; above this critical temperature and critical pressure, _____ are _____ from each other.
- Each point _____ this line is the _____ point at that _____.



- The circled line in diagram above is the _____ interface.
- Each point _____ this line is the _____ point at that _____.
- _____ melting and boiling point = _____



- Below the _____ point the substance _____ exist as a _____.
- _____ the circled line, _____ and _____ phases are at _____.
- Each point _____ this line is the _____ point at that _____.