States of Matter

There are 4 forms or phases of matter:

• ______________
• ______________
• ______________
• ______________

The states of matter are ___________________________ states. This means that matter can go from one state to another without changing any of its ________________ ________________.

Anything that has mass and takes up space is called ________________.

Most common substances exist as ________________, ________________, and ________________, which have diverse chemical and physical properties.

Solids, liquids, and gases are the ____________________________ in which all matter naturally exists on Earth. Matter can also exist as ________________, but this state is not common on Earth.

Solids

A ______________ is a form of matter that has its own definite ______________ and ______________. A solid ______________ take the shape of a container it is placed in. ________________, ________________, ________________, and ______________ are examples of solids. Particles in a solid are ____________________________.
**Liquid**

A _______________ is a form of matter that _________, has constant _______________, but has _________________. A liquid takes the shape of its container. Common examples of liquids include __________, __________, and __________. Particles in a liquid are not held in place ________________, so are able to flow past one another.

**Gas**

A ___________ is a form of matter that has ____ definite shape and ____ definite volume. A gas takes the shape of its container and also __________ the whole container, unlike a liquid. Some examples are _______________ and _______________. Particles in a gas are _________________________________.

Particles in a ___________ and a ___________ are close enough together that they are not able to be compressed into a smaller volume. The particles of a ___________, however, are far enough apart that they are able to be ___________________ into a smaller volume.

**Vapor**

What is the difference between a gas and vapor? __________ refers to a substance that is naturally in the gaseous state at ________________. ____________ refers to the gaseous state of a substance that is a ___________ or a ___________ at room temperature.

______________, ____________, and _____________ are all gases at room temperature. _______________ is a liquid at room temperature and turns to a _______ when it has been sufficiently heated. Then it becomes water _____________ (steam).
Changes of State

Matter changes form or state all the time. Ice ___________, water ______________ or ______________. Ice melting is an example of water changing state from ______________ to ______________.

Matter changes state by the addition or removal of __________ or ______________.

_____________ ↔ ______________ ↔ ______________

___________________________ is the temperature at which a substance changes from the solid state to the liquid state.

___________________________ is the temperature at which a substance changes from the liquid state to the solid state. It is the opposite of ______________ and are the exact same temperature.

___________________________ is the temperature at which a substance changes from the liquid states to the gaseous state.

___________________________ is the temperature which a substance changes from the gaseous state to the liquid state. It is the opposite of ______________ and is the same temperature.

___________________________ is the process by which a substance changes from the _____________ state directly to the _____________ state without ever entering the ______________ state. ______________ (frozen CO₂) sublimates when it is exposed to room temperature.