NAME: **HONORS CHEMISTRY**

SECTION: UNIT 1 ASSIGNMENT SHEET

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| **In-Class Topic** | **Homework (will be posted in GC)** | **HW Due Date** |
| 8/31 Class setup  Plan Lab #1 procedure | 1. Complete Formative lab safety assignment; student and parent/guardian complete video acknowledgement 2. Writing Assignment: How I Used Chemistry Over the Summer (15 sentence minimum) | Thursday, 9/1 |
| 9/1 Organizing data  Long F: concept mapping | 1. Reviewing course policies--Formative assignment posted in GC | Friday, 9/2 |
| 9/2 Lab #1: Applying the Scientific Method to Stain Removal  Long G: Concept mapping | 1. Finish lab writeup--submit lab Google Slidedeck in GC | Tuesday, 9/6 |
| 9/6 Measurements | 1. Measurements problem set (Desmos activity) 2. Learn the SI prefixes—1 column on pair tutoring sheet | Wednesday, 9/7 |
| 9/7 Significant Figures | 1. Learn the SI prefixes—1 column on pair tutoring sheet 2. Significant figures practice problems (Quizizz, link in GC) | Thursday, 9/8 |
| 9/8 Calculations with significant figures | 1. Listen to the [Accuracy and Precision webcast](https://youtu.be/NCkWXvjuw-I); take notes 2. Calculations with significant figures practice (Formative, link in GC) | Friday, 9/9 |
| 9/9 Density & % error  Long D: concept mapping | 1. Sig figs mixed problem set (CK12) 2. Learn the names and symbols for elements 1-10 (1 column on pair tutoring sheet) | Thursday 9/15 |
| 9/12  Measurements lab | 1. Work on measurements lab group formal report (due 9/19) 2. Learn the names and symbols for elements 1-10 (1 column on pair tutoring sheet) | Tuesday, 9/13 |
| 9/13 Classification of matter | 1. Work on measurements lab group formal report (due 9/19) 2. Classification of Matter activity (Desmos) | Wednesday, 9/14 |
| 9/14 Dimensional analysis | 1. Work on the measurement lab group formal report 2. Classification of matter interactive practice (Quizizz) | Thursday, 9/15 |
| 9/15 Temperature conversions  Mixtures | 1. Work on the measurement lab group formal report 2. Dimensional analysis practice problems | Friday, 9/16 |
| 9/16 Lab equipment  Physical and chemical properties & changes | 1. Lab equipment practice problems (Quizizz) 2. Finish the measurements lab group formal report (due 9/19--bring a hard copy to class) | Monday, 9/19 |
| 9/19 Separation methods  \*Lab report due\* | 1. Learn the names and symbols for elements 1-10 (1 column on pair tutoring sheet) 2. Mixed practice problem set | Tuesday, 9/20 |
| 9/20 Mixed practice | 1. Complete unit 1 review sheet (bring hard copy to class) | Wednesday, 9/21 |
| 9/21 Review | 1. Study for unit 1 test | Thursday 9/22 |
| 9/22 Unit 1 test | 1. Learn the names and symbols for elements 11-20 (1 column on pair tutoring sheet) 2. Work on the History of Atomic Theory Webquest… | Friday 9/23 |
| 9/23 Intro to atomic structure | 1. Finish the History of Atomic Theory Webquest… | Monday 9/27 |

# Dates to Remember

* Group formal lab report for the *Measurement* lab due Monday 9/19
* Unit 1 Test Thursday, 9/22

**After studying chapters 2-3, you should be able to:**

* Convert between standard and scientific notation
* List and use the SI units of measurement for mass, length, time, and temperature.
* Express and convert quantities using the common SI prefixes.
* Distinguish between the accuracy and precision of a measurement.
* Identify the number of significant figures in a measurement.
* Indicate a measurement’s uncertainty by using significant figures
* Apply the rules for significant figures in calculations to round off numbers correctly.
* Calculate the density of an object from experimental data.
* Calculate the percent error of an experimentally determined measurement.
* Use dimensional analysis to solve various types of problems.
* Convert between the Celsius and Kelvin temperature scales.
* Distinguish between the physical properties and chemical properties of matter.
* Compare and contrast the three main states of matter: solids, liquids and gases.
* Distinguish between the extensive and intensive properties of matter.
* Classify changes of matter as chemical or physical.
* Classify a sample of matter as a substance or a mixture; as homogeneous or heterogeneous.
* Explain the difference between an element and a compound.
* Identify common pieces of lab apparatus.
* Explain the uses of distillation, filtration and chromatography.

**Some Useful Websites**

**Significant figures**

<http://chemistry2.csudh.edu/homework/hwintro.html> Interactive practice Online HW Site #1

<https://www.chem.tamu.edu/class/fyp/mathrev/mr-sigfg.html>

<http://www.chem.tamu.edu/class/fyp/mathrev/mr-scnot.html> Scientific notation

<http://www.sciencegeek.net/Chemistry/taters/directory.shtml> Try the unit 0 question sets

[Accuracy vs precision](https://pressbooks.bccampus.ca/humanbiomechanics/chapter/1-3-accuracy-precision-and-significant-figures-2/)

[Measurements and error](https://www2.southeastern.edu/Academics/Faculty/wparkinson/help/measurement/)

**Classification of matter**

<http://chemwiki.ucdavis.edu/Analytical_Chemistry/Qualitative_Analysis/Classification_of_Matter>

<https://www.simbucket.com/simulation/chemthink-the-particulate-nature-of-matter/> Online tutorial (You can log in as a guest)

**Mathematics of chemistry**

<http://www.felderbooks.com/papers/units.html> Units and dimensional analysis

<https://courses.lumenlearning.com/cheminter/chapter/percent-error/> Percent error

[Converting between Celsius and Kelvin scales](http://www.chemteam.info/GasLaw/Convert-Celsius-Kelvin.html)

<http://ww2010.atmos.uiuc.edu/%28Gh%29/guides/maps/ctof.rxml> Temperature conversions

**Properties of matter**

[Physical properties & physical changes](http://chemistry.elmhurst.edu/vchembook/104Aphysprop.html)

[Chemical properties & chemical changes](http://chemistry.elmhurst.edu/vchembook/105Achemprop.html)

[Discussion of several separation methods](http://www.bbc.co.uk/education/guides/zgvc4wx/revision/1)

CK12 Resources

* [Uncertainty in measurements](https://flexbooks.ck12.org/user:a3zhbmrlcnzlzw5achnoyxj2yxjklm9yzw../cbook/ck-12-chemistry-for-high-school/section/2.5/)
* [Significant Figures](https://flexbooks.ck12.org/user:a3zhbmrlcnzlzw5achnoyxj2yxjklm9yzw../cbook/ck-12-chemistry-for-high-school/section/2.6/)
* [Significant Figures: Addition & Subtraction](https://flexbooks.ck12.org/user:a3zhbmrlcnzlzw5achnoyxj2yxjklm9yzw../cbook/ck-12-chemistry-for-high-school/section/2.7/)
* [Significant Figures: Multiplication & Division](https://flexbooks.ck12.org/user:a3zhbmrlcnzlzw5achnoyxj2yxjklm9yzw../cbook/ck-12-chemistry-for-high-school/section/2.8/)
* [Density](https://flexbooks.ck12.org/user:a3zhbmrlcnzlzw5achnoyxj2yxjklm9yzw../cbook/ck-12-chemistry-for-high-school/section/2.10/)
* [Percent Error](https://flexbooks.ck12.org/user:a3zhbmrlcnzlzw5achnoyxj2yxjklm9yzw../cbook/ck-12-chemistry-for-high-school/section/2.11/)
* [Accuracy and Precision](https://flexbooks.ck12.org/user:a3zhbmrlcnzlzw5achnoyxj2yxjklm9yzw../cbook/ck-12-chemistry-for-high-school/section/2.13/)
* [Temperature and Temperature Scales](https://flexbooks.ck12.org/user:a3zhbmrlcnzlzw5achnoyxj2yxjklm9yzw../cbook/ck-12-chemistry-for-high-school/section/2.16/)
* [Dimensional Analysis](https://flexbooks.ck12.org/user:a3zhbmrlcnzlzw5achnoyxj2yxjklm9yzw../cbook/ck-12-chemistry-for-high-school/section/2.17/)
* [Pure Substance](https://flexbooks.ck12.org/user:a3zhbmrlcnzlzw5achnoyxj2yxjklm9yzw../cbook/ck-12-chemistry-for-high-school/section/3.15/)
* [Element](https://flexbooks.ck12.org/user:a3zhbmrlcnzlzw5achnoyxj2yxjklm9yzw../cbook/ck-12-chemistry-for-high-school/section/3.3/)
* [Compound](https://flexbooks.ck12.org/user:a3zhbmrlcnzlzw5achnoyxj2yxjklm9yzw../cbook/ck-12-chemistry-for-high-school/section/3.4/)
* [Homogeneous Mixture](https://flexbooks.ck12.org/user:a3zhbmrlcnzlzw5achnoyxj2yxjklm9yzw../cbook/ck-12-chemistry-for-high-school/section/3.7/)
* [Heterogeneous Mixture](https://flexbooks.ck12.org/user:a3zhbmrlcnzlzw5achnoyxj2yxjklm9yzw../cbook/ck-12-chemistry-for-high-school/section/3.8/)
* [Separating Mixtures](https://flexbooks.ck12.org/user:a3zhbmrlcnzlzw5achnoyxj2yxjklm9yzw../cbook/ck-12-chemistry-for-high-school/section/3.13/)
* [Physical Properties](https://flexbooks.ck12.org/user:a3zhbmrlcnzlzw5achnoyxj2yxjklm9yzw../cbook/ck-12-chemistry-for-high-school/section/3.9/)
* [Physical Change](https://flexbooks.ck12.org/user:a3zhbmrlcnzlzw5achnoyxj2yxjklm9yzw../cbook/ck-12-chemistry-for-high-school/section/3.10/)
* [Extensive and Intensive Properties](https://flexbooks.ck12.org/user:a3zhbmrlcnzlzw5achnoyxj2yxjklm9yzw../cbook/ck-12-chemistry-for-high-school/section/3.11/)
* [States of Matter](https://flexbooks.ck12.org/user:a3zhbmrlcnzlzw5achnoyxj2yxjklm9yzw../cbook/ck-12-chemistry-for-high-school/section/3.12/)
* [Chemical Change](https://flexbooks.ck12.org/user:a3zhbmrlcnzlzw5achnoyxj2yxjklm9yzw../cbook/ck-12-chemistry-for-high-school/section/3.14/)
* [Chemical Reaction](https://flexbooks.ck12.org/user:a3zhbmrlcnzlzw5achnoyxj2yxjklm9yzw../cbook/ck-12-chemistry-for-high-school/section/3.15/)