

# Physical Science, 5<sup>th</sup> Edition Lesson Plan Overview

Day(s)	Topic	Pages	Support Materials	Bible Integration**
<b>Unit 1: Foundations</b>				
<b>Chapter 1: Modeling God's World</b>				
1	1A What in the World ... ?	2–5	See <i>PHYSICAL SCIENCE</i> 5 <sup>th</sup> Edition Teacher's Toolkit CD: <input type="checkbox"/> Visual Gallery Slides (7) <input type="checkbox"/> Section Quizzes (3)	<input type="checkbox"/> Discuss why bad things happen. <input type="checkbox"/> Explore why people matter even in a secular world. <input type="checkbox"/> Introduce the Creation Mandate and biblical dominion through science. <input type="checkbox"/> Show how mitigating the consequences of the Fall is part of God's plan for redeeming the earth.
2	1B Science with a View!	6–13		<input type="checkbox"/> Introduce presuppositional problem solving. <input type="checkbox"/> Show how one's worldview affects presuppositions, biases, and prejudices. <input type="checkbox"/> Differentiate between Christian and secular worldviews and the kinds of models they produce.
3	Lab 1A, <i>More Than Little Airplanes</i> (Scientific Modelmaking)			
4	1C The Work of Physical Science	14–17		<input type="checkbox"/> Motivate your Christian students to be sensitive to the possibility of God's calling to be a scientist.
5	Lab 1B, <i>Based on a True Story</i> (Laboratory Safety)			
6	Chapter 1 Review			
7	Chapter 1 Test			
<b>Chapter 2: Matter</b>				
8	2A The Particle Model of Matter	21–27	See <i>PHYSICAL SCIENCE</i> 5 <sup>th</sup> Edition Teacher's Toolkit CD: <input type="checkbox"/> Visual Gallery Slides (6) <input type="checkbox"/> Section Quizzes (4) <input type="checkbox"/> Facet: Unusual States of Matter	<input type="checkbox"/> Begin the chapter by discussing the dominion science problem about police officers who are killed or injured in the line of duty. <input type="checkbox"/> Use the <i>History of Atomism</i> facet on page 23 to illustrate how worldviews can influence physical science.
9				
10	2B Classification of Matter	28–34		<input type="checkbox"/> Referring to the Garden of Eden illustration, show how man is emulating God's work when he classifies things. Demonstrate how this is part of the Creation Mandate.
11				
12	Lab 2A, <i>Has Mass, Occupies Space</i> (Modeling Matter)			

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13	2C Changes in Matter	34–39		<ul style="list-style-type: none"> <li><input type="checkbox"/> Tie in the opening dominion science problem here by discussing the chemical properties of Kevlar vests.</li> <li><input type="checkbox"/> Have students consider the role of the laws of conservation (models) in view of God’s miracles.</li> </ul>
14	2D Changes of State	39–44		
15	Lab 2B, <i>Something Old, Something New?</i> (Chemical and Physical Changes)			
16	Chapter 2 Review			
17	Chapter 2 Test			
<b>Chapter 3: Measurement</b>				
18	3A Scientific Measurements	47–55	See <i>PHYSICAL SCIENCE</i> 5 <sup>th</sup> Edition Teacher’s Toolkit CD: <ul style="list-style-type: none"> <li><input type="checkbox"/> Visual Gallery Slides (9)</li> <li><input type="checkbox"/> Section Quizzes (3)</li> <li><input type="checkbox"/> Chapter 3 Rounding Practice Problems</li> <li><input type="checkbox"/> Activities:             <ul style="list-style-type: none"> <li>3-1 Significant Digits and Reading Scales</li> <li>3-2 Significant Digits in Calculations</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Open the chapter by discussing the dominion science problem about the extraordinary design requirements for a Mars rover.</li> <li><input type="checkbox"/> Engage your students with the doctrinal and theological implications of alien life on Mars or elsewhere.</li> <li><input type="checkbox"/> Show students how measurements can help us fulfill the Creation Mandate.</li> <li><input type="checkbox"/> As a matter of interest, help students understand how the Bible likely refers to at least two different cubits.</li> </ul>
19	Lab 3A, <i>Whose Arm?</i> (Standardized Measurements)			
20	3B Accuracy and Precision in Measuring	56–63		<ul style="list-style-type: none"> <li><input type="checkbox"/> Get students to care about accuracy! God’s children, of all people, should be careful to minimize error in measurements (Bible Integration [BI] margin box, page 57).</li> <li><input type="checkbox"/> Tie in the opening dominion science problem here by discussing precision, accuracy, and dimensional tolerances in the milling of Mars rover components.</li> </ul>
21				
22	Lab 3B, <i>A Hair’s Breadth</i> (Measurement Techniques)			
23	3C The Science of Measuring	63–69		<ul style="list-style-type: none"> <li><input type="checkbox"/> Remind students about the importance of using measurement honestly and wisely when exercising biblical dominion (BI margin box, page 64).</li> </ul>
24	Chapter 3 Review			
25	Chapter 3 Test			
<b>Unit 2: Mechanics</b>				
<b>Chapter 4: Kinematics: How Things Move</b>				
26	4A Introduction to Mechanics	74–79	See <i>PHYSICAL SCIENCE</i> 5 <sup>th</sup> Edition. Teacher’s Toolkit CD: <ul style="list-style-type: none"> <li><input type="checkbox"/> Visual Gallery Slides (6)</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Kick off the chapter by discussing the dominion science problem about safely transporting children in cars.</li> <li><input type="checkbox"/> Examine the principle of uniformity</li> </ul>

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27			<input type="checkbox"/> Section Quizzes (2) <input type="checkbox"/> Chapter 4 Practice Problems	<p>from a biblical perspective (TE margin note, page 75).</p> <input type="checkbox"/> Discuss reference frames and time within the context of the Bible's truths.
28	4B Kinematics: Describing Motion	80–87		<input type="checkbox"/> Tie in the opening dominion science problem here by discussing the development of child crash test dummies.
29	Lab 4A, <i>Robotically Reckoning</i> (Distance and Displacement)			
30	Lab 4B, <i>Sports Kitty (Part 1)</i> (Speed and Acceleration). <i>Note:</i> This lab must be performed if you intend to do Lab 6B.			
31	Chapter 4 Review			
32	Chapter 4 Test			
<b>Chapter 5: Dynamics: Why Things Move</b>				
33	5A Forces	90–95	See <i>PHYSICAL SCIENCE</i> 5 <sup>th</sup> Edition Teacher's Toolkit CD: <input type="checkbox"/> Visual Gallery Slides (9) <input type="checkbox"/> Section Quizzes (3) <input type="checkbox"/> Chapter 5 Practice Problems	<input type="checkbox"/> Begin the chapter by discussing the dominion science problem about dealing with the vertical development of cities.
34	Lab 5B, <i>Friendly Enemy</i> (Properties of Friction)			
35	5B Newton's Laws of Motion	95–99		<input type="checkbox"/> Remind students that the natural laws, such as Newton's laws, are workable descriptions of God's ordinances. They are <i>not</i> His ordinances themselves.
36				<input type="checkbox"/> Remind students that the universal constants such as <i>g</i> were determined because they work. They are workable models that reflect the way God created the universe.
37	5C Gravity and Free Fall	99–106		
38	Lab 5A, <i>Going Downhill</i> (Accelerated Motion)			
39	5C Gravity and Free Fall (continued)	99–106		<input type="checkbox"/> Tie in the opening dominion science problem here by discussing elevators and how they enable modern cities to develop.
40	Chapter 5 Review			
41	Chapter 5 Test			
<b>Chapter 6: Energy</b>				
42	6A The Nature of Energy	109–11	See <i>PHYSICAL SCIENCE</i> 5 <sup>th</sup> Edition Teacher's Toolkit CD: <input type="checkbox"/> Visual Gallery Slides (5) <input type="checkbox"/> Section Quizzes (3) <input type="checkbox"/> Chapter 6 Practice Problems	<input type="checkbox"/> Open the chapter by discussing the dominion science problem about the urban heat island effect. <input type="checkbox"/> Explain that ultimately it is God's sustaining power that holds the physical universe together. Forces are just one manifestation of this power (margin box, page 110).
43	Lab 6A, <i>Hold Your Horses</i> (Work, Energy, and Power)			
44	6B Classification of Energy	112–18		
45	6C Conservation Laws	119–25		<input type="checkbox"/> Tie in the opening dominion science problem here by discussing how to

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46				reduce the urban heat island effect and to conserve energy in order to be better stewards of God's creation.
47	Lab 6B, <i>Sports Kitty (Part 2)</i> (Acceleration, Energy, and Power)			
48	Chapter 6 Review			
49	Chapter 6 Test			
<b>Chapter 7: Work and Simple Machines</b>				
50	7A Work and Mechanical Advantage	128–34	See <i>PHYSICAL SCIENCE</i> 5 <sup>th</sup> Edition Teacher's Toolkit CD: <input type="checkbox"/> Visual Gallery Slides (5) <input type="checkbox"/> Section Quizzes (4) <input type="checkbox"/> Chapter 7 Practice Problems	<input type="checkbox"/> Kick off the chapter by discussing the dominion science problem about timekeeping, especially the period when the railroad began to transform people's lives. <input type="checkbox"/> Exercising dominion is not only creating things that are functional, but beautiful. Both of these attributes reflect the Creator. <input type="checkbox"/> Tie in the opening dominion science problem here by discussing how the Great Clock of Westminster works and helps people.
51				
52	7B Levers and the Law of Torques	135–40		
53	Lab 7A, <i>Gaining an Advantage</i> (First-Class Levers)			
54	7C Wheels, Gears, and Pulleys	140–45		<input type="checkbox"/> Prod students to give examples of wheel-like features in God's Creation. <input type="checkbox"/> Seek out examples of inclined planes, wedges, and screw-like features in God's Creation.
55	7D Inclined Planes, Wedges, and Screws	145–48		
56	Lab 7B, <i>Ramping Up</i> (Inclined Planes)			
57	Chapter 7 Review			
58	Chapter 7 Test			
<b>Chapter 8: Fluid Mechanics</b>				
59	8A Properties of Fluids	151–60	See <i>PHYSICAL SCIENCE</i> 5 <sup>th</sup> Edition Teacher's Toolkit CD: <input type="checkbox"/> Visual Gallery Slides (5) <input type="checkbox"/> Section Quizzes (3) <input type="checkbox"/> Chapter 8 Practice Problems  <input type="checkbox"/> Facet: The Human Circulatory "Hydraulic" System	<input type="checkbox"/> Begin the chapter by discussing the dominion science problem about the tsunamis in Japan (2011) and Indonesia (2004). <input type="checkbox"/> Tie in the opening dominion science problem here by discussing how scientists are working to use fluid pressure to develop a tsunami warning system. <input type="checkbox"/> Also be sure to mention Tilly Smith, a 10 year old who helped save lives on a beach in Thailand in 2004.
60				
61	Lab 8A, <i>Putting On the Squeeze</i> (Pressure)			

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62	8B Hydraulics and Fluid Flow	161–68		<input type="checkbox"/> Remind students that many of our best machines replicate features found in God’s creatures. <input type="checkbox"/> Boyle’s and Charles’s laws are additional workable descriptions of God’s unknowable created ordinances.
63				
64	8C Gas Laws	168–74		
65	Lab 8B, <i>How Cold Is Cold?</i> (Charles’s Law and Absolute Zero)			
66	Chapter 8 Review			
67	Chapter 8 Test			
<b>Chapter 9: Thermodynamics</b>				
68	9A Thermal Energy	177–84	See <i>PHYSICAL SCIENCE</i> 5 <sup>th</sup> Edition Teacher’s Toolkit CD: <input type="checkbox"/> Visual Gallery Slides (7) <input type="checkbox"/> Section Quizzes (3) <input type="checkbox"/> Chapter 9 Practice Problems	<input type="checkbox"/> Open the chapter by discussing the dominion science problem about exploring renewable energy resources. <input type="checkbox"/> Expand your students’ view of science by examining how worldviews affect the objectivity of scientists’ work. <input type="checkbox"/> Tie in the opening dominion science problem here by discussing solar thermal power plants as one method of renewable energy generation.
69				
70	9B Temperature	184–89		<input type="checkbox"/> Show how the development of temperature scales was another example of dominion and modeling.
71				
72	9C Heat	190–99		
73				
74	Lab 9A, <i>Hunting the Hidden Energy (Part 1)</i> (Latent Heat of Fusion)			
75	Lab 9B, <i>Hunting the Hidden Energy (Part 2)</i> (Latent Heat of Vaporization)			
76	Chapter 9 Review			
77	Chapter 9 Test			
<b>Unit 3: Electromagnetism</b>				
<b>Chapter 10: Electricity</b>				
78	10A Static Electricity and Electric Fields	204–9	See <i>PHYSICAL SCIENCE</i> 5 <sup>th</sup> Edition Teacher’s Toolkit CD: <input type="checkbox"/> Visual Gallery Slides (3) <input type="checkbox"/> Section Quizzes (4) <input type="checkbox"/> Chapter 10 Practice Problems	<input type="checkbox"/> Kick off the chapter by discussing the dominion science problem about how people in the Middle Ages viewed lightning and God’s judgment.
79	Lab 10A, <i>Charge!</i> (Electrical Charge)			
80	10B Detecting, Transferring, and Storing Charges	210–15		<input type="checkbox"/> Tie in the opening dominion science problem here by discussing the invention of the lightning rod. <input type="checkbox"/> Students will be forced to review their own ideas about God’s purposes behind natural disasters and other effects that we find in a fallen world.
81	10C Electrical Current and Ohm’s Law	215–22		<input type="checkbox"/> Ask your students, “How has life changed for people since the

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82				invention of electricity? Is this a blessing or a curse?"
83	10D Electrical Circuits and Safety	223–25		<input type="checkbox"/> Motivate students to see inventions in electrical safety as a way to love their neighbors.
84	Lab 10B, <i>Staying on the Path</i> (Electrical Circuits)			
85	Chapter 10 Review			
86	Chapter 10 Test			
<b>Chapter 11: Magnetism</b>				
87	11A Magnetism and Magnets	228–34	See <i>PHYSICAL SCIENCE</i> 5 <sup>th</sup> Edition Teacher's Toolkit CD: <input type="checkbox"/> Visual Gallery Slides (6) <input type="checkbox"/> Section Quizzes (3)	<input type="checkbox"/> Begin the chapter by discussing the dominion science problem about traffic and pollution in big cities. <input type="checkbox"/> Point out to students that lacking an appreciation for the orderliness of God's creation can leave one open to believing in magical or occult phenomena.
88	Lab 11A, <i>Ahead of the Curve</i> (Magnetic Fields)			
89	11B Electromagnetism	235–41		
90				
91	11C Using Electromagnetism	242–49		<input type="checkbox"/> Tie in the opening dominion science problem here by discussing maglev trains and how they can help society. Be sure to note the difficulties as well as the benefits of this technology.
92	Lab 11B, <i>Magnetic Might</i> (Electromagnetism)			
93	Chapter 11 Review			
94	Chapter 11 Test			
<b>Unit 4: Periodic Phenomena</b>				
<b>Chapter 12: Periodic Motion and Waves</b>				
95	12A Periodic Motion	254–60	See <i>PHYSICAL SCIENCE</i> 5 <sup>th</sup> Edition Teacher's Toolkit CD: <input type="checkbox"/> Visual Gallery Slides (6) <input type="checkbox"/> Section Quizzes (3) <input type="checkbox"/> Chapter 12 Practice Problems	<input type="checkbox"/> Open the chapter by discussing the dominion science problem about very accurately measuring time. <input type="checkbox"/> Discuss how God has built in certain properties of creation (such as periodic motion) that help us express ourselves through beautiful music.
96				
97	12B Pendulums	260–64		
98	Lab 12A, <i>Tick Tock</i> (The Physics of Pendulums)			
99	12C Waves	264–74		<input type="checkbox"/> Tie in the opening dominion science problem here by discussing how atomic clocks, which rely on the periodic motions of atoms, provide the necessary accuracy for many modern technologies.
100				
101	Lab 12B, <i>Springing Back</i> (Periodic Motion and Frequency)			
102	Chapter 12 Review			
103	Chapter 12 Test			
<b>Chapter 13: Sound</b>				

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104	13A The Science of Sound	277–85	See <i>PHYSICAL SCIENCE</i> 5 <sup>th</sup> Edition Teacher's Toolkit CD: <input type="checkbox"/> Visual Gallery Slides (10) <input type="checkbox"/> Section Quizzes (3) <input type="checkbox"/> Facet: Musical Instruments	<input type="checkbox"/> Kick off the chapter by discussing the dominion science problem about helping buildings survive earthquakes. <input type="checkbox"/> Point out that learning to communicate with people who cannot hear is a valuable area of Christian ministry.
105				
106	Lab 13A, <i>Sounding Off</i> (The Properties of Sound)			
107	13B The Human Voice and Hearing	286–89		<input type="checkbox"/> Studying the construction of the human anatomy is important for seeing God's creativity and economy in His design of His image bearers. <input type="checkbox"/> Artificial echolocation is another example of technology that emulates design in creation. <input type="checkbox"/> Tie in the opening dominion science problem here by discussing how people can use knowledge of seismic waves to retrofit buildings so that they are more resistant to earthquakes.
108	13C Applications of Sound	290–96		
109	Lab 13B, <i>Playing in Tune</i> (Musical Instruments)			
110	Chapter 13 Review			
111	Chapter 13 Test			
<b>Chapter 14: Electromagnetic Energy</b>				
112	14A Electromagnetic Waves	299–305	See <i>PHYSICAL SCIENCE</i> 5 <sup>th</sup> Edition Teacher's Toolkit CD: <input type="checkbox"/> Visual Gallery Slides (12) <input type="checkbox"/> Section Quizzes (3)	<input type="checkbox"/> Begin the chapter by discussing the dominion science problem about saving people's lives through cancer treatment.
113	Lab 14A, <i>Photonic Falloff</i> (The Inverse Square Law)			
114	14B Electromagnetic Spectrum	306–14		<input type="checkbox"/> Tie in the opening dominion science problem here by discussing how radiotherapy is used to treat cancer. <input type="checkbox"/> The <i>Redeeming Resonance</i> facet on page 316, highlighting the invention of MRI, will show students that Bible-believing Christians are able to make great and useful discoveries in science. <input type="checkbox"/> Stimulate student discussion about RFID technology and any relationship it might have to the "mark of the Beast" mentioned in Revelation.
115				
116	14C Radio-Frequency Technology	314–22		
117	Lab 14B, <i>Spectacular Spectra</i> (The Visible Light Spectrum)			
118	Chapter 14 Review			
119	Chapter 14 Test			
<b>Chapter 15: Light and Optics</b>				
120	15A Visible Light and Its Sources	325–32	See <i>PHYSICAL SCIENCE</i> 5 <sup>th</sup> Edition Teacher's Toolkit CD: <input type="checkbox"/> Visual Gallery Slides (15)	<input type="checkbox"/> Open the chapter by discussing the dominion science problem about the importance of reducing the need for major exploratory surgeries.

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121			<input type="checkbox"/> Section Quizzes (4) <input type="checkbox"/> Lab Demonstration: Color Filters and Light Spectra	<input type="checkbox"/> Trigger student discussion by asking the question, “In view of the finite speed of light, how can a young-earth creationist explain the distance to most stellar and galactic objects?”
122	15B The Nature of Color	332–36		<input type="checkbox"/> The perceptual nature of vision is fertile ground for exploring philosophical questions about what is real.
123	15C Reflection and Mirrors	336–40		
124	Lab 15A, <i>Mirror Image</i> (Mirrors and Virtual Images)			
125	15D Refraction and Lenses	341–49		<input type="checkbox"/> Tie in the opening dominion science problem here by discussing the use of fiber optics in endoscopy. <input type="checkbox"/> A worldview conflict is evident in interpreting the significance of the rainbow.
126				
127	Lab 15B, <i>Bending Light</i> (Lenses)			
128	Chapter 15 Review			
129	Chapter 15 Test			

## Unit 5: The Structure of Matter

### Chapter 16: The Atom

130	16A The Atomic Model	354–61	See <i>PHYSICAL SCIENCE</i> 5 <sup>th</sup> Edition Teacher’s Toolkit CD: <input type="checkbox"/> Visual Gallery Slides (12) <input type="checkbox"/> Section Quizzes (3) <input type="checkbox"/> Google Earth model: Walking Around an Atom <input type="checkbox"/> Chapter 16 Problem Set	<input type="checkbox"/> Kick off the chapter by discussing the dominion science problem about saving people from deaths and injuries in house fires.
131				
132	16B The Orderly Atom	361–69		<input type="checkbox"/> Examine the premises of oxygen isotope radio dating of ice cores and how their interpretations are based on one’s view of the earth’s history.
133				
134	Lab 16A, <i>Visualizing the Invisible</i> (Modeling the Atom)			
135	16C The Nuclear Atom	370–79		<input type="checkbox"/> Tie in the opening dominion science problem here by discussing how smoke detectors use radioactive decay.
136				<input type="checkbox"/> Help students unravel the assumptions behind radioactive dating methods. <input type="checkbox"/> Probe students’ views of radioactive decay in light of a “very good” creation.
137	Lab 16B, <i>Probabilities</i> (Radioactive Decay)			
138	Chapter 16 Review			
139	Chapter 16 Test			

### Chapter 17: Elements and the Periodic Table

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140	17A A Brief History of the Elements	382–87	See Physical Science 5th Edition Teacher's Toolkit CD: <input type="checkbox"/> Visual Gallery Slides (9) <input type="checkbox"/> Section Quizzes (4) <input type="checkbox"/> Chapter 17 Practice Problems	<input type="checkbox"/> Begin the chapter by discussing the dominion science problem about pollution from automobiles. <input type="checkbox"/> Reinforce with students how identification and classifying are important aspects of biblical dominion.
141	17B The Periodic Table	388–94		
142	Lab 17A, <i>Colorful Fingerprints</i> (Flame Tests and Spectroscopy)			
143	17C Classes of Elements	394–404		<input type="checkbox"/> Alert students to the problems with a deep-time view of Earth's history when it comes to examining helium diffusion rates in igneous rocks. <input type="checkbox"/> Tie in the opening dominion science problem here by discussing fuel cell technology in automobiles.
144				
145	17D Periodic Trends	404–7		
146	Lab 17B, <i>Periodic Puzzle</i> (The Periodic Table)			
147	Chapter 17 Review			
148	Chapter 17 Test			

## Unit 6: Introduction to Chemistry

### Chapter 18: Bonding and Compounds

149	18A Principles of Bonding	412–17	See <i>PHYSICAL SCIENCE</i> 5 <sup>th</sup> Edition Teacher's Toolkit CD: <input type="checkbox"/> Visual Gallery Slides (7) <input type="checkbox"/> Section Quizzes (4) <input type="checkbox"/> Activities 18-1 Covalent Bonding 18-2 Ionic Bonding 18-3 Bonding Summary	<input type="checkbox"/> Open the chapter by discussing the dominion science problem about relieving people's pain.
150	18B Covalent Bonds	418–25		<input type="checkbox"/> Tie in the opening dominion science problem here by discussing how covalent compounds can relieve pain. <input type="checkbox"/> Have students consider how pain relief is just another important aspect of mitigating the effects of the Fall.
151				
152	18C Ionic Bonds	426–430		
153	18D Metallic Bonds	430–33		
154	Lab 18A, <i>Bonding Time</i> (Identifying Chemical Bonds)			
155	Lab 18B, <i>Bits and Pieces</i> (Elements and Compounds)			
156	Chapter 18 Review			
157	Chapter 18 Test			

### Chapter 19: Chemical Reactions

158	19A Compounds and Chemical Formulas	436–445	See <i>PHYSICAL SCIENCE</i> 5 <sup>th</sup> Edition Teacher's Toolkit CD: <input type="checkbox"/> Visual Gallery Slides (5)	<input type="checkbox"/> Launch the chapter by discussing the dominion science problem about engine knock in gasoline cars. <input type="checkbox"/> Don't let naming compounds be a
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159			<input type="checkbox"/> Section Quizzes (3) <input type="checkbox"/> Activities: 19-1 Chemical Formulas 19-2 Chemical Equations	useless exercise! Help students find meaning in this work by discussing how naming compounds is important for dominion.	
160	19B Chemical Changes	445–449			
161	19C Types of Chemical Reactions	450–454		Tie in the opening dominion science problem here by discussing chemicals in gasoline called <i>anti-knocking agents</i> .	
162	Lab 19A, <i>Bubbling Up</i> (Chemical Reactions)				
163	Lab 19B, <i>Overreacting</i> (Types of Chemical Reactions [Demonstration])				
164	Chapter 19 Review				
165	Chapter 19 Test				
<b>Chapter 20: Mixtures and Solutions</b>					
166	20A Heterogeneous Mixtures	457–61	See <i>PHYSICAL SCIENCE</i> 5 <sup>th</sup> Edition Teacher's Toolkit CD: <input type="checkbox"/> Visual Gallery Slides (5) <input type="checkbox"/> Section Quizzes (3)	<input type="checkbox"/> Begin the chapter by discussing the dominion science problem about the worldwide need for fresh water. <input type="checkbox"/> Stimulate student discussion by asking, "Can a secular scientist or even an atheist make valuable scientific discoveries?"	
167	Lab 20A, <i>All Mixed Up</i> (Separating Mixtures)				
168	20B Homogeneous Mixtures: Solutions	462–72			
169	20C Solution Concentration	472–78		<input type="checkbox"/> Tie in the opening dominion science problem here by discussing desalination as part of the solution to worldwide water needs.	
170	Lab 20B, <i>Transitions</i> (The Mole and Solutions)				
171	Chapter 20 Review				
172	Chapter 20 Test				
<b>Chapter 21: Acids, Bases, and Salts</b>					
173	21A Acids and Bases	482–91	See <i>PHYSICAL SCIENCE</i> 5 <sup>th</sup> Edition Teacher's Toolkit CD: <input type="checkbox"/> Visual Gallery Slides (6) <input type="checkbox"/> Section Quizzes (3)	<input type="checkbox"/> Open the chapter by discussing the dominion science problem about indigestion.	
174					<input type="checkbox"/> Tie in the opening dominion science problem here by discussing antacids.
175	21B Salts	492–94			
176	21C Acidity and Alkalinity	495–503			
177	Lab 21A, <i>Making Lemonade</i> (Determining pH)				
178	Lab 21B, <i>Sour Stomach</i> (Acid-Base Neutralization)				
179	Chapter 21 Review. Discuss with your students the last section addressing a vocational challenge.				
180	Chapter 21 Test				

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