

Science

Physical Science Schedule Plus

By Sandy Hotz

Sonlight Curriculum® Science 150 "Physical Science Schedule Plus," Twelfth Edition

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"Do to others what you would have them do to you" (Matthew 7:12).

"The worker is worth his keep" (Matthew 10:10).

Published by

Sonlight Curriculum, Ltd.
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Printed in the United States of America.

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Dear Mom and Dad,

Welcome to the Sonlight family! Thanks for putting your trust in our program. The Instructor's Guide (IG) in your hands is your road map to a successful educational journey this year. Inside you'll find 36 weeks of complete lesson plans – everything you need to teach your children for an entire year.

Before you begin, take a look at the Quick Start page and briefly acquaint yourself with the IG layout. You'll soon discover that we've covered all the information and scheduled all the tasks you and your students need to accomplish on this leg of the journey.

You don't need any special expertise or have to expend extra effort. We've done all the planning for you, so you're free to relax and enjoy the time learning and growing together.

What's on the horizon? Stories that ignite curiosity. Meaningful conversations. Relationship-building interactions. Critical thinking. Character development. Academic excellence. Godly hearts with a concern for the world.

Can it really be that easy? Will your children love to learn and you love to teach? Yes, yes and yes! We guarantee it. If that isn't your experience, please return your complete package for a full refund. (See sonlight.com/guarantee for details.)

I pray God's blessings on your family as you embark on this phase of your homeschool adventure. Along the way, may you discover the joy of learning that lasts a lifetime.



Blessings,

Sarita Holzmann, President

P.S. Reach out to us for advice or support anytime at **1-800-903-1675** or main@sonlight.com.

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3 Forms For Experiment Write-Ups

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Week 1—Module 1

Date:	Day 1 ¹	Day 2 ²	Day 3 ³	Day 4 ⁴	Day 5 ⁵
Exploring Creation with Physical Science	pp. 1–4 (through Figure 1.1)	pp. 4–7 (mid-page)	pp. 7–11 (bottom)	pp. 11–14 (mid-page)	pp. 14–17 (mid-page)
Exploring Creation with Physical Science-CD ROM¹	“Introduction” through Figure 1.1 in “Atoms and Molecules 2”	“Atoms and Molecules 2” (after Figure 1.1) through “Atoms and Molecules 3”	“Measurement and Units” through “Manipulating Units”	“Converting Between Units” through three “On Your Own”	“Converting Between Systems” through “Converting Between Systems 3”
Multimedia Companion CD		Related to Figure 1.2		Example 1.1	Example 1.2
On Your Own		1.1–1.2		1.3–1.5	1.6–1.8
Experiments	Perform & write-up Experiment 1.1				Perform & write-up Experiment 1.2
Vocabulary²	<input type="checkbox"/>		<input type="checkbox"/>		
Supplies³	We Provide: 150-35 —9-volt battery, insulated wire. You Provide: small glass, baking soda, tap water, scissors, tape (preferably electrical tape), spoon, long piece of string, large table top, cellophane tape, pencil, helper.				
Shopping/Planning List	For next week: We provide: 150-35 —6 calcium carbonate tablets (such as TUMS®). You provide: vinegar (approx. 4 cups), water, measuring cups, 3 large glasses, spoon.				
Other Notes					

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1. The “Exploring Creation with Physical Science–CD ROM” schedule is for the full course CD ROM version of the text. It is identical to the page designations given for the text, *Exploring Creation with Physical Science*. You will use either the textbook *Exploring Creation with Physical Science* or the CD ROM version. You do not need both versions to complete this course.
2. Define Vocabulary terms and names found in each day’s reading, then place a check in the box.
3. When supplies are listed as “**We provide:**” they are materials found in your Science Supplies Kit 150 (150-35). When supplies are listed as “**You provide:**” they are materials you can generally find around your home.

Week 1—Module 1

Vocabulary | Terms and Names

Atoms and Molecules

Atom: The smallest chemical unit of matter. [p. 3]

Molecule: Two or more atoms linked together to make a substance with unique properties. [p. 4]

The Metric System

Metric measurements: mass = gram;
weight = Newton; distance = meter; volume = liter;
time = seconds. [p. 9]

English units of measurement: mass = slug; weight = pounds; distance = foot; volume = gallon;
time = seconds. [p. 9]

Milli (m): 0.001 (thousandths). [p. 11]

Centi (c): 0.01 (hundredths). [p. 11]

Kilo (k): 1,000 (thousand). [p. 11] ■

Week 2—Module 1

Date:	Day 1 ⁶	Day 2 ⁷	Day 3 ⁸	Day 4 ⁹	Day 5 ¹⁰
Exploring Creation with Physical Science	pp. 17–20	Study Guide p. 24 Questions #1–6; Review	Study Guide p. 24 Questions #7–14; Review	Summary of Module 1 pp. 449–450; Review	Test for Module 1
Exploring Creation with Physical Science-CD ROM	“Concentration” through “Concentration 3”	Study Guide Questions #1–6; Review	Study Guide Questions #7–14; Review	Summary of Module 1; Review	Test for Module 1
Multimedia Companion CD	Concentration can affect a chemical's behavior				
On Your Own	1.9–1.10				
Experiments	Perform & write- up Experiment 1.3				
Vocabulary	□				
Supplies	We Provide: 150-35 —6 calcium carbonate tablets (such as TUMS®). You Provide: vinegar (approx. 4 cups), water, measuring cups, 3 large glasses, spoon.				
Shopping/Planning List	For next week: We provide: 150-35 —candle, matches, thermometer, yeast, balloon. You provide: small glass, 2 cotton balls, water, small piece of plastic; large glass or jar, 2 cups hydrogen peroxide, bottle (plastic, 1-liter soda bottle, for example), teaspoon, large clear Ziploc® freezer bag, vinegar, baking soda, safety glasses.				

Other Notes

Vocabulary | Terms and Names

Concentration

Concentration: The quantity of a substance within a certain volume. [p. 17] ■

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Week 3—Module 2

Date:	Day 1 ¹¹	Day 2 ¹²	Day 3 ¹³	Day 4 ¹⁴	Day 5 ¹⁵
Exploring Creation with Physical Science	pp. 25–27	pp. 28–32 (top)	pp. 32–36 (mid-page)	pp. 36–41 (top)	pp. 41–44 (bottom)
Exploring Creation with Physical Science-CD ROM	“Introduction” and “Air and Humidity” through two “On Your Own”	“The Composition of Air” through two “On Your Own”	“Carbon Dioxide in the Air” through two “On Your Own”	“Global Warming” through one “On Your Own”	“Parts per Million” through “Ozone 2”
Multimedia Companion CD		Related to Figure 2.1 & “extreme” Experiment 2.2	Related to Figure 2.4		Example 2.1 & Related to Figure 2.8
On Your Own	2.1–2.2	2.3–2.4	2.5–2.6	2.7	2.8–2.10
Experiments	Perform & write-up Experiment 2.1	Perform & write-up Experiment 2.2	Perform & write-up Experiment 2.3		
Vocabulary	☐		☐	☐	☐
Supplies	We Provide: 150-35 —candle, matches, thermometer, yeast, balloon. You Provide: small glass, 2 cotton balls, water, small piece of plastic; large glass or jar, 2 cups hydrogen peroxide, bottle (plastic, 1-liter soda bottle, for example), teaspoon, large clear Ziploc® freezer bag, vinegar, baking soda, safety glasses.				

Other Notes

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Vocabulary | Terms and Names

The Air and Humidity

Humidity: The moisture content of air. [p. 25]

Heat index: A combination of temperature and humidity. [p. 26]

Absolute humidity: The mass of water vapor contained in a certain volume of air. [p. 27]

Relative humidity: The ratio of the mass of water vapor in the air at a given temperature to the maximum mass of water vapor the air could hold at that temperature, expressed as a percentage. [p. 27]

Carbon Dioxide in the Air

Greenhouse effect: The process by which certain gases (principally water vapor, carbon dioxide, and methane) trap heat that radiates from the earth. [p. 32]

Global Warming

Global warming: If the concentration of carbon dioxide (and the other greenhouse gases) were to increase too much, the earth would get too warm. [p. 36]

Parts Per Million

Parts per million: (ppm) The number of molecules (or atoms) of a substance in a mixture for every one million molecules (or atoms) in that mixture. [p. 41] ■

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