



## ACROSS

- 7 \_\_\_\_\_ tension is an effect within the surface layer of a liquid that causes that layer to behave as an elastic sheet.
- 9 In a mixture of ideal gases, each gas has a \_\_\_\_\_ pressure which is the pressure which the gas would have if it alone occupied the volume.
- 10 The enthalpy of \_\_\_\_\_ is the energy required to transform a given quantity of a substance into a gas, measured at the boiling point of the substance.
- 11 The \_\_\_\_\_ point is the temperature to which a given parcel of air must be cooled, at constant barometric pressure, for water vapor to condense into water.
- 13 \_\_\_\_\_ is the process by which

molecules in a liquid state spontaneously become gaseous without being heated to boiling point.

- 15 A \_\_\_\_\_ is typically an ionized gas, considered to be a distinct state of matter, apart from gases, because of its unique properties.
- 16 A phase \_\_\_\_\_ is a type of graph used to show the equilibrium conditions between the thermodynamically-distinct phases.
- 19 \_\_\_\_\_ is the gas phase component present along with a solid or liquid sample of matter which does not completely fill its container.
- 20 The \_\_\_\_\_ point of a substance is the maximum temperature at which a liquid can remain a liquid at a given pressure.
- 21 A \_\_\_\_\_ is a

curve in the surface of a liquid and is produced in response to the surface of the container or another object.

- 25 \_\_\_\_\_ is the onset of a phase transition in a small region such as with the formation of a bubble or of a crystal from a liquid.
- 26 A \_\_\_\_\_ is a fluid that can freely form a distinct surface at the boundaries of its bulk material.
- 27 A \_\_\_\_\_ of matter is one of the many ways that matter can interact with itself to form a macroscopic, homogenous phase.
- 28 The \_\_\_\_\_ point of a crystalline solid is the temperature range at which it changes state from solid to liquid.

## DOWN

- 1 \_\_\_\_\_ action is the ability of a

substance to draw another substance into it.

- 2 \_\_\_\_\_ is the process whereby a liquid turns to a solid.
- 3 A \_\_\_\_\_ is a set of states of a macroscopic physical system that have relatively uniform chemical composition and physical properties
- 4 \_\_\_\_\_ pressure is the pressure of a gaseous phase in equilibrium with its non-gaseous phases.
- 5 A \_\_\_\_\_ structure is composed of a motif, a set of atoms arranged in a particular way, and a lattice.
- 6 \_\_\_\_\_ solids are a class of solids that have regular or nearly-regular structures, meaning that the atoms in these solids are arranged in an orderly manner

8 \_\_\_\_\_ is the change in matter of a substance to a denser phase, such as a gas to a liquid.

- 12 A \_\_\_\_\_ fluid is any substance at a temperature and pressure above its thermodynamic critical point.
- 14 A \_\_\_\_\_ point specifies the conditions (temperature, pressure) at which the liquid state of the matter ceases to exist.
- 17 A \_\_\_\_\_ solid is a solid in which there is no long-range order of the positions of the atoms.
- 18 A \_\_\_\_\_ curve is a line graph that represents the change of phase of matter, typically from either a gas to a solid or from a liquid to a solid.
- 22 A \_\_\_\_\_ object is in the states of matter characterized by resistance to deformation and changes of volume.

- 23 The \_\_\_\_\_ point of a substance is the temperature and pressure at which three phases (gas, liquid, and solid) of that substance may coexist in thermodynamic equilibrium.
- 24 The enthalpy of \_\_\_\_\_ is the amount of thermal energy which must be absorbed or evolved at the melting point for 1 mole of a substance to change states from a solid to a liquid or vice versa.