

# Free Materials for AP Summer Packets --- Or For An “AP Start of School Fundamentals Review”

For AP Chemistry instructors, below are details on

- Over 60 pages of free “eBook homework tutorials” for student use that review Chem I fundamentals;
- Quizzes available to instructors that cover the tutorial content; and
- For *all AP and Chem I* instructors, a *free* copy of a 500 page “interactive eBook” covering Chem I and AP topics – that is currently the highest rated chemistry text on Amazon.

## Details:

### Free Homework Tutorials

For AP instructors who assign summer packets, or who would like to speed the fall review of Chem I fundamentals, at the link below is over 60 pages of free “eBook tutorials” that can be assigned to students for completion during the summer or first weeks of school “study time.”

In 6 chapters and 26 lessons, topics include:

1. Learning chemistry, mental math, and exponential notation
2. Metric system fundamentals
3. Significant figures
4. Conversion factors
5. Systematic word problem strategies, and
6. The structure of atoms and ions.

The tutorials apply recommendations of cognitive research on how to help students learn science.

To view the tutorials: Click on the **link** below, then the **eBook** tile, then the blue box **Demo Chapter 1** at the left. Lessons 1.1 to 1.3 will provide an overview of the eBook features.

<https://digital.wwnorton.com/calculations2>

Also recommended for initial review is Lesson 4.4 followed by Chapter 5. The “Wanted Data Solve” algorithm in Chapter 5 has been found by instructors to be especially helpful to students when solving scientific calculations.

Chapters and lessons can be assigned selectively. Pre-tests at the start of topics encourage AP students to skip previously mastered material and focus where refreshing memory may be needed.

Access to eBook **Demo** Chapters 1 and 2 of *Calculations* is available all year. The **Demo** chapters 3 to 6 will be available in 2018 from June 1 to September 17. Publisher W. W. Norton has

graciously agreed to a request from the authors to allow ¼ of the *Calculations* chapters to be accessed at no cost by AP students during the review period for Chem I fundamentals.

## Assignment Options

For assignment formats as part of a summer packet or a fall review, click [here](#).

## Free Quizzes

To save instructor time and encourage homework completion, multiple quizzes on the lessons are available to instructors in an editable format. To obtain secure copies, click [here](#).

## Free eBook: All 24 Chapters

All instructors of *first* year and *AP* chemistry may request a free access code that opens all 24 chapters of the eBook. To request an examination code, click [here](#).

## Reviews

The Demo chapters are an excerpt of the 24 chapter textbook *Calculations In Chemistry – An Introduction*. *Calculations* currently has the highest user rating of any chemistry text on Amazon. Reviews of the first and second edition are here:

<https://www.amazon.com/Calculations-Chemistry-Introduction-Donald-Dahm/dp/0393912868#customerReviews>

## Available Formats

The 24 chapters of *Calculations* are available as either a “write-in” paperback or an eBook. The cost of the paperback version is \$36.

For **high schools**, access codes to all 24 chapters of the *Calculations* eBook may be purchased for **\$36** for six years of eBook access for each code (\$6 per code per year for the six year purchase).

## Additional Free Materials

Also posted online at all times for free use in Chem I and AP are:

- A 17 page packet on mental math activities, downloadable from the “Chemistry and Cognition” blog at <http://chemreview.net/blog/?p=409>
- Assignments, templates, and quizzes to help students gain “automaticity” in recall of the name, symbol, and periodic table location of the 40 atoms encountered most frequently, downloadable from <http://chemreview.net/blog/?p=268>
- A summary of short articles (with links to the PDFs) by U.Va. cognitive scientist Daniel Willingham on how science says we can best help students learn science, at <http://chemreview.net/blog/?p=321> .
- The article “Cognitive Science for Chemists,” a 12 page summary of the scientific consensus on instructional issues including inquiry activities, memorization, use of algorithms, and constructing conceptual understanding at [www.ChemReview.Net/CogSciForChemists.pdf](http://www.ChemReview.Net/CogSciForChemists.pdf) .

## Use in Chem I and AP

For additional discussion of the use of *Calculations* in AP and Chem I, and for information on coverage of additional AP topics in the *Calculations* format, click [here](#).

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