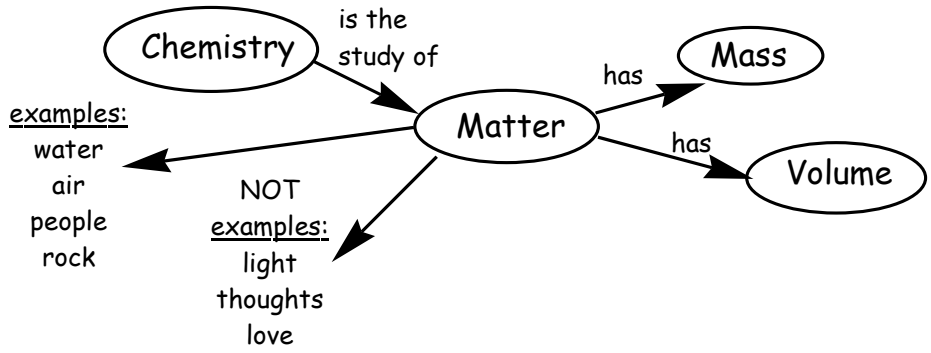
CHM 4, PAL – concept map Student name:

So far in CHM 4 you should have covered textbook sections 3.1-3.6 and 4.1-4.6. These sections contained a lot of terminology that at first might seem disconnected. Today your PAL team will make a *concept map* out of the material you have covered so far. Scientists believe that *concept maps* model how our brains store information; therefore making a *concept map* is an excellent way to organize and learn new material.

Below is a sample concept map based on the sentences "Chemistry is the study of matter. Matter is anything that has volume and mass."



In the above example, the main concept is "matter". The terms "mass", "volume", and "chemistry" are all supporting concepts. Though there are none in this *concept map*, it is possible for supporting concepts to have additional supporting concepts.

On the next page is a list of concepts that your PAL team will make into a *concept map*. As you work on your *concept map*, consider the following:

- There is not just one right way to organize your *concept map*.
- The layout can be changed as you develop the map. To make this easier, you may want to use a whiteboard or Post-it notes which can be moved around.
- Each concept should appear only once on the map (though it can connect to many other concepts… like a giant web).
- Arrows and connecting phrases explain the relationship between concepts.
- Examples can also be added to clarify concepts.

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Start with the *concept map* from the previous page (the four highlighted terms below) and add all of the additional terms below. Feel free to use your textbook. For all the terms labeled with an *****, also provide examples as part of your *concept map*.

Chemistry	Electron
Matter *	Atomic number
Mass	Alkali metals
Volume	Compound
Solid	Metalloids
Scanning tunneling microscope	Gas
Physical properties *	Mixture
Compressible	Neutron
Halogen	Periodic table
Pure substance	Group
Molecules	Homogeneous *
Metals	Element
Properties	Chemical properties *
Crystalline	Transition metals
Heterogeneous *	Chemical symbol *
Atoms	Family
Proton	Nonmetals
Liquid	Phases
Charge	Nucleus
Noble gas	Amorphous