

Unit 1: Scientific Measurement

Reading Assignments

Modern Chemistry (2006), Chpt. 2

Supplementary Reading

“A New Low: Lilliputian pipette releases tiniest drops” (*Science News Vol.171*, No. 16)

Homework/Activities

- Sect. Review (Chpt. 2, Sect. 2) (p.42) #2-6 Due: _____
- Worksheet: Using Metric Units Due: _____
- Worksheet: Metric Prefixes Due: _____
- Worksheet: Conversions Due: _____
- Worksheet: Mass, Volume, and Density Due: _____
- Sect. Review (Chpt. 2, Sect. 3) (p.57) #1-4, 7, 10 Due: _____
- Worksheet: Significant Figures/Rounding Due: _____
- Safety Quiz Due: _____
- Article: A New Low... Due: _____
- Chapter Review (Chpt. 2) 6-8, 17-21, 29-30, 35-42 Due: _____
- TBA: _____ Due: _____

Concepts/Topics

- Safety [pgs. xviii-xx]
- Scientific Method; Data collection - qualitative vs. quantitative [pgs. 29-31]
- SI (metric) units - base units & derived units, metric prefixes [pgs. 33-40]
- Mass vs. weight; Density, mass, and volume [pgs. 20-21]
- Dimensional analysis & conversions [pgs. 40-42]
- Significant figures, rounding, percent error; precision vs. accuracy [pgs. 44-50]
- Scientific Notation: converting, adding, subtracting, multiplying, dividing [pgs. 50-52]

Web Resources

Math League: Metric Units & Measurement	www.mathleague.com/help/metric/metric.htm
NIST: Intl. System of Units (SI)	physics.nist.gov/cuu/Units/index.html
Scientific Notation	science.widener.edu/svb/tutorial/scinotcsn7.html
Significant Figures Quiz Machine	science.widener.edu/svb/tutorial/sigfigures.html
Significant Figures - Wikipedia	en.wikipedia.org/wiki/Significant_figures
Mass, Density, Volume	science.widener.edu/svb/tutorial/densitycsn7.htm
Mass, Density, Volume - Word Problems	science.widener.edu/svb/tutorial/densitywpcsn7.html
Math Skills - Dim. Analysis (Texas A&M)	www.chem.tamu.edu/class/fyp/mathrev/mr-da.html
Units: one of these things is not like the other	www.ncsu.edu/felder-public/kenny/papers/units.html