Chemistry ~ Ms. Hart **Class:**

HURBAN EASSEMBLY SCHOOL FOR CRIMINAL

Sublimation

Deposition

the change from solid to gas.

the change from gas to solid.

Unit 2: Phase Changes Worksheets

Phases of Matter:

<u>Solid</u>

Matter that has definite volume and shape.

The molecules are packed together tightly and move slowly.

Evaporation

of a liquid.

Boiling

<u>Liquid</u>

Matter that has definite volume but not shape. Since the molecules of a liquid are loosely packed and move with greater speed, a liquid can flow and spread out.

Date:

or

Cations

Anions

Gas

Matter that has no definite volume or shape.

Molecules of a gas are so loosely arranged and move so rapidly that they will fill their container.

Phase Change Descriptions:

the change from solid to

liquid.

Freezing

the change from liquid to solid.

Vaporization

the change from liquid to gas.

liquid.

Condensation

the change from gas to liquid.

vaporization from the surface

vaporization from within as

well as from the surface of a

Fill in the phase changes in the blank provided.



Heating Curve





Time (s)

| Section | What's Happening | # of Phases Present | PE or KE |
|---------|------------------|------------------------|----------|
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Time (minutes) The graph was drawn from data collected as a substance was heated at a constant rate. Use the graph and vocabulary from first page to answer the following questions.

At **point A**, the beginning of observations, the substance exists in a solid state. Material in this

| phase has | volume and | shape. | With each passing minute, |
|----------------------|--|----------------------------|--|
| | is added to the substance. This ca | uses the molecules of the | e substance to |
| | more rapidly which we detect by a | 1 | rise in the substance. At |
| point B, the tempe | erature of the substance is | _°C. The solid begins to _ | At point |
| C, the substance is | completely o | r in a | _ state. Material in this |
| phase has | volume and | shape. The e | nergy put to the substance |
| between minutes 5 | and 9 was used to convert the sub | stance from a | to a |
| | | | |
| Between 9 and | 13 minutes, the added energy inc | reases the | of the substance. |
| During the time fro | m point D to point E , the liquid | is | By point E , the substance |
| is completely in the | phase. Material in | this phase has | volume and |
| | shape. The energy put to the subs | tance between minutes 1 | 3 and 18 converted the |
| substance from a _ | to a | state. Beyond p o | bint E , the substance is still |
| in the | phase, but the molecules a | are moving | as indicated |
| by the increasing te | mperature. | | |