

Chem 1020-01

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MasteringChemistry registration: See handout on webpage for step-by-step guide to registration. You will only do this registration once.

- Access code: bundled with book, available separate from bookstore, or available online
- Course ID: will be emailed to your MetNet email address on Tuesday morning. Please activate your MetNet before Tuesday if you have not yet (link on webpage)

Intro/Ch1 assignment in MasteringChemistry is due next Wednesday, Jan 21

D2L: Introduce yourself in discussions.

Read Ch 1/2 by Wednesday.

What is chemistry?



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Properties of atoms and molecules (microscopic)



Properties of substances (macroscopic)

reactivity, boiling point, etc.

Scientific method

A. A scientist notices that when burning a certain metal in a closed container, the mass of the entire container stays the same.

*observation - single event / system
raises question*

B. The scientist performs many controlled tests, carefully measuring the masses before and after many chemical reactions.

experimentation - controlled variables

C. The scientist finds that the mass will stay the same during ANY chemical reaction as long as it's in a closed container.

law : summary of observations - not explanation of why/how

D. This may be because substances in the air combine with the metal when it burns.

hypothesis : tentative explanation why/how

E. The work done confirms that all matter is made of atoms, and these atoms rearrange and recombine during chemical reactions.

theory : goal! explanation confirmed by experiment!

theory

hypothesis

law

~~experimentation~~

~~observation~~

guides more exps.