Daily Lesson Plans
for
*Exploring Creation with Chemistry*
*(Second Edition)*

My Father’s World®
Exploring Creation with Chemistry, Second Edition

Apologia has earned the reputation of being the premier science course for college-bound students. The text is written in a friendly, conversational style and is easy to understand, even for parents with minimal science background. The simple experiments, user-friendly format, and personal approach set it apart from standard textbooks. The program is written from a Christian worldview and takes a balanced approach toward controversial subjects, examining all viewpoints while explaining the scientific facts behind differing theories.

Apologia science courses appeal to both parents/teachers and students because they are easy to understand, practical, and organized. They also encourage critical thinking skills in an interesting format. We are so confident in this science course that it is the only one we carry for 7th grade through high school.

Dr. Jay L. Wile holds a Ph.D. in nuclear chemistry and a B.S. in chemistry from the University of Rochester. A former university professor, he has won several awards for excellence in teaching and has presented numerous lectures on the topics of nuclear chemistry, Christian apologetics, homeschooling, and creation vs. evolution. In addition, he has published thirty articles on these subjects in nationally recognized journals.

In order to be able to understand this text, the student needs to have completed Algebra I. This course is designed to be a first-year high school chemistry course and gives the student a rigorous foundation in chemistry, in order to prepare him or her for a college-level course. The course covers significant figures, units, classification, the mole concept, stoichiometry, thermochemistry, thermodynamics, kinetics, acids and bases, redox reactions, solutions, atomic structure, Lewis structures, molecular geometry, the gas laws, and equilibrium.

How to Use These Plans

Before beginning this course, parents need to read thoroughly the TEACHER’S NOTES at the beginning of Solutions and Tests for Exploring Creation with Chemistry, and students need to read thoroughly the STUDENT NOTES at the beginning of the textbook.

Schedule science four days a week. Monday through Thursday works best, with Friday free or used for catch-up, review, or tests as needed. If you find that a lesson is too lengthy, simply end the lesson and resume the following day. By Friday you should catch up with the week’s lessons.

Plan to spend about two weeks on each module. This gives you 32 weeks for science (or 34 if you use the quarterly tests) – thus allowing a few weeks for review or catch-up if needed.

For record-keeping purposes, use the line to the left of “Day 1,” “Day 2,” etc., to write the date the student completes each lesson.

A “Test and Experiment Scores” sheet is provided so that all test and experiment scores can be recorded in one place for a permanent record. Read the paragraph on page v in Solutions and Tests for Exploring Creation with Chemistry regarding cumulative tests, which are quarterly tests. If you choose to use the cumulative tests, plan to use one day for review, and one day for the cumulative test. These extra days are included in the day count in the lesson plans, but are optional.
**CD-ROM Multimedia Companion**

The CD provides additional visual instruction, especially valuable for students who are more visually oriented, for students wanting a richer science course, and for parents who want extra help in presenting information. The components of the optional CD-ROM Multimedia Companion are scheduled within these lesson plans. **Each CD item is marked with an asterisk (*)**. Key vocabulary words are listed at the *beginning* of the lesson plans for each module; the pronunciations are found on the CD. The other items marked with an asterisk (*) are multimedia instruction, examples, figures, and experiments. **The CD enhancements of the experiments are to be viewed following the experiments.**

**Lab Supplies**

This course includes laboratory experiments for you to perform. It is strongly recommended that you perform the experiments as part of your college preparatory science courses. To complete the laboratory experiments, you will need to purchase a laboratory kit. You can order this kit from:  

*[My Father’s World provides the ordering information in the Lesson Plans]*

Besides the laboratory kit, you will need to gather common items from home and purchase some supplies from local stores.

For your convenience we have compiled a master list of all lab supplies needed for the entire year. (See “Master List: Lab Supplies to Purchase for the Year” in these lesson plans.) The master list includes a list of the items found in the laboratory kit, and the items you will need to purchase at a store, but does not include items commonly found at home, such as scissors. We recommend that you purchase all of these supplies and the laboratory equipment now, before beginning the school year, so that they will be on hand.

We also list lab supplies for each module at the beginning of each module plan, if you prefer to purchase supplies as needed. Items in boldface type are found in the laboratory kit that is available separately. The lab supply list for each module does include items commonly found at home. Reminders to purchase and gather lab supplies are given for each module.
Master List: Lab Supplies to Purchase for the Year

Items in boldface type are found in the laboratory kit that is available separately.

Note: The Master List does not include perishable items that should not be purchased far in advance, such as eggs and butter, or items that you certainly already have, such as water.

[My Father’s World has reorganized the Apologia supply lists to show an organized master list ordered by the store type most likely to carry the items. Following is an abbreviated sample of the lists.]

Grocery
- maple syrup (All-natural does not work as well.)
- Styrofoam cups
- apple
- orange juice or soda pop
- … (plus 24 other items not included in this sample)

Drugstore
- rubber cleaning gloves
- antacid tablets
- Q-Tip or small paintbrush
- iodine solution
- … (plus 22 other items not included in this sample)

Hardware
- electrical tape
- sand (Kitty litter is an acceptable substitute, but don’t use the kind that clumps.)
- string or tape measure
- small Phillips-head screwdriver
- … (plus 8 other items not included in this sample)

Office Supplies
- cellophane tape such as Scotch®
- ruler

Laboratory Equipment Set
- safety goggles
- thermometer
- funnel
- 2 eyedroppers
- … (plus 12 other items not included in this sample)

Other
- weather report that contains the atmospheric (sometimes called barometric) pressure for the day (If you can’t find this, just assume the atmospheric pressure is 1.00 atm.)
### Test and Experiment Scores

*Exploring Creation with Chemistry*

by Dr. Jay L. Wile

Name ______________________________

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<thead>
<tr>
<th>MODULE #1</th>
<th>Date</th>
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[All modules are listed in My Father’s World Lesson Plans]
Module #12: The Gas Phase

- Look again at the lab supplies list for Module #12. Be sure you have already purchased any needed supplies.

- Also look at the lab supplies list for Module #13 (which you will need in two weeks). Plan to purchase any supplies you do not already have.

Lab Supplies for Module #12
- safety goggles
- mass scale
- thermometer
- plastic 2-liter bottle
- round balloon with an 8-inch diameter
- vinegar
- baking soda
- seamstress’ tape measure (A piece of string and a ruler will work as well.)
- weather report that contains the atmospheric (sometimes called barometric) pressure for the day (If you can’t find this, just assume the atmospheric pressure is 1.00 atm.)

_______ Day 93 pages 383-386
*Listen to the following vocabulary words on the CD if you need help with pronunciation: extrapolation, Pascal.
  - Introduction
  - The Definition of Pressure
  - Boyle’s Law
    - *See an "expansive" demonstration of Boyle's law on the CD.

_______ Day 94 pages 387-391a
  - Charles’s Law

_______ Day 95 pages 391b-396a
  - The Combined Gas Law
  - ON YOUR OWN 12.1, 12.2, 12.3
  - Ideal Gases
  - Dalton’s Law of Partial Pressures

_______ Day 96 pages 396b-400a
  - Vapor Pressure
    - *See a "bubbly" demonstration of the definition of boiling point on the CD.
    - ON YOUR OWN 12.4
    - An Alternative Statement of Dalton’s Law
    - ON YOUR OWN 12.5
Day 97 pages 400b-404a
- Begin reading after ON YOUR OWN 12.5
- ON YOUR OWN 12.6, 12.7
- The Ideal Gas Law
- ON YOUR OWN 12.8

Day 98 pages 404b-408
- Using the Ideal Gas Law in Stoichiometry
- EXPERIMENT 12.1
  Enter Experiment score on Test and Experiment Scores form.
- ON YOUR OWN 12.9, 12.10

Day 99 pages 415-416
- REVIEW QUESTIONS FOR MODULE #12
- PRACTICE PROBLEMS FOR MODULE #12

Day 100 TEST FOR MODULE #12
Enter test score on Test and Experiment Scores form.

Day 101 Review for Quarterly Test #3
Review Modules 9-12 on your own. There is no review written in the textbook. Make sure you can answer the review questions and practice problems for Modules 9-12.

Day 102 Quarterly Test #3
Enter test score on Test and Experiment Scores form.