

Working with Numbers and Matter

Text	Unit Objectives:
3.3	1. Must be comfortable using dimensional analysis to convert <ul style="list-style-type: none"> • between different metric units • between metric units and English units
3.2 3.3	2. Must be comfortable using table C to convert metric units when given prefixes you are not comfortable with.
3.2	3. Must be comfortable using table D to select the correct unit of measure for different quantities.
3.1	4. Must know what the uncertainty in measurement is. Be able to make a measurement of length, volume, mass, or temperature which is as accurate as the measuring instrument will allow.
3.1	5. Must be able to convert from scientific notation to the written out number and back ($5,280\text{ft} = 5.28 \times 10^3\text{ft}$).
3.1	6. Must be able to determine the number of significant figures in a number when written out or in scientific notation.
3.1	7. Getting answers with the correct number of significant figures after adding, subtracting, multiplying and dividing.
3.4	8. Develop and understanding of matter and the difference between elements, compounds, and mixtures. Also know the difference between a homogenous mixture and a heterogeneous mixture.
2.1 3.4	9. Be able to define and list properties of matter, with special attention paid to density.
2.3	10. Know that the periodic table is a comprehensive list of all the elements and the rules for writing symbols.
2.1	11. Know the three major states of matter and the order in which they occur.
2.1 2.4	12. Know the difference between physical and chemical changes.

Essential Vocabulary

Accuracy, Atom, Binary Compound, Chemical Change, Compound, Density, Element, Gas, Heterogeneous Substance, Homogenous Substance, Liquid, Matter, Mixture, Phase, Physical Change, Significant Figures, Solid, Substance, Vapor.

Announcements:

1. Make sure you are active in class by listening to instruction, taking good notes and solving problems at your desk.