

Resource Integration Guide

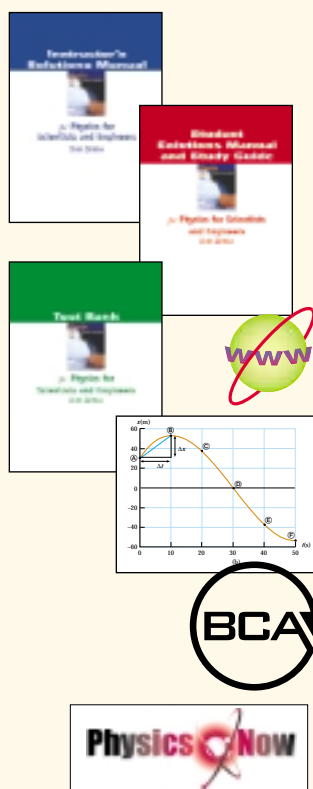


Welcome to your Resource Integration Guide

We've done your homework for you!

The **Resource Integration Guide** on the next 22 pages correlates each of the supplementary items listed below with this book. For detailed descriptions of these items, turn to pages 14–16 of the preceding Preview. With this easy-to-use tool, you can quickly compile a teaching and learning program that complements both the text and your personal teaching style. The guide provides grids that link the outlines for Chapters 1–22—topic by topic—to the following:

Resource Integration Guide				
CHAPTER 1 • PHYSICS AND MEASUREMENT				
Chapter Outline	Print Resources	Web and Multimedia Resources	PhysicsNow	
Chapter Objectives	Chapter Objectives Section 1.1: The Nature of Science Section 1.2: Kinematics Section 1.3: Dynamics Section 1.4: Kinematics Section 1.5: Dynamics Section 1.6: Kinematics Section 1.7: Dynamics Section 1.8: Kinematics Section 1.9: Dynamics Section 1.10: Kinematics Section 1.11: Dynamics Section 1.12: Kinematics Section 1.13: Dynamics Section 1.14: Kinematics Section 1.15: Dynamics Section 1.16: Kinematics Section 1.17: Dynamics Section 1.18: Kinematics Section 1.19: Dynamics Section 1.20: Kinematics Section 1.21: Dynamics Section 1.22: Kinematics Section 1.23: Dynamics Section 1.24: Kinematics Section 1.25: Dynamics Section 1.26: Kinematics Section 1.27: Dynamics Section 1.28: Kinematics Section 1.29: Dynamics Section 1.30: Kinematics Section 1.31: Dynamics Section 1.32: Kinematics Section 1.33: Dynamics Section 1.34: Kinematics Section 1.35: Dynamics Section 1.36: Kinematics Section 1.37: Dynamics Section 1.38: Kinematics Section 1.39: Dynamics Section 1.40: 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Instructor's Solutions Manual

Student Solutions Manual and Study Guide

Test Bank

Web site to accompany *Physics for Scientists and Engineers, Sixth Edition* at <http://www.pse6.com>

Transparency Acetates

BCA Testing software

PhysicsNow—the first assessment-centered student learning tool for physics!

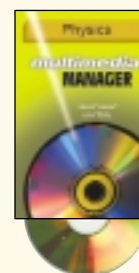
WebTutor™ Advantage on WebCT and Blackboard

WebTUTOR™ Advantage



Multiple online course management/home-work systems including *PhysicsNow PLUS!*

Multimedia Manager for Serway/Jewett's *Physics for Scientists and Engineers, Sixth Edition: A Microsoft® PowerPoint® Link Tool*










Core Concepts in *Physics CD-ROM, Version 2.0*



Check out the **Resource Integration Guide** for Chapters 23–46 located online at the **Instructor's Resource** section of the text's **Companion Web Site** at [http://www.pse6.com!](http://www.pse6.com)








CHAPTER 1 ■ PHYSICS AND MEASUREMENT

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume I, Chapter 1</p> <p>Student Solutions Manual and Study Guide Volume I, Chapter 1</p> <p>Test Bank Volume I, Chapter 1</p> <p>BCA Testing Volume I, Chapter 1 </p> <p>Transparency Acetates Volume I, Chapter 1</p>	<p>Companion Web Site Online Chapter 1 at http://www.pse6.com </p> <p>Online Course/Homework Management Systems Chapter 1</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage for WebCT and Blackboard  ■ PhysicsNow Plus  ■ WebAssign ■ UT-Austin Homework Service ■ CAPA <p>Multimedia Manager Volume I, Chapter 1 Microsoft® PowerPoint® lecture tool with images </p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action </p>	<p>PhysicsNow  Online Chapter 1 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Standards of Length, Mass, and Time		Multimedia Manager See slides for Section 1.1	
Matter and Model Building		Multimedia Manager See slides for Section 1.2	
Density and Atomic Mass	Test Bank Questions 2, 8, 11-13	Multimedia Manager See slides for Section 1.3	Coached Problems Problem 7
Dimensional Analysis	Test Bank Questions 4-7	Multimedia Manager See slides for Section 1.4	
		Core Concepts in Physics 2.0 CD-ROM Video 1.5: <i>Orders of Magnitude and Dimensional Analysis</i>	
Conversion of Units	Test Bank Questions 1, 9, 10, 14	Multimedia Manager See slides for Section 1.5	Coached Problems Problems 31, 39
		Core Concepts in Physics 2.0 CD-ROM Video 1.5: <i>Orders of Magnitude and Dimensional Analysis</i>	
Estimates and Order-of-Magnitude Calculations	Test Bank Question 3	Multimedia Manager See slides for Section 1.6	Coached Problems Problem 41
Significant Figures		Multimedia Manager See slides for Section 1.7	








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CHAPTER 2 ■ MOTION IN ONE DIMENSION

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume I, Chapter 2</p> <p>Student Solutions Manual and Study Guide Volume I, Chapter 2</p> <p>Test Bank Volume I, Chapter 2</p> <p>BCA Testing Volume I, Chapter 2 </p> <p>Transparency Acetates Volume I, Chapter 2</p>	<p>Companion Web Site Online Chapter 2 at http://www.pse6.com </p> <p>Online Course/Homework Management Systems Chapter 2</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage for WebCT and Blackboard  ■ PhysicsNow Plus  ■ WebAssign ■ UT-Austin Homework Service ■ CAPA <p>Multimedia Manager Volume I, Chapter 2 Microsoft® PowerPoint® lecture tool with images </p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action </p>	<p>PhysicsNow  Online Chapter 2 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Position, Velocity, and Speed	<p>Test Bank Questions 1, 7, 42, 44 Acetate 1</p>	<p>Multimedia Manager See slides for Section 2.1</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 3.2: <i>Displacement, Velocity, and Speed</i></p>	<p>Active Figures Figure 2.1</p>
Instantaneous Velocity and Speed	<p>Test Bank Questions 3, 5, 33, 34, 47, 50 Acetate 2</p>	<p>Multimedia Manager See slides for Section 2.2</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 3.3: <i>Instantaneous Velocity and Acceleration</i></p>	<p>Active Figures Figure 2.3</p> <p>Coached Problems Problem 2</p>
Acceleration	<p>Test Bank Questions 2, 4, 6, 8-10, 46 Acetate 2</p>	<p>Multimedia Manager See slides for Section 2.3</p>	<p>Coached Problems Problem 15</p>
Motion Diagrams	<p>Test Bank Questions 37, 39, 41 Acetate 3</p>	<p>Multimedia Manager See slides for Section 2.4</p>	<p>Active Figures Figure 2.9</p>
One-Dimensional Motion with Constant Acceleration	<p>Test Bank Questions 11-20, 31, 32, 48, 49, 52, 53 Acetate 4</p>	<p>Multimedia Manager See slides for Section 2.5</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 3.4: <i>One-Dimensional Motion at Constant Acceleration</i></p>	<p>Active Figures Figures 2.10, 2.11</p> <p>Coached Problems Problem 21</p> <p>Interactive Worked Examples Example 2.8</p>
Freely Falling Objects	<p>Test Bank Questions 21-30, 36, 38, 40, 43, 45, 51 Acetate 5</p>	<p>Multimedia Manager See slides for Section 2.6</p>	<p>Active Figures, Figure 2.13</p> <p>Coached Problems, Problems 43, 49</p> <p>Interactive Worked Examples, Example 2.12</p>
Kinematic Equations Derived from Calculus	<p>Test Bank Question 35</p>	<p>Multimedia Manager See slides for Section 2.7</p>	








CHAPTER 3 ■ VECTORS

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume I, Chapter 3</p> <p>Student Solutions Manual and Study Guide Volume I, Chapter 3</p> <p>Test Bank Volume I, Chapter 3</p> <p>BCA Testing Volume I, Chapter 3 </p> <p>Transparency Acetates Volume I, Chapter 3</p>	<p>Companion Web Site Online Chapter 3 at http://www.pse6.com </p> <p>Online Course/Homework Management Systems Chapter 3</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage for WebCT and Blackboard  ■ PhysicsNow Plus  ■ WebAssign ■ UT-Austin Homework Service ■ CAPA <p>Multimedia Manager Volume I, Chapter 3 Microsoft® PowerPoint® lecture tool with images </p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action </p>	<p>PhysicsNow  Online Chapter 3 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Coordinate Systems	Acetate 6	<p>Multimedia Manager See slides for Section 3.1</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 2.2: <i>Coordinate Systems</i></p>	<p>Active Figures Figures 3.2, 3.3</p> <p>Coached Problems Problem 1</p>
Vector and Scalar Quantities	<p>Test Bank Questions 2, 5, 6, 9, 13-20, 22-24, 28, 30-35 Acetate 7</p>	<p>Multimedia Manager See slides for Section 3.2</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 2.3: <i>Vector and Scalar Quantities</i></p>	
Some Properties of Vectors	<p>Test Bank Questions 1, 3, 4, 7, 8, 10-12, 21, 25-27, 29, 36-39 Acetate 8</p>	<p>Multimedia Manager See slides for Section 3.3</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 2.4: <i>Vector Addition and Subtraction</i></p>	<p>Active Figures Figure 3.6</p> <p>Coached Problems Problems 11, 15</p>
Components of a Vector and Unit Vectors		<p>Multimedia Manager See slides for Section 3.4</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 2.5: <i>Vector Components and Unit Vectors</i></p>	<p>Active Figures Figure 3.16</p> <p>Coached Problems Problems 19, 49</p> <p>Interactive Worked Examples Example 3.5</p>

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CHAPTER 4 ■ MOTION IN TWO DIMENSIONS

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume I, Chapter 4</p> <p>Student Solutions Manual and Study Guide Volume I, Chapter 4</p> <p>Test Bank Volume I, Chapter 4</p> <p>BCA Testing Volume I, Chapter 4 </p> <p>Transparency Acetates Volume I, Chapter 4</p>	<p>Companion Web Site Online Chapter 4 at http://www.pse6.com </p> <p>Online Course/Homework Management Systems Chapter 4</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage for WebCT and Blackboard  ■ PhysicsNow Plus  ■ WebAssign ■ UT-Austin Homework Service ■ CAPA <p>Multimedia Manager Volume I, Chapter 4 Microsoft® PowerPoint® lecture tool with images </p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action </p>	<p>PhysicsNow  Online Chapter 4 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
The Position, Velocity, and Acceleration Vectors	Test Bank Questions 39, 40, 49-52 Acetate 9	Multimedia Manager See slides for Section 4.1	Coached Problems Problem 1
Two-Dimensional Motion with Constant Acceleration	Test Bank Questions 1-7 Acetate 10	Multimedia Manager See slides for Section 4.2	Active Figures Figure 4.5
Projectile Motion	Test Bank Questions 8-15, 38, 41, 46-48, 53-56, 58, 59 Acetates 11, 12	Multimedia Manager See slides for Section 4.3	Active Figures Figures 4.7, 4.11 Coached Problems Problems 11, 19 Interactive Worked Examples Examples 4.4, 4.5
Uniform Circular Motion	Test Bank Questions 16-22, 37, 57 Acetate 13	Multimedia Manager See slides for Section 4.4	Coached Problems Problem 27
Tangential and Radial Acceleration	Test Bank Questions 23-30, 44 Acetate 13	Multimedia Manager See slides for Section 4.5	Active Figures Figure 4.18
Relative Velocity and Relative Acceleration	Test Bank Questions 31-36, 42, 43, 45 Acetate 14	Multimedia Manager See slides for Section 4.6	

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CHAPTER 5 ■ THE LAWS OF MOTION

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	See the Instructor's Solutions Manual Volume I, Chapter 5 Student Solutions Manual and Study Guide Volume I, Chapter 5 Test Bank Volume I, Chapter 5 BCA Testing Volume I, Chapter 5  Transparency Acetates Volume I, Chapter 5	Companion Web Site Online Chapter 5 at http://www.pse6.com  See options for Online Course/Homework Management Systems Chapter 5  Multimedia Manager Volume I, Chapter 5  Microsoft® <i>PowerPoint</i> ® lecture tool with images Core Concepts in Physics 2.0 CD-ROM  Multimedia presentation of physics concepts in action	PhysicsNow  Online Chapter 5 at http://www.pse6.com . This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.
The Concept of Force	Test Bank Questions 30, 31 Acetate 15	Multimedia Manager See slides for Section 5.1 Core Concepts in Physics 2.0 CD-ROM Video 4.2: <i>Motion, Newton's First Law, and Inertial Frames</i>	
Newton's First Law and Inertial Frames		Multimedia Manager See slides for Section 5.2 Core Concepts in Physics 2.0 CD-ROM Video 4.2: <i>Motion, Newton's First Law, and Inertial Frames</i>	
Mass		Multimedia Manager See slides for Section 5.3 Core Concepts in Physics 2.0 CD-ROM Video 4.3: <i>Inertia, Mass, Weight</i>	
Newton's Second Law	Test Bank Questions 8, 10-12, 26, 27, 32, 34, 35, 100	Multimedia Manager See slides for Section 5.4 Core Concepts in Physics 2.0 CD-ROM Video 4.4: <i>Newton's Second Law and the Equation of Motion</i>	Coached Problems Problem 5
The Gravitational Force and Weight		Multimedia Manager See slides for Section 5.5 Core Concepts in Physics 2.0 CD-ROM Video 4.3: <i>Inertia, Mass, Weight</i>	
Newton's Third Law	Test Bank Questions 28, 33, 87, 90-93, 95, 96 Acetate 16	Multimedia Manager See slides for Section 5.6 Core Concepts in Physics 2.0 CD-ROM Video 4.5: <i>Newton's Third Law</i>	
Some Applications of Newton's Laws	Test Bank Questions 1-7, 9, 13-25, 29, 36, 37, 40-61, 64, 69, 88, 89, 97-99 Acetates 17, 18	Multimedia Manager See slides for Section 5.7 Core Concepts in Physics 2.0 CD-ROM Video 4.6: <i>Free Body Diagrams</i>	Active Figures Figures 5.12, 5.14 Coached Problems Problems 23, 25 Interactive Worked Examples Examples 5.9, 5.10
Forces of Friction	Test Bank Questions 38, 39, 62, 63, 65-68, 70-86, 94, 101 Acetate 19	Multimedia Manager See slides for Section 5.8	Active Figures Figures 5.16, 5.19 Coached Problems Problem 41







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CHAPTER 6 ■ CIRCULAR MOTION AND OTHER APPLICATIONS OF NEWTON'S LAWS

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume I, Chapter 6</p> <p>Student Solutions Manual and Study Guide Volume I, Chapter 6</p> <p>Test Bank Volume I, Chapter 6</p> <p>BCA Testing Volume I, Chapter 6 </p> <p>Transparency Acetates Volume I, Chapter 6</p>	<p>Companion Web Site Online Chapter 6 at http://www.pse6.com </p> <p>Online Course/Homework Management Systems Chapter 6</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage for WebCT and Blackboard  ■ PhysicsNow Plus  ■ WebAssign ■ UT-Austin Homework Service ■ CAPA <p>Multimedia Manager Volume I, Chapter 6 Microsoft® PowerPoint® lecture tool with images </p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action </p>	<p>PhysicsNow  Online Chapter 6 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Newton's Second Law Applied to Uniform Circular Motion	<p>Test Bank Questions 1-16, 20, 22-30, 32, 34-36</p> <p>Acetates 20, 21, 22</p>	<p>Multimedia Manager See slides for Section 6.1</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 4.7: <i>Centripetal Force</i></p>	<p>Active Figures Figure 6.2</p> <p>Interactive Worked Examples Examples 6.4, 6.5</p>
Nonuniform Circular Motion	<p>Test Bank Questions 17-19, 21, 31, 33, 37</p> <p>Acetate 22</p>	<p>Multimedia Manager See slides for Section 6.2</p>	<p>Active Figures Figure 6.8</p> <p>Coached Problems Problems 15, 17</p> <p>Interactive Worked Examples Example 6.7</p>
Motion in Accelerated Frames	<p>Acetate 23</p>	<p>Multimedia Manager See slides for Section 6.3</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 4.8: <i>Fictitious Forces</i></p>	<p>Active Figures Figure 6.12</p>
Motion in the Presence of Resistive Forces	<p>Acetate 24</p>	<p>Multimedia Manager See slides for Section 6.4</p>	<p>Active Figures Figure 6.15</p> <p>Coached Problems Problem 39</p>
Numerical Modeling in Particle Dynamics		<p>Multimedia Manager See slides for Section 6.5</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 4.9: <i>Forces in the Real World</i></p>	<p>Coached Problems Problem 45</p>









CHAPTER 7 ■ ENERGY AND ENERGY TRANSFER

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume I, Chapter 7 Student Solutions Manual and Study Guide Volume I, Chapter 7 Test Bank Volume I, Chapter 7 BCA Testing  Volume I, Chapter 7 Transparency Acetates Volume I, Chapter 7	Companion Web Site Online Chapter 7 at http://www.pse6.com  See options for Online Course/Homework Management Systems Chapter 7  Multimedia Manager Volume I, Chapter 7  Microsoft® <i>PowerPoint</i> ® lecture tool with images Core Concepts in Physics 2.0 CD-ROM  Multimedia presentation of physics concepts in action	PhysicsNow  Online Chapter 7 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.
Systems and Environments		Multimedia Manager See slides for Section 7.1	
Work Done by a Constant Force	Test Bank Questions 1-6, 50, 51, 54, 56, 63 Acetate 25	Multimedia Manager See slides for Section 7.2 Core Concepts in Physics 2.0 CD-ROM Video 5.2: <i>Work</i> ; Video 5.4: <i>Work Done to Accelerate a Mass</i>	Active Figures Figure 7.4 Coached Problems Problem 3
The Scalar Product of Two Vectors	Test Bank Questions 8, 40-49, 62 Acetate 26	Multimedia Manager See slides for Section 7.3 Core Concepts in Physics 2.0 CD-ROM Video 2.6: <i>The Dot Product</i> ; Video 5.2: <i>Work</i>	Coached Problems Problem 7
Work Done by a Varying Force	Test Bank Questions 9-12, 66 Acetates 27, 28	Multimedia Manager See slides for Section 7.4 Core Concepts in Physics 2.0 CD-ROM Video 5.3: <i>Important Examples in Work</i> ; Video 5.4: <i>Work Done to Accelerate a Mass</i> ; Video 5.5: <i>Energy</i> ; Video 5.7: <i>Work-Energy Theorem</i>	Active Figures Figure 7.10 Coached Problems Problem 13
Kinetic Energy and the Work-Energy Theorem		Multimedia Manager See slides for Section 7.5	
The Nonisolated System-Conservation of Energy	Test Bank Questions 7, 14, 15, 17, 27-32, 34-39, 52, 57-60, 64, 67-69	Multimedia Manager See slides for Section 7.6 Core Concepts in Physics 2.0 CD-ROM Video 5.5: <i>Energy</i>	Active Figures Figure 7.16
Situations Involving Kinetic Friction	Test Bank Questions 13, 16, 18, 33, 55, 61, 65	Multimedia Manager See slides for Section 7.7 Core Concepts in Physics 2.0 CD-ROM Video 5.7: <i>Work Energy Theorem</i>	Coached Problems Problem 35 Interactive Worked Examples Examples 7.9, 7.11
Power	Test Bank Questions 19-26, 53	Multimedia Manager See slides for Section 7.8 Core Concepts in Physics 2.0 CD-ROM Video 5.8: <i>Power</i>	Coached Problems Problem 37
Energy and the Automobile	Test Bank Question 70	Multimedia Manager See slides for Section 7.9	







Resource Integration Guide



CHAPTER 8 - POTENTIAL ENERGY

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume I, Chapter 8</p> <p>Student Solutions Manual and Study Guide Volume I, Chapter 8</p> <p>Test Bank Volume I, Chapter 8</p> <p>BCA Testing Volume I, Chapter 8 </p> <p>Transparency Acetates Volume I, Chapter 8</p>	<p>Companion Web Site Online Chapter 8 at http://www.pse6.com </p> <p>Online Course/Homework Management Systems Chapter 8</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage  for WebCT and Blackboard ■ PhysicsNow Plus  ■ WebAssign ■ UT-Austin Homework Service ■ CAPA <p>Multimedia Manager Volume I, Chapter 8 Microsoft® PowerPoint® lecture tool with images </p> <p>Core Concepts in Physics 2.0 CD-ROM  Multimedia presentation of physics concepts in action</p>	<p>PhysicsNow  Online Chapter 8 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Potential Energy of a System	Test Bank Question 44	<p>Multimedia Manager See slides for Section 8.1</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 5.5: <i>Energy</i> </p>	<p>Active Figures Figures 8.3, 8.4</p> <p>Interactive Worked Examples Examples 8.2, 8.4</p>
The Isolated System-Conservation of Mechanical Energy	Test Bank Questions 5-25, 42, 43, 46-51, 59, 61-64 Acetate 2	<p>Multimedia Manager See slides for Section 8.2</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 5.6: <i>Conservative Forces</i> Video 5.9: <i>Conservation of Energy</i></p>	
Conservative and Nonconservative Forces	Test Bank Questions 56-58	<p>Multimedia Manager See slides for Section 8.3</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 5.6: <i>Conservative Forces</i></p>	
Changes in Mechanical Energy for Nonconservative Forces	Test Bank Questions 26-41, 52-55, 60 Acetate 30	<p>Multimedia Manager See slides for Section 8.4</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 5.7: <i>Work-Energy Theorem</i></p>	Coached Problems Problem 31
Relationship Between Conservative Forces and Potential Energy	Test Bank Questions 1-4, 45	Multimedia Manager See slides for Section 8.5	Coached Problems Problems 41, 43
Energy Diagrams and Equilibrium of a System	Acetate 31	<p>Multimedia Manager See slides for Section 8.6</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 5.6: <i>Conservative Forces</i></p>	Active Figures Figures 8.16, 8.16b

CHAPTER 9 ■ LINEAR MOMENTUM AND COLLISIONS

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume I, Chapter 9</p> <p>Student Solutions Manual and Study Guide Volume I, Chapter 9</p> <p>Test Bank Volume I, Chapter 9</p> <p>BCA Testing Volume I, Chapter 9 </p> <p>Transparency Acetates Volume I, Chapter 9</p>	<p>Companion Web Site Online Chapter 9 at http://www.pse6.com </p> <p>See options for Online Course/Homework Management Systems Chapter 9 </p> <p>Multimedia Manager Volume I, Chapter 9 Microsoft® PowerPoint® lecture tool with images </p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action </p>	<p>PhysicsNow Online  Chapter 9 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Linear Momentum and Its Conservation	<p>Test Bank Questions 49, 51, 61, 67, 72, 73</p>	<p>Multimedia Manager See slides for Section 9.1</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 6.2: <i>Linear Momentum and Its Conservation</i></p>	<p>Interactive Worked Examples Example 9.1</p>
Impulse and Momentum	<p>Test Bank Questions 1-8, 11, 53, 54, 56-60, 64, 70, 71</p>	<p>Multimedia Manager See slides for Section 9.2</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 6.3: <i>The General Form of Newton's Second Law</i> Video 6.4: <i>Impulse and the Impulse Approximation</i></p>	<p>Coached Problems Problem 9</p>
Collisions in One Dimension	<p>Test Bank Questions 9, 10, 12-28, 52, 62, 63 Acetates 32, 33, 34</p>	<p>Multimedia Manager See slides for Section 9.3</p>	<p>Active Figures Figures 9.8, 9.9 Coached Problems Problems 23, 25 Interactive Worked Examples Examples 9.5, 9.8</p>
Two-Dimensional Collisions	<p>Test Bank Questions 29-40 Acetate 34</p>	<p>Multimedia Manager See slides for Section 9.4</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 6.5: <i>Collisions (1)</i>; Video 6.6: <i>Collisions (2)</i></p>	<p>Active Figures Figure 9.13 Coached Problems Problem 37</p>
The Center of Mass	<p>Test Bank Questions 43, 47, 55 Acetates 35, 36</p>	<p>Multimedia Manager See slides for Section 9.5</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 6.7: <i>Center of Mass</i></p>	<p>Active Figures Figures 9.16, 9.17</p>
Motion of a System of Particles	<p>Test Bank Questions 41, 42, 48, 50, 65, 66, 69</p>	<p>Multimedia Manager See slides for Section 9.6</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 6.8: <i>Motion of a System of Particles</i></p>	
Rocket Propulsion	<p>Test Bank Questions 44-46, 68</p>	<p>Multimedia Manager See slides for Section 9.7</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 6.9: <i>Momentum in the Real World</i></p>	<p>Coached Problems Problem 49</p>







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CHAPTER 10 - ROTATION OF A RIGID OBJECT ABOUT A FIXED AXIS

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	See the Instructor's Solutions Manual Volume I, Chapter 10 Student Solutions Manual and Study Guide Volume I, Chapter 10 Test Bank Volume I, Chapter 10 BCA Testing Volume I, Chapter 10  Transparency Acetates Volume I, Chapter 10	Companion Web Site Online Chapter 10 at http://www.pse6.com  See options for Online Course/Homework Management Systems Chapter 10  Multimedia Manager Volume I, Chapter 10  Microsoft® <i>PowerPoint</i> ® lecture tool with images Core Concepts in Physics 2.0 CD-ROM  Multimedia presentation of physics concepts in action	PhysicsNow  Online Chapter 10 at http://www.pse6.com . This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.
Angular Position, Velocity, and Acceleration	Test Bank Questions 3, 46-48, 52-56, 59-63, 66 Acetate 37	Multimedia Manager See slides for Section 10.1 Core Concepts in Physics 2.0 CD-ROM Video 7.2: <i>Basic Concepts in Rotational Kinematics</i> Video 8.7: <i>Mathematical Nature of Waves (1)</i>	
Rotational Kinematics: Rotational Motion with Constant Angular Acceleration	Test Bank Questions 1, 2, 4-8, 10	Multimedia Manager See slides for Section 10.2	Coached Problems Problem 5
Angular and Linear Quantities	Test Bank Question 45 Acetates 37, 38	Multimedia Manager See slides for Section 10.3	Active Figures Figure 10.4 Coached Problems Problem 17
Rotational Kinetic Energy	Test Bank Questions 9, 21-27	Multimedia Manager See slides for Section 10.4 Core Concepts in Physics 2.0 CD-ROM Video 7.3: <i>Rotational Energy</i>	Coached Problems Problem 21
Calculation of Moments of Inertia	Test Bank Questions 57, 58 Acetate 38	Multimedia Manager See slides for Section 10.5 Core Concepts in Physics 2.0 CD-ROM Video 7.4: <i>Moment of Inertia of Rigid Bodies</i>	
Torque	Test Bank Question 49 Acetate 39	Multimedia Manager See slides for Section 10.6 Core Concepts in Physics 2.0 CD-ROM Video 7.5: <i>Torque</i>	Active Figures Figure 10.14 Coached Problems Problem 31
Relationship Between Torque and Angular Acceleration	Test Bank Questions 11-20, 28-35, 50 Acetate 40	Multimedia Manager See slides for Section 10.7	Coached Problems Problem 35 Interactive Worked Examples Examples 10.12, 10.13
Work, Power, and Energy in Rotational Motion	Test Bank Questions 36-44, 64, 65	Multimedia Manager See slides for Section 10.8 Core Concepts in Physics 2.0 CD-ROM Video 7.6: <i>Work, Energy, and Power in Rotational Motion</i>	Interactive Worked Examples Example 10.14
Rolling Motion of a Rigid Object	Test Bank Questions 51, 67 Acetate 9	Multimedia Manager ; See slides for Section 10.9 Core Concepts in Physics 2.0 CD-ROM Video 7.7: <i>Rolling Motion</i>	Active Figures ; Figure 10.30 Coached Problems Problem 51








CHAPTER 11 ■ ANGULAR MOMENTUM

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume I, Chapter 11</p> <p>Student Solutions Manual and Study Guide Volume I, Chapter 11</p> <p>Test Bank Volume I, Chapter 11</p> <p>BCA Testing Volume I, Chapter 11 </p> <p>Transparency Acetates Volume I, Chapter 11</p>	<p>Companion Web Site Online Chapter 11 at http://www.pse6.com </p> <p>Online Course/Homework Management Systems Chapter 11</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage for WebCT and Blackboard  ■ PhysicsNow Plus ■ WebAssign ■ UT-Austin Homework Service ■ CAPA <p>Multimedia Manager Volume I, Chapter 11 Microsoft® PowerPoint® lecture tool with images </p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action </p>	<p>PhysicsNow  Online Chapter 11 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
The Vector Product and Torque	<p>Test Bank Questions 1-3, 27, 28, 31 Acetate 42</p>	<p>Multimedia Manager See slides for Section 11.1</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 2.7: <i>The Cross Product</i></p>	<p>Active Figures Figure 11.1 Coached Problems Problem 3</p>
Angular Momentum	<p>Test Bank Questions 4, 6-9, 12, 13, 24-26, 33, 35 Acetate 43</p>	<p>Multimedia Manager See slides for Section 11.2</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 7.8: <i>Angular Momentum</i></p>	<p>Active Figures Figures 11.3, 11.4 Coached Problems Problem 13</p>
Angular Momentum of a Rotating Rigid Object	<p>Test Bank Questions 5, 10, 11, 19-22, 29, 30, 32, 36, 37 Acetate 44</p>	<p>Multimedia Manager See slides for Section 11.3</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 7.8: <i>Angular Momentum</i></p>	<p>Interactive Worked Examples Example 11.6</p>
Conservation of Angular Momentum	<p>Test Bank Questions 14-18, 23, 34 Acetate 44</p>	<p>Multimedia Manager See slides for Section 11.4</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 7.9: <i>Conservation of Angular Momentum</i></p>	<p>Coached Problems Problem 33 Interactive Worked Examples Example 11.10</p>
The Motion of Gyroscopes and Tops		<p>Multimedia Manager See slides for Section 11.5</p>	
Angular Momentum as a Fundamental Quantity		<p>Multimedia Manager See slides for Section 11.6</p>	

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CHAPTER 12 ■ STATIC EQUILIBRIUM AND ELASTICITY

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume I, Chapter 12</p> <p>Student Solutions Manual and Study Guide Volume I, Chapter 12</p> <p>Test Bank Volume I, Chapter 12</p> <p>BCA Testing Volume I, Chapter 12 </p> <p>Transparency Acetates Volume I, Chapter 12</p>	<p>Companion Web Site Online Chapter 12 at http://www.pse6.com </p> <p>Online Course/Homework Management Systems Chapter 12</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage  for WebCT and Blackboard ■ PhysicsNow Plus (icon)  ■ WebAssign ■ UT-Austin Homework Service ■ CAPA <p>Multimedia Manager Volume I, Chapter 12 Microsoft® PowerPoint® lecture tool with images </p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action </p>	<p>PhysicsNow  Online Chapter 12 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
The Conditions for Equilibrium	<p>Test Bank Questions 11, 12, 18 Acetate 45</p>	<p>Multimedia Manager See slides for Section 12.1</p>	<p>Coached Problems Problem 3</p>
More on the Center of Gravity	<p>Test Bank Questions 13-15 Acetate 45</p>	<p>Multimedia Manager See slides for Section 12.2</p>	<p>Coached Problems Problem 7</p>
Examples of Rigid Objects in Static Equilibrium	<p>Test Bank Questions 1-7, 17, 20 Acetate 46</p>	<p>Multimedia Manager See slides for Section 12.3</p>	<p>Interactive Worked Examples Examples 12.3, 12.4</p>
Elastic Properties of Solids	<p>Test Bank Questions 8-10, 16, 19, 21, 22 Acetate 47</p>	<p>Multimedia Manager See slides for Section 12.4</p>	<p>Active Figures Figures 12.14, 12.16, 12.17 Coached Problems Problem 33</p>



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CHAPTER 13 ■ UNIVERSAL GRAVITATION

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume I, Chapter 13</p> <p>Student Solutions Manual and Study Guide Volume I, Chapter 13</p> <p>Test Bank Volume I, Chapter 13</p> <p>BCA Testing Volume I, Chapter 13 </p> <p>Transparency Acetates Volume I, Chapter 13</p>	<p>Companion Web Site Online Chapter 13 at http://www.pse6.com </p> <p>Online Course/Homework Management Systems Chapter 13</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage for WebCT and Blackboard  ■ PhysicsNow Plus ■ WebAssign ■ UT-Austin Homework Service ■ CAPA <p>Multimedia Manager Volume I, Chapter 13 Microsoft® PowerPoint® lecture tool with images </p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action </p>	<p>PhysicsNow  Online Chapter 13 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Newton's Law of Universal Gravitation	<p>Test Bank Questions 4, 7-9, 15, 35 Acetate 48</p>	<p>Multimedia Manager See slides for Section 13.1</p>	<p>Active Figures Figure 13.1 Interactive Worked Examples Example 13.1</p>
Measuring the Gravitational Constant	<p>Test Bank Question 34</p>	<p>Multimedia Manager See slides for Section 13.2</p>	<p>Coached Problems Problem 7</p>
Free-Fall Acceleration and the Gravitational Force	<p>Test Bank Questions 5, 36</p>	<p>Multimedia Manager See slides for Section 13.3</p>	<p>Coached Problems Problem 9</p>
Kepler's Laws and the Motion of Planets	<p>Test Bank Questions 1-3, 6, 10, 23-32, 37, 39 Acetate 49</p>	<p>Multimedia Manager See slides for Section 13.4</p>	<p>Active Figures Figures 13.5, 13.7 Coached Problems Problem 15 Interactive Worked Examples Example 13.5</p>
The Gravitational Field		<p>Multimedia Manager See slides for Section 13.5</p>	
Gravitational Potential Energy	<p>Test Bank Questions 11-14, 16-18, 21 Acetate 50</p>	<p>Multimedia Manager See slides for Section 13.6</p>	
Energy Considerations in Planetary and Satellite Motion	<p>Test Bank Questions 19, 20, 22, 33, 38</p>	<p>Multimedia Manager See slides for Section 13.7</p>	<p>Coached Problems Problem 33</p>







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CHAPTER 14 ■ FLUID MECHANICS

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume I, Chapter 14</p> <p>Student Solutions Manual and Study Guide Volume I, Chapter 14</p> <p>Test Bank Volume I, Chapter 14</p> <p>BCA Testing Volume I, Chapter 14 </p> <p>Transparency Acetates Volume I, Chapter 14</p>	<p>Companion Web Site Online Chapter 14 at http://www.pse6.com </p> <p>Online Course/Homework Management Systems Chapter 14</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage  for WebCT and Blackboard ■ PhysicsNow Plus  ■ WebAssign ■ UT-Austin Homework Service ■ CAPA <p>Multimedia Manager Volume I, Chapter 14 Microsoft® PowerPoint® lecture tool with images </p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action </p>	<p>PhysicsNow  Online Chapter 14 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Pressure	Test Bank Questions 1, 2, 8, 20, 22	Multimedia Manager See slides for Section 14.1	
Variation of Pressure with Depth	Test Bank Questions 4-7, 13, 18, 19, 32, 36 Acetate 51	Multimedia Manager See slides for Section 14.2	Coached Problems Problem 9 Interactive Worked Examples Example 14.2
Pressure Measurements	Test Bank Question 38	Multimedia Manager See slides for Section 14.3	Coached Problems Problem 17
Buoyant Forces and Archimedes's Principle	Test Bank Questions 3, 9-12, 29-31, 33-35, 37 Acetates 52, 53	Multimedia Manager See slides for Section 14.4	Active Figures Figures 14.9, 14.10 Coached Problems Problem 29
Fluid Dynamics	Test Bank Questions 16, 17 Acetate 53	Multimedia Manager See slides for Section 14.5	
Bernoulli's Equation	Test Bank Questions 14, 15, 24-28, 39, 40 Acetate 53	Multimedia Manager See slides for Section 14.6	Interactive Worked Examples Example 14.10
Other Applications of Fluid Dynamics	Test Bank Questions 21, 23	Multimedia Manager See slides for Section 14.7	








CHAPTER 15 ■ OSCILLATORY MOTION

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume I, Chapter 15</p> <p>Student Solutions Manual and Study Guide Volume I, Chapter 15</p> <p>Test Bank Volume I, Chapter 15</p> <p>BCA Testing Volume I, Chapter 15 </p> <p>Transparency Acetates Volume I, Chapter 15</p>	<p>Companion Web Site Online Chapter 15 at http://www.pse6.com </p> <p>Online Course/Homework Management Systems Chapter 15</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage for WebCT and Blackboard  ■ PhysicsNow Plus  ■ WebAssign ■ UT-Austin Homework Service ■ CAPA <p>Multimedia Manager Volume I, Chapter 15 Microsoft® PowerPoint® lecture tool with images </p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action </p>	<p>PhysicsNow  Online Chapter 15 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Motion of an Object Attached to a Spring	<p>Test Bank Question 16 Acetate 54</p>	<p>Multimedia Manager See slides for Section 15.1</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 8.2: <i>Simple Harmonic Motion (1)</i> Video 8.3: <i>Simple Harmonic Motion (2)</i> Video 8.10: <i>Simple Harmonic Motion (3)</i></p>	<p>Active Figures Figure 15.1</p>
Mathematical Representation of Simple Harmonic Motion	<p>Test Bank Questions 1-4, 7, 8, 21-24, 29 Acetates 54, 55</p>	<p>Multimedia Manager See slides for Section 15.2</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 8.6: <i>Physical Nature of Waves (3)</i> Video 8.9: <i>Mathematical Nature of Waves (3)</i></p>	<p>Active Figures Figures 15.2, 15.7, 15.9 Coached Problems Problem 5</p>
Energy of the Simple Harmonic Oscillator	<p>Test Bank Questions 5, 6, 19, 20, 25-28</p>	<p>Multimedia Manager See slides for Section 15.3</p>	<p>Active Figures Figures 15.10, 15.11 Coached Problems Problem 17</p>
Comparing Simple Harmonic Motion with Uniform Circular Motion	<p>Acetate 56</p>	<p>Multimedia Manager See slides for Section 15.4</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 8.7: <i>Mathematical Nature of Waves (1)</i></p>	<p>Active Figures Figure 15.14 Coached Problems Problem 31</p>
The Pendulum	<p>Test Bank Questions 9-15, 17, 18 Acetate 56</p>	<p>Multimedia Manager See slides for Section 15.5</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 8.11: <i>SHM and Waves in the Real World (1)</i> Video 8.12: <i>Physical Insight</i></p>	<p>Active Figures Figure 15.17</p>
Damped Oscillations	<p>Acetate 56</p>	<p>Multimedia Manager See slides for Section 15.6</p>	<p>Active Figures Figure 15.22</p>
Forced Oscillations		<p>Multimedia Manager See slides for Section 15.7</p>	

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CHAPTER 16 ■ WAVE MOTION

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume I, Chapter 16</p> <p>Student Solutions Manual and Study Guide Volume I, Chapter 16</p> <p>Test Bank Volume I, Chapter 16</p> <p>BCA Testing  Volume I, Chapter 16</p> <p>Transparency Acetates Volume I, Chapter 16</p>	<p>Companion Web Site Online Chapter 16 at http://www.pse6.com </p> <p>Online Course/Homework Management Systems Chapter 16</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage  for WebCT and Blackboard ■ PhysicsNow Plus  ■ WebAssign ■ UT-Austin Homework Service ■ CAPA <p>Multimedia Manager  Volume I, Chapter 16 Microsoft® PowerPoint® lecture tool with images</p> <p>Core Concepts in Physics 2.0 CD-ROM  Multimedia presentation of physics concepts in action</p>	<p>PhysicsNow  Online Chapter 16 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Propagation of a Disturbance	<p>Test Bank Questions 5, 30 Acetates 57, 58</p>	<p>Multimedia Manager See slides for Section 16.1</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 8.5: <i>Physical Nature of Waves (2)</i></p>	<p>Active Figures Figure 16.4</p>
Sinusoidal Waves	<p>Test Bank Questions 1-4, 8, 10-14, 16-20, 22, 25-29, 34-36 Acetates 58, 59, 60</p>	<p>Multimedia Manager See slides for Section 16.2</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 8.6: <i>Physical Nature of Waves (3)</i></p>	<p>Active Figures Figures 16.7, 16.8, 16.10 Coached Problems Problem 15</p>
The Speed of Waves on Strings	<p>Test Bank Questions 6, 7, 9, 24, 31, 37</p>	<p>Multimedia Manager See slides for Section 16.3</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 9.2: <i>Speed of a Wave in a Medium</i></p>	<p>Coached Problems Problem 31 Interactive Worked Examples Example 16.5</p>
Reflection and Transmission	<p>Test Bank Questions 32, 33 Acetate 61</p>	<p>Multimedia Manager See slides for Section 16.4</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 9.3: <i>When a Wave Hits a Boundary</i></p>	<p>Active Figures Figures 16.14, 16.15, 16.17</p>
Rate of Energy Transfer by Sinusoidal Waves on Strings	<p>Test Bank Questions 15, 23</p>	<p>Multimedia Manager See slides for Section 16.5</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 9.5: <i>Energy and Power in Waves</i></p>	<p>Coached Problems Problem 37</p>
The Linear Wave Equation	<p>Test Bank Question 21</p>	<p>Multimedia Manager See slides for Section 16.6</p>	



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CHAPTER 17 ■ SOUND WAVES

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume I, Chapter 17</p> <p>Student Solutions Manual and Study Guide Volume I, Chapter 17</p> <p>Test Bank Volume I, Chapter 17</p> <p>BCA Testing  Volume I, Chapter 17</p> <p>Transparency Acetates Volume I, Chapter 17</p>	<p>Companion Web Site Online Chapter 17 at http://www.pse6.com </p> <p>Online Course/Homework Management Systems Chapter 17</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage for WebCT and Blackboard  ■ PhysicsNow Plus ■ WebAssign ■ UT-Austin Homework Service ■ CAPA <p>Multimedia Manager Volume I, Chapter 17 Microsoft® PowerPoint® lecture tool with images </p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action </p>	<p>PhysicsNow  Online Chapter 17 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Speed of Sound Waves	<p>Test Bank Questions 1-4, 25, 29, 42</p>	<p>Multimedia Manager See slides for Section 17.1</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 9.2: <i>Speed of a Wave in a Medium</i></p>	<p>Interactive Worked Examples Example 17.1</p>
Periodic Sound Waves	<p>Test Bank Questions 5-10, 15-17, 32-37 Acetate 62</p>	<p>Multimedia Manager See slides for Section 17.2</p>	<p>Active Figures Figure 17.2 Coached Problems Problem 15</p>
Intensity of Periodic Sound Waves	<p>Test Bank Questions 11-14, 24, 28, 39, 41 Acetate 62</p>	<p>Multimedia Manager See slides for Section 17.3</p>	<p>Coached Problems Problem 25</p>
The Doppler Effect	<p>Test Bank Questions 18-23, 26, 27, 30, 31, 38, 40 Acetate 63</p>	<p>Multimedia Manager See slides for Section 17.4</p>	<p>Active Figures Figures 17.8, 17.9 Coached Problems Problems 39, 47 Interactive Worked Examples Example 17.6</p>
Digital Sound Recording		<p>Multimedia Manager See slides for Section 17.5</p>	
Motion Picture Sound		<p>Multimedia Manager See slides for Section 17.6</p>	







Resource Integration Guide



CHAPTER 18 - SUPERPOSITION AND STANDING WAVES

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume I, Chapter 18</p> <p>Student Solutions Manual and Study Guide Volume I, Chapter 18</p> <p>Test Bank Volume I, Chapter 18</p> <p>BCA Testing Volume I, Chapter 18 </p> <p>Transparency Acetates Volume I, Chapter 18</p>	<p>Companion Web Site Online Chapter 18 at http://www.pse6.com </p> <p>See options for Online Course/Homework Management Systems Chapter 18 </p> <p>Multimedia Manager Volume I, Chapter 18 Microsoft® <i>PowerPoint</i>® lecture tool with images </p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action </p>	<p>PhysicsNow  Online Chapter 18 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Superposition and Interference	<p>Test Bank Questions 1-6, 8, 26, 29-31, 36 Acetate 64</p>	<p>Multimedia Manager See slides for Section 18.1 Core Concepts in Physics 2.0 CD-ROM Video 9.6: <i>Superposition and Interference (1)</i> Video 9.7: <i>Superposition and Interference (2)</i></p>	<p>Active Figures Figures 18.1, 18.2, 18.4 Coached Problems Problems 5, 11</p>
Standing Waves	<p>Test Bank Questions 7, 9-12 Acetate 65</p>	<p>Multimedia Manager See slides for Section 18.2 Core Concepts in Physics 2.0 CD-ROM Video 9.8: <i>Standing Waves (1)</i></p>	<p>Active Figures Figure 18.9 Coached Problems Problem 15</p>
Standing Waves in a String Fixed at Both Ends	<p>Test Bank Questions 13-15, 25, 27, 32, 33, 37-39 Acetate 66</p>	<p>Multimedia Manager See slides for Section 18.3 Core Concepts in Physics 2.0 CD-ROM Video 9.9: <i>Standing Waves (2)</i></p>	<p>Active Figures Figure 18.10 Interactive Worked Examples Examples 18.4, 18.5</p>
Resonance		<p>Multimedia Manager See slides for Section 18.4 Core Concepts in Physics 2.0 CD-ROM Video 9.10: <i>Resonance (1)</i>; Video 9.11: <i>Resonance (2)</i></p>	
Standing Waves in Air Columns	<p>Test Bank Questions 16-19, 24, 34, 35 Acetates 67, 68</p>	<p>Multimedia Manager See slides for Section 18.5 Core Concepts in Physics 2.0 CD-ROM Video 9.9: <i>Standing Waves (2)</i></p>	<p>Coached Problems Problems 41, 43</p>
Standing Waves in Rods and Membranes		<p>Multimedia Manager See slides for Section 18.6 Core Concepts in Physics 2.0 CD-ROM Video 9.9: <i>Standing Waves (2)</i></p>	
Beats: Interference in Time	<p>Test Bank Questions 20-23, 28 Acetate 69</p>	<p>Multimedia Manager See slides for Section 18.7</p>	<p>Active Figures Figure 18.22 Coached Problems Problem 51</p>
Nonsinusoidal Wave Patterns	<p>Acetate 70</p>	<p>Multimedia Manager See slides for Section 18.8</p>	<p>Active Figures Figure 18.25</p>

CHAPTER 19 ■ TEMPERATURE

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume I, Chapter 19</p> <p>Student Solutions Manual and Study Guide Volume I, Chapter 19</p> <p>Test Bank Volume I, Chapter 19</p> <p>BCA Testing Volume I, Chapter 19 </p> <p>Transparency Acetates Volume I, Chapter 19</p>	<p>Companion Web Site Online Chapter 19 at http://www.pse6.com </p> <p>Online Course/Homework Management Systems Chapter 19</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage for WebCT and Blackboard  ■ PhysicsNow Plus ■ WebAssign ■ UT-Austin Homework Service ■ CAPA <p>Multimedia Manager Volume I, Chapter 19 Microsoft® PowerPoint® lecture tool with images </p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action </p>	<p>PhysicsNow  Online Chapter 19 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Temperature and the Zeroth Law of Thermodynamics	<p>Test Bank Questions 1, 2, 25</p>	<p>Multimedia Manager See slides for Section 19.1</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 10.4: <i>The Zeroth Law of Thermodynamics</i></p>	
Thermometers and the Celsius Temperature Scale		<p>Multimedia Manager See slides for Section 19.2</p>	
The Constant-Volume Gas Thermometer and the Absolute Temperature Scale	<p>Test Bank Questions 3-10, 26, 27, 33 Acetate 71</p>	<p>Multimedia Manager See slides for Section 19.3</p>	<p>Coached Problems Problem 1</p>
Thermal Expansion of Solids and Liquids	<p>Test Bank Questions 11-13, 28, 29, 31, 32, 34 Acetate 72</p>	<p>Multimedia Manager See slides for Section 19.4</p>	<p>Active Figures Figure 19.8 Coached Problems Problem 13</p>
Macroscopic Description of an Ideal Gas	<p>Test Bank Questions 14-24, 30, 35 Acetate 73</p>	<p>Multimedia Manager See slides for Section 19.5</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 10.5: <i>The Ideal Gas</i></p>	<p>Active Figures Figure 19.12 Coached Problems Problem 33 Interactive Worked Examples Example 19.7</p>






Resource Integration Guide



CHAPTER 20 ■ HEAT AND THE FIRST LAW OF THERMODYNAMICS

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume I, Chapter 20</p> <p>Student Solutions Manual and Study Guide Volume I, Chapter 20</p> <p>Test Bank Volume I, Chapter 20</p> <p>BCA Testing Volume I, Chapter 20 </p> <p>Transparency Acetates Volume I, Chapter 20</p>	<p>Companion Web Site Online Chapter 20 at http://www.pse6.com </p> <p>Online Course/Homework Management Systems Chapter 20</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage  for WebCT and Blackboard ■ PhysicsNow Plus  ■ WebAssign ■ UT-Austin Homework Service ■ CAPA <p>Multimedia Manager Volume I, Chapter 20 Microsoft® PowerPoint® lecture tool with images </p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action </p>	<p>PhysicsNow  Online Chapter 20 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Heat and Internal Energy	<p>Test Bank Questions 15, 32 Acetate 74</p>	<p>Multimedia Manager See slides for Section 20.1</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 5.5: <i>Energy</i></p>	
Specific Heat and Calorimetry	<p>Test Bank Questions 1-5, 16, 43, 47</p>	<p>Multimedia Manager See slides for Section 20.2</p>	Coached Problems Problem 7
Latent Heat	<p>Test Bank Questions 6-8, 37, 38, 44-46 Acetate 74</p>	<p>Multimedia Manager See slides for Section 20.3</p>	Coached Problems Problem 21
Work and Heat in Thermodynamic Processes	<p>Test Bank Questions 17-19, 39 Acetates 75, 76</p>	<p>Multimedia Manager See slides for Section 20.4</p>	Active Figures Figures 20.4, 20.5 Coached Problems Problems 23, 25
The First Law of Thermodynamics	<p>Test Bank Questions 36, 40</p>	<p>Multimedia Manager See slides for Section 20.5</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 10.6: <i>The First Law of Thermodynamics</i></p>	
Some Applications of the First Law of Thermodynamics	<p>Test Bank Questions 20-31, 34, 41 Acetate 76</p>	<p>Multimedia Manager See slides for Section 20.6</p>	Active Figures Figure 20.7
Energy Transfer Mechanisms	<p>Test Bank Questions 9-14, 33, 35, 42</p>	<p>Multimedia Manager See slides for Section 20.7</p>	Interactive Worked Examples Example 20.10



CHAPTER 21 ■ THE KINETIC THEORY OF GASES

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume I, Chapter 21</p> <p>Student Solutions Manual and Study Guide Volume I, Chapter 21</p> <p>Test Bank Volume I, Chapter 21</p> <p>BCA Testing Volume I, Chapter 21 </p> <p>Transparency Acetates Volume I, Chapter 21</p>	<p>Companion Web Site Online Chapter 21 at http://www.pse6.com </p> <p>Online Course/Homework Management Systems Chapter 21</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage for WebCT and Blackboard  ■ PhysicsNow Plus ■ WebAssign ■ UT-Austin Homework Service ■ CAPA <p>Multimedia Manager Volume I, Chapter 21 Microsoft® PowerPoint® lecture tool with images </p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action </p>	<p>PhysicsNow  Online Chapter 21 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Molecular Model of an Ideal Gas	<p>Test Bank Questions 1-6, 15-17, 19, 24, 25, 29 Acetate 77</p>	<p>Multimedia Manager See slides for Section 21.1</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 5.5: <i>Energy</i> Video 10.3: <i>Basic Concepts of Thermodynamics</i></p>	<p>Active Figures Figure 21.2 Coached Problems Problem 9</p>
Molar Specific Heat of an Ideal Gas	<p>Test Bank Questions 7, 21, 23 Acetates 78, 79</p>	<p>Multimedia Manager See slides for Section 21.2</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 10.3: <i>Basic Concepts of Thermodynamics</i></p>	<p>Active Figures Figure 21.4 Coached Problems Problem 13</p>
Adiabatic Processes for an Ideal Gas	<p>Test Bank Questions 8-11, 18, 26, 27</p>	<p>Multimedia Manager See slides for Section 21.3</p>	
The Equipartition of Energy	<p>Test Bank Questions 12, 20, 22 Acetate 80</p>	<p>Multimedia Manager See slides for Section 21.4</p>	<p>Coached Problems Problem 33</p>
The Boltzmann Distribution Law		<p>Multimedia Manager See slides for Section 21.5</p>	<p>Interactive Worked Examples Example 21.4</p>
Distribution of Molecular Speeds	<p>Test Bank Question 28 Acetate 81</p>	<p>Multimedia Manager See slides for Section 21.6</p>	<p>Active Figures Figures 21.11, 21.12</p>
Mean Free Path	<p>Test Bank Questions 13, 14</p>	<p>Multimedia Manager See slides for Section 21.7</p>	

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CHAPTER 22 ■ HEAT ENGINES, ENTROPY, AND THE SECOND LAW OF THERMODYNAMICS

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume I, Chapter 22</p> <p>Student Solutions Manual and Study Guide Volume I, Chapter 22</p> <p>Test Bank Volume I, Chapter 22</p> <p>BCA Testing Volume I, Chapter 22 </p> <p>Transparency Acetates Volume I, Chapter 22</p>	<p>Companion Web Site Online Chapter 22 at http://www.pse6.com </p> <p>See options for Online Course/Homework Management Systems Chapter 22 </p> <p>Multimedia Manager Volume I, Chapter 22 Microsoft® <i>PowerPoint</i>® lecture tool with images </p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action </p>	<p>PhysicsNow  Online Chapter 22 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Heat Engines and the Second Law of Thermodynamics	<p>Test Bank Questions 1, 2, 5-7, 10-12, 15, 16, 37 Acetate 82</p>	<p>Multimedia Manager See slides for Section 22.1 Core Concepts in Physics 2.0 CD-ROM Video 10.7: <i>Cyclic Heat Engines</i> Video 10.8: <i>The Second Law of Thermodynamics</i></p>	Active Figures Figure 22.2
Heat Pumps and Refrigerators	<p>Test Bank Questions 3, 4, 9, 13, 14, 17 Acetate 83</p>	<p>Multimedia Manager See slides for Section 22.2</p>	Active Figures Figure 22.5
Reversible and Irreversible Processes	<p>Test Bank Questions 8, 35</p>	<p>Multimedia Manager See slides for Section 22.3</p>	
The Carnot Engine	<p>Test Bank Questions 34, 39, 40, 43 Acetates 84, 85</p>	<p>Multimedia Manager See slides for Section 22.4 Core Concepts in Physics 2.0 CD-ROM Video 10.9: <i>Carnot Engines</i></p>	Active Figures Figures 22.10, 22.11 Coached Problems Problems 13, 27
Gasoline and Diesel Engines	<p>Test Bank Question 41 Acetate 85</p>	<p>Multimedia Manager See slides for Section 22.5</p>	Active Figures Figures 22.12, 22.13
Entropy	<p>Test Bank Questions 18-24, 27, 36, 44</p>	<p>Multimedia Manager See slides for Section 22.6 Core Concepts in Physics 2.0 CD-ROM Video 10.10: <i>Entropy</i></p>	
Entropy Changes in Irreversible Processes	<p>Test Bank Questions 25, 26, 28-33, 38, 45</p>	<p>Multimedia Manager See slides for Section 22.7 Core Concepts in Physics 2.0 CD-ROM Video 10.11: <i>Applications of Entropy</i></p>	Coached Problems Problem 41
Entropy on a Microscopic Scale	<p>Test Bank Question 42</p>	<p>Multimedia Manager See slides for Section 22.8 Core Concepts in Physics 2.0 CD-ROM Video 10.10: <i>Entropy</i></p>	Active Figures Figure 22.19 Interactive Worked Examples Example 22.10



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CHAPTER 23 ■ ELECTRIC FIELDS

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume II, Chapter 23</p> <p>Student Solutions Manual and Study Guide Volume II, Chapter 23</p> <p>Test Bank Volume II, Chapter 23</p> <p>BCA Testing Volume II, Chapter 23</p> <p>Transparency Acetates Volume II, Chapter 23</p>	<p>Companion Web Site Online Chapter 23 at http://www.pse6.com</p> <p>Online Course/Homework Management Systems Chapter 23</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage for WebCT and Blackboard ■ PhysicsNow Plus ■ WebAssign ■ UT-Austin Homework System ■ CAPA <p>Multimedia Manager Volume II, Chapter 23 Microsoft® PowerPoint® lecture tool with images</p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action</p>	<p>PhysicsNow Online Chapter 23 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Properties of Electric Charges	<p>Test Bank Questions 65, 70, 71 Acetates 1-3</p>	<p>Multimedia Manager See slides for Section 23.1</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 11.2: <i>Electric Charge</i></p>	
Charging Objects by Induction	<p>Test Bank Question 72</p>	<p>Multimedia Manager See slides for Section 23.2</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 11.3: <i>Insulators and Conductors</i></p>	
Coulomb's Law	<p>Test Bank Questions 1-5, 7-21, 63, 69, 77</p>	<p>Multimedia Manager See slides for Section 23.3</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 11.4: <i>Coulomb's Law</i></p>	<p>Active Figures Figure 23.7 Coached Problems Problem 3 Interactive Worked Examples Example 23.3</p>
The Electric Field	<p>Test Bank Questions 22-32 Acetate 4</p>	<p>Multimedia Manager See slides for Section 23.4</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 11.5: <i>The Electric Field and Field Lines</i></p>	<p>Active Figures Figure 23.13</p>
Electric Field of a Continuous Charge Distribution	<p>Test Bank Questions 33-48, 59-61</p>	<p>Multimedia Manager See slides for Section 23.5</p>	<p>Coached Problems Problem 33</p>
Electric Field Lines	<p>Test Bank Questions 62, 66, 73 Acetate 5</p>	<p>Multimedia Manager See slides for Section 23.6</p>	<p>Active Figures Figure 23.24 Coached Problems Problem 41</p>
Motion of Charged Particles in a Uniform Electric Field	<p>Test Bank Questions 6, 49-58, 63, 67, 68, 74-76 Acetates 5, 6</p>	<p>Core Concepts in Physics 2.0 CD-ROM Video 11.5: <i>The Electric Field and Field Lines</i></p> <p>Multimedia Manager See slides for Section 23.7</p>	<p>Active Figures Figure 23.26 Coached Problems Problem 45 Interactive Worked Examples Example 23.11</p>

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CHAPTER 24 ■ GAUSS'S LAW

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume II, Chapter 24</p> <p>Student Solutions Manual and Study Guide Volume II, Chapter 24</p> <p>Test Bank Volume II, Chapter 24</p> <p>BCA Testing Volume II, Chapter 24 </p> <p>Transparency Package Volume II, Chapter 24</p>	<p>Companion Web Site Online Chapter 24 at http://www.pse6.com </p> <p>Online Course/Homework Management Systems Chapter 24</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage  for WebCT and Blackboard ■ PhysicsNow Plus  ■ WebAssign ■ UT-Austin Homework System ■ CAPA <p>Multimedia Manager Volume II, Chapter 24  Microsoft® PowerPoint® lecture tool with images</p> <p>Core Concepts in Physics 2.0 CD-ROM  Multimedia presentation of physics concepts in action</p>	<p>PhysicsNow  Online Chapter 24 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Electric Flux	<p>Test Bank Questions 12, 13, 60, 61 Acetate 7</p>	<p>Multimedia Manager See slides for Section 24.1</p>	<p>Active Figures Figure 24.4</p>
Gauss's Law	<p>Test Bank Questions 1-11, 52-57 Acetates 8, 9</p>	<p>Multimedia Manager See slides for Section 24.2</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 11.6: <i>Gauss's Law</i></p>	<p>Active Figures Figure 24.9</p> <p>Coached Problems Problem 15</p>
Application of Gauss's Law to Various Charge Distributions	<p>Test Bank Questions 14-36, 62-65 Acetate 10</p>	<p>Multimedia Manager See slides for Section 24.3</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 11.7: <i>Examples of the Electric Field</i></p>	<p>Coached Problems Problem 29</p> <p>Interactive Worked Examples Example 24.5</p>
Conductors in Electrostatic Equilibrium	<p>Test Bank Questions 37-51, 58, 59, 66 Acetate 11</p>	<p>Multimedia Manager See slides for Section 24.4</p>	<p>Coached Problems Problem 49</p> <p>Interactive Worked Examples Example 24.10</p>
Formal Derivation of Gauss's Law		<p>Multimedia Manager See slides for Section 24.5</p>	

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CHAPTER 25 ■ ELECTRIC POTENTIAL

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume II, Chapter 25</p> <p>Student Solutions Manual and Study Guide Volume II, Chapter 25</p> <p>Test Bank Volume II, Chapter 25</p> <p>BCA Testing Volume II, Chapter 25</p> <p>Transparency Package Volume II, Chapter 25</p>	<p>Companion Web Site Online Chapter 25 at http://www.pse6.com</p> <p>Online Course/Homework Management Systems Chapter 25</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage for WebCT and Blackboard ■ PhysicsNow Plus (icon) ■ WebAssign ■ UT-Austin Homework System ■ CAPA <p>Multimedia Manager Volume II, Chapter 25 Microsoft® PowerPoint® lecture tool with images</p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action</p>	<p>PhysicsNow Online Chapter 25 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Potential Difference and Electric Potential	<p>Test Bank Questions 1, 2, 4, 6-12, 37</p>	<p>Multimedia Manager See slides for Section 25.1</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 11.8: <i>Electric Potential</i></p>	
Potential Differences in a Uniform Electric Field	<p>Test Bank Questions 3, 5, 13</p>	<p>Multimedia Manager See slides for Section 25.2</p>	<p>Coached Problems Problem 7 Interactive Worked Examples Example 25.2</p>
Electric Potential and Potential Energy Due to Point Charges	<p>Test Bank Questions 14-36, 38, 40, 41, 80, 81, 83 Acetates 12, 13, 14</p>	<p>Multimedia Manager See slides for Section 25.3</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 11.9: <i>The Electric Field and Electric Potential</i></p>	<p>Active Figures Figure 25.10 Coached Problems Problem 23 Interactive Worked Examples Example 25.3</p>
Obtaining the Value of the Electric Field from the Electric Potential	<p>Test Bank Questions 64-68, 72, 73, 78, 79 Acetate 15</p>	<p>Multimedia Manager See slides for Section 25.4</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 11.9: <i>The Electric Field and Electric Potential</i></p>	<p>Coached Problems Problem 39</p>
Electric Potential Due to Continuous Charge Distributions	<p>Test Bank Questions 39, 42-56, 59-61, 71</p>	<p>Multimedia Manager See slides for Section 25.5</p>	
Electric Potential Due to a Charged Conductor	<p>Test Bank Questions 57, 58, 62, 63, 70, 74-77, 82</p>	<p>Multimedia Manager See slides for Section 25.6</p>	<p>Coached Problems Problem 49</p>
The Millikan Oil-Drop Experiment	<p>Acetate 16</p>	<p>Multimedia Manager See slides for Section 25.7</p>	<p>Active Figures Figure 25.27</p>
Applications of Electrostatics	<p>Test Bank Questions 84, 85 Acetates 17, 18</p>	<p>Multimedia Manager See slides for Section 25.8</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 11.10: <i>The Electric Field in the Real World</i></p>	

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CHAPTER 26 ■ CAPACITANCE AND DIELECTRICS

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume II, Chapter 26</p> <p>Student Solutions Manual and Study Guide Volume II, Chapter 26</p> <p>Test Bank Volume II, Chapter 26</p> <p>BCA Testing Volume II, Chapter 26</p> <p>Transparency Package Volume II, Chapter 26</p>	<p>Companion Web Site Online Chapter 26 at http://www.pse6.com</p> <p>Online Course/Homework Management Systems Chapter 26</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage for WebCT and Blackboard ■ PhysicsNow Plus ■ WebAssign ■ UT-Austin Homework System ■ CAPA <p>Multimedia Manager Volume II, Chapter 26 Microsoft® PowerPoint® lecture tool with images</p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action</p>	<p>PhysicsNow Online Chapter 26 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Definition of Capacitance	<p>Test Bank Questions 45, 48</p>	<p>Multimedia Manager See slides for Section 26.1</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 13.5: <i>Capacitors</i></p>	
Calculating Capacitance	<p>Test Bank Questions 36-39, 49-51 Acetate 19</p>	<p>Multimedia Manager See slides for Section 26.2</p>	<p>Active Figures Figure 26.4 Coached Problems Problems 7, 11</p>
Combinations of Capacitors	<p>Test Bank Questions 1-9, 23, 25, 26, 28, 30-35, 42-44 Acetates 20, 21</p>	<p>Multimedia Manager See slides for Section 26.3</p>	<p>Active Figures Figures 26.9, 26.10 Coached Problems Problem 21 Interactive Worked Examples Example 26.4</p>
Energy Stored in a Charged Capacitor	<p>Test Bank Questions 10-22, 24, 27, 29</p>	<p>Multimedia Manager See slides for Section 26.4</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 13.5: <i>Capacitors</i></p>	<p>Coached Problems Problem 37 Interactive Worked Examples Example 26.5</p>
Capacitors with Dielectrics	<p>Test Bank Questions 40, 41, 46, 47, 51 Acetate 22</p>	<p>Multimedia Manager See slides for Section 26.5</p>	
Electric Dipole in an Electric Field	<p>Acetate 23</p>	<p>Multimedia Manager See slides for Section 26.6</p>	
An Atomic Description of Dielectrics	<p>Acetate 23</p>	<p>Multimedia Manager See slides for Section 26.7</p>	



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CHAPTER 27 ■ CURRENT AND RESISTANCE

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume II, Chapter 27</p> <p>Student Solutions Manual and Study Guide Volume II, Chapter 27 </p> <p>Test Bank Volume II, Chapter 27</p> <p>BCA Testing Volume II, Chapter 27</p> <p>Transparency Package Volume II, Chapter 27</p>	<p>Companion Web Site Online Chapter 27 at http://www.pse6.com </p> <p>Online Course/Homework Management Systems Chapter 27</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage for WebCT and Blackboard  ■ PhysicsNow Plus  ■ WebAssign ■ UT-Austin Homework System ■ CAPA <p>Multimedia Manager Volume II, Chapter 27 Microsoft® PowerPoint® lecture tool with images </p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action </p>	<p>PhysicsNow Online  Chapter 27 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Electric Current	<p>Test Bank Question 7 Acetate 24</p>	<p>Multimedia Manager See slides for Section 27.1</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 13.2: <i>Electric Current</i></p>	<p>Coached Problems Problem 3</p>
Resistance	<p>Test Bank Questions 8-15, 23, 25 Acetate 25</p>	<p>Multimedia Manager See slides for Section 27.2</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 13.3: <i>Voltage, Resistance, and Ohm's Law</i></p>	<p>Coached Problems Problem 15 Interactive Worked Examples Example 27.3</p>
A Model for Electrical Conduction	<p>Test Bank Questions 21, 22 Acetate 24</p>	<p>Multimedia Manager See slides for Section 27.3</p>	<p>Active Figures Figure 27.9 Coached Problems Problem 25</p>
Resistance and Temperature	<p>Test Bank Questions 18, 20</p>	<p>Multimedia Manager See slides for Section 27.4</p>	
Superconductors		<p>Multimedia Manager See slides for Section 27.5</p>	
Electrical Power	<p>Test Bank Questions 1-6, 16, 17, 24, 26-28 Acetate 26</p>	<p>Multimedia Manager See slides for Section 27.6</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 13.3: <i>Voltage, Resistance, and Ohm's Law</i></p>	<p>Active Figures Figure 27.13 Coached Problems Problem 39 Interactive Worked Examples Example 27.8</p>

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CHAPTER 28 ■ DIRECT CURRENT CIRCUITS

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume II, Chapter 28</p> <p>Student Solutions Manual and Study Guide Volume II, Chapter 28</p> <p>Test Bank Volume II, Chapter 28</p> <p>BCA Testing Volume II, Chapter 28</p> <p>Transparency Package Volume II, Chapter 28</p>	<p>Companion Web Site Online Chapter 28 at http://www.pse6.com</p> <p>Online Course/Homework Management Systems Chapter 28</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage for WebCT and Blackboard ■ PhysicsNow Plus ■ WebAssign ■ UT-Austin Homework System ■ CAPA <p>Multimedia Manager Volume II, Chapter 28 Microsoft® PowerPoint® lecture tool with images</p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action</p>	<p>PhysicsNow Online Chapter 28 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Electromotive Force	<p>Test Bank Questions 51, 64 Acetate 27</p>	<p>Multimedia Manager See slides for Section 28.1</p>	<p>Active Figures Figure 28.2 Coached Problems Problem 1 Interactive Worked Examples Example 28.1</p>
Resistors in Series and Parallel	<p>Test Bank Questions 1-12, 29, 30, 44-50, 53-55, 73 Acetates 28, 29</p>	<p>Multimedia Manager See slides for Section 28.2</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 13.4: <i>Circuit Analysis and Kirchhoff's Laws</i></p>	<p>Active Figures Figures 28.4, 28.6 Coached Problems Problem 9 Interactive Worked Examples Example 28.5</p>
Kirchhoff's Rules	<p>Test Bank Questions 13-23, 31, 52, 56, 58-60, 63, 66, 67, 70</p>	<p>Multimedia Manager See slides for Section 28.3</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 13.4: <i>Circuit Analysis and Kirchhoff's Laws</i></p>	<p>Coached Problems Problem 21 Interactive Worked Examples Example 28.9</p>
RC Circuits	<p>Test Bank Questions 24-28, 32-43, 57, 61, 62, 65, 68, 69, 71, 72, 75, 76 Acetates 30, 31</p>	<p>Multimedia Manager See slides for Section 28.4</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 13.5: <i>Capacitors</i></p>	<p>Active Figures Figures 28.19, 28.21 Coached Problems Problem 31</p>
Electrical Meters		<p>Multimedia Manager See slides for Section 28.5</p>	<p>Active Figures Figures 28.27, 28.29</p>
Household Wiring and Electrical Safety	<p>Test Bank Question 74 Acetates 31, 32</p>	<p>Multimedia Manager See slides for Section 28.6</p>	<p>Coached Problems Problem 49</p>



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CHAPTER 29 ■ MAGNETIC FIELDS

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume II, Chapter 29</p> <p>Student Solutions Manual and Study Guide Volume II, Chapter 29</p> <p>Test Bank Volume II, Chapter 29</p> <p>BCA Testing Volume II, Chapter 29</p> <p>Transparency Package Volume II, Chapter 29</p>	<p>Companion Web Site Online Chapter 29 at http://www.pse6.com</p> <p>Online Course/Homework Management Systems Chapter 29</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage for WebCT and Blackboard ■ PhysicsNow Plus ■ WebAssign ■ UT-Austin Homework System ■ CAPA <p>Multimedia Manager Volume II, Chapter 29 Microsoft® <i>PowerPoint</i>® lecture tool with images</p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action</p>	<p>PhysicsNow Online Chapter 29 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Magnetic Fields and Forces	<p>Test Bank Questions 1-11, 17, 56, 57, 59, 70</p> <p>Acetate 33</p>	<p>Multimedia Manager See slides for Section 29.1</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 12.2: <i>Magnets and the Magnetic Field</i></p>	<p>Active Figures Figure 29.1</p> <p>Coached Problems Problem 1</p>
Magnetic Force Acting on a Current-Carrying Conductor	<p>Test Bank Questions 12-16, 18-21, 26, 27, 60-68</p>	<p>Multimedia Manager See slides for Section 29.2</p>	<p>Coached Problems Problems 11, 17</p>
Torque on a Current Loop in a Uniform Magnetic Field	<p>Test Bank Questions 22-25, 28-31, 58, 69</p> <p>Acetate 33</p>	<p>Multimedia Manager See slides for Section 29.3</p>	<p>Active Figures Figure 29.14</p> <p>Coached Problems Problem 23</p>
Motion of a Charged Particle in a Uniform Magnetic Field	<p>Test Bank Questions 32-55, 72</p> <p>Acetate 34</p>	<p>Multimedia Manager See slides for Section 29.4</p>	<p>Active Figures Figures 29.18, 29.19</p> <p>Interactive Worked Examples Example 29.7</p>
Applications Involving Charged Particles Moving in a Magnetic Field	<p>Test Bank Questions 71, 75,</p> <p>Acetate 35</p>	<p>Multimedia Manager See slides for Section 29.5</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 12.3: <i>Magnetic Force on a Moving Charge</i></p>	<p>Active Figures Figures 29.23, 29.24</p> <p>Coached Problems Problem 47</p>
The Hall Effect	<p>Test Bank Question 73</p>	<p>Multimedia Manager See slides for Section 29.6</p>	

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CHAPTER 30 ■ SOURCES OF THE MAGNETIC FIELD

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume II, Chapter 30</p> <p>Student Solutions Manual and Study Guide Volume II, Chapter 30</p> <p>Test Bank Volume II, Chapter 30</p> <p>BCA Testing Volume II, Chapter 30 </p> <p>Transparency Package Volume II, Chapter 30</p>	<p>Companion Web Site Online Chapter 30 at http://www.pse6.com </p> <p>See options for Online Course/Homework Management Systems Chapter 30 </p> <p>Multimedia Manager Volume II, Chapter 30 Microsoft® <i>PowerPoint</i>® lecture tool with images </p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action </p>	<p>PhysicsNow  Online Chapter 30 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
The Biot-Savart Law	<p>Test Bank Questions 1-27 Acetate 36</p>	<p>Multimedia Manager See slides for Section 30.1</p>	<p>Coached Problem 5 Interactive Worked Examples 30.1, 30.3</p>
The Magnetic Force Between Two Parallel Conductors	<p>Test Bank Questions 28-36, 68, 82 Acetate 37</p>	<p>Multimedia Manager See slides for Section 30.2</p>	<p>Active Figures Figure 30.8</p>
Ampère's Law	<p>Test Bank Questions 37-46, 54-59, 62, 65, 66, 69, 73, 77-80, 84 Acetate 38</p>	<p>Multimedia Manager See slides for Section 30.3</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 12.4: <i>Finding the Magnetic Field Near a Current-Carrying Wire</i></p>	<p>Active Figures Figure 30.9 Coached Problems Problems 21, 25</p>
The Magnetic Field of a Solenoid	<p>Test Bank Questions 47, 49-53, 61, 67, 70-72, 75</p>	<p>Multimedia Manager See slides for Section 30.4</p>	<p>Coached Problems Problem 31</p>
Magnetic Flux	<p>Test Bank Question 48 Acetate 39</p>	<p>Multimedia Manager See slides for Section 30.5</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 12.5: <i>Magnetic Flux and Gauss's Law for Magnetism</i></p>	<p>Active Figures Figure 30.21 Interactive Worked Example 30.8</p>
Gauss's Law in Magnetism	<p>Test Bank Question 60</p>	<p>Multimedia Manager See slides for Section 30.6</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 12.5: <i>Magnetic Flux and Gauss's Law for Magnetism</i></p>	
Displacement Current and the General Form of Ampère's Law		<p>Multimedia Manager See slides for Section 30.7</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 12.9: <i>The General Form of Ampère's Law</i></p>	
Magnetism in Matter	<p>Test Bank Questions 64, 74, 76, 81, 85 Acetate 40</p>	<p>Multimedia Manager See slides for Section 30.8</p>	
The Magnetic Field of the Earth	<p>Test Bank Questions 63, 83 Acetate 41</p>	<p>Multimedia Manager See slides for Section 30.9</p>	



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CHAPTER 31 ■ FARADAY'S LAW

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume II, Chapter 31</p> <p>Student Solutions Manual and Study Guide Volume II, Chapter 31</p> <p>Test Bank Volume II, Chapter 31</p> <p>BCA Testing Volume II, Chapter 31 </p> <p>Transparency Package Volume II, Chapter 31</p>	<p>Companion Web Site Online Chapter 31 at http://www.pse6.com </p> <p>Online Course/Homework Management Systems Chapter 31</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage for WebCT and Blackboard  ■ PhysicsNow Plus  ■ WebAssign ■ UT-Austin Homework System ■ CAPA <p>Multimedia Manager Volume II, Chapter 31 Microsoft® PowerPoint® lecture tool with images </p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action </p>	<p>PhysicsNow  Online Chapter 31 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Faraday's Law of Induction	<p>Test Bank Questions 1-12, 14, 15, 54-57, 60 Acetates 42, 43</p>	<p>Multimedia Manager See slides for Section 31.1</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 12.7: <i>Magnetic Induction (2)</i></p>	<p>Active Figures Figures 31.1, 31.2 Coached Problems Problems 5, 7</p>
Motional emf	<p>Test Bank Questions 13, 16-33, 44, 51-53, 58, 59 Acetate 44</p>	<p>Multimedia Manager See slides for Section 31.2</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 12.6: <i>Magnetic Induction (1)</i></p>	<p>Active Figures Figure 31.10 Interactive Worked Examples Examples 31.4, 31.5</p>
Lenz's Law	<p>Test Bank Questions 42, 45, 48</p>	<p>Multimedia Manager See slides for Section 31.3</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 12.7: <i>Magnetic Induction (2)</i></p>	
Induced emf and Electric Fields	<p>Test Bank Questions 34-38</p>	<p>Multimedia Manager See slides for Section 31.4</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 12.8: <i>The General Form of Faraday's Law</i></p>	
Generators and Motors	<p>Test Bank Questions 39-41, 43, 46, 47 Acetates 45, 46</p>	<p>Multimedia Manager See slides for Section 31.5</p>	<p>Active Figures Figures 31.21, 31.23 Coached Problems Problem 35</p>
Eddy Currents	<p>Acetate 47</p>	<p>Multimedia Manager See slides for Section 31.6</p>	<p>Active Figures Figure 31.26 Coached Problems Problem 43</p>
Maxwell's Equations	<p>Test Bank Questions 49, 50</p>	<p>Multimedia Manager See slides for Section 31.7</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 12.10: <i>Maxwell's Equations and the Lorentz Force Law</i></p>	








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CHAPTER 32 ■ INDUCTANCE

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume II, Chapter 32</p> <p>Student Solutions Manual and Study Guide Volume II, Chapter 32</p> <p>Test Bank Volume II, Chapter 32</p> <p>BCA Testing Volume II, Chapter 32 </p> <p>Transparency Package Volume II, Chapter 32</p>	<p>Companion Web Site Online Chapter 32 at http://www.pse6.com </p> <p>Online Course/Homework Management Systems Chapter 32</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage for WebCT and Blackboard  ■ PhysicsNow Plus  ■ WebAssign ■ UT-Austin Homework System ■ CAPA <p>Multimedia Manager Volume II, Chapter 32 Microsoft® PowerPoint® lecture tool with images </p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action </p>	<p>PhysicsNow  Online Chapter 32 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Self-Inductance	<p>Test Bank Questions 1, 6</p>	<p>Multimedia Manager See slides for Section 32.1</p> <p>Core Concepts in Physics 2.0 CD-ROM Video Title</p>	<p>Active Figures Figures 32.3, 32.4, 32.6, 32.7</p> <p>Coached Problems Problem 5</p>
RL Circuits	<p>Test Bank Questions 2, 4, 5, 7, 11-14, 17 Acetates 48, 49</p>	<p>Multimedia Manager See slides for Section 32.2</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 13.6: <i>Inductors</i></p>	<p>Coached Problems Problem 19, 27 Interactive Worked Examples Example 32.3</p>
Energy in a Magnetic Field	<p>Test Bank Questions 3, 15, 16</p>	<p>Multimedia Manager See slides for Section 32.3</p>	<p>Coached Problems Problem 33</p>
Mutual Inductance		<p>Multimedia Manager See slides for Section 32.4</p>	
Oscillations in an LC Circuit	<p>Test Bank Questions 8-10, 18 Acetates 50, 51</p>	<p>Multimedia Manager See slides for Section 32.5</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 13.7: <i>Circuits Containing Resistors, Inductors, and Capacitors</i></p>	<p>Active Figures Figures 32.17, 32.18 Coached Problems Problem 53 Interactive Worked Examples Example 33.7</p>
The RLC Circuit	<p>Acetates 52, 53</p>	<p>Multimedia Manager See slides for Section 32.6</p>	<p>Active Figures Figures 32.21, 32.23</p>

CHAPTER 33 ■ ALTERNATING CURRENT CIRCUITS

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume II, Chapter 33</p> <p>Student Solutions Manual and Study Guide Volume II, Chapter 33</p> <p>Test Bank Volume II, Chapter 33</p> <p>BCA Testing Volume II, Chapter 33 </p> <p>Transparency Package Volume II, Chapter 33</p>	<p>Companion Web Site Online Chapter 33 at http://www.pse6.com </p> <p>Online Course/Homework Management Systems Chapter 33</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage for WebCT and Blackboard  ■ PhysicsNow Plus  ■ WebAssign ■ UT-Austin Homework System ■ CAPA <p>Multimedia Manager Volume II, Chapter 33 Microsoft® PowerPoint® lecture tool with images </p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action </p>	<p>PhysicsNow  Online Chapter 33 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
AC Sources		Multimedia Manager See slides for Section 33.1	
Resistors in an AC Circuit	Test Bank Questions 1-5 Acetate 54	Multimedia Manager See slides for Section 33.2	Active Figures Figures 33.2, 33.3
Inductors in an AC Circuit	Test Bank Questions 6, 10, 13, 28, 53, 54 Acetate 55	Multimedia Manager See slides for Section 33.3	Active Figures Figures 33.6, 33.7 Coached Problems Problem 11
Capacitors in an AC Circuit	Test Bank Questions 7, 9, 11, 12, 29, 50, 51 Acetate 56	Multimedia Manager See slides for Section 33.4	Active Figures Figures 33.9, 33.10
The RLC Series Circuit	Test Bank Questions 8, 17-23, 25, 27, 43, 46, 56, 58 Acetates 57, 58	Multimedia Manager See slides for Section 33.5 Core Concepts in Physics 2.0 CD-ROM Video 13.7: <i>Circuits Containing Resistors, Inductors, and Capacitors</i>	Active Figures Figures 33.13, 33.15 Coached Problems Problem 23 Interactive Worked Examples Example 33.5
Power in an AC Circuit	Test Bank Questions 31, 47, 52, 55	Multimedia Manager See slides for Section 33.6	Coached Problems Problem 31
Resonance in a Series RLC Circuit	Test Bank Questions 14, -16, 24, 30, 48, 49, 57 Acetate 59	Multimedia Manager See slides for Section 33.7	Active Figures Figure 33.19 Interactive Worked Examples Example 33.7
The Transformer and Power Transmission	Test Bank Questions 32-36, 44, 45, 59	Multimedia Manager See slides for Section 33.8	
Rectifiers and Filters	Test Bank Questions 37-42 Acetate 60	Multimedia Manager See slides for Section 33.9	Active Figures Figures 33.25, 33.26 Coached Problems Problem 53

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CHAPTER 34 ■ ELECTROMAGNETIC WAVES

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume II, Chapter 34</p> <p>Student Solutions Manual and Study Guide Volume II, Chapter 34</p> <p>Test Bank Volume II, Chapter 34</p> <p>BCA Testing Volume II, Chapter 34</p> <p>Transparency Package Volume II, Chapter 34</p>	<p>Companion Web Site Online Chapter 34 at http://www.pse6.com</p> <p>Online Course/Homework Management Systems Chapter 34</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage for WebCT and Blackboard ■ PhysicsNow Plus ■ WebAssign ■ UT-Austin Homework System ■ CAPA <p>Multimedia Manager Volume II, Chapter 34 Microsoft® <i>PowerPoint</i>® lecture tool with images</p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action</p>	<p>PhysicsNow Online Chapter 34 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Maxwell's Equations and Hertz's Discoveries	Acetate 61	Multimedia Manager See slides for Section 34.1	
Plane Electromagnetic Waves	Test Bank Questions 3, 15-19, 22, 24-26 Acetates 61-63	Multimedia Manager See slides for Section 34.2	Active Figures Figure 34.3 Coached Problems Problem 5 Interactive Worked Examples Example 34.1
Energy Carried by Electromagnetic Waves	Test Bank Questions 1, 2, 5-8, 20, 21, 27, 31, 32	Multimedia Manager See slides for Section 34.3	Coached Problems Problem 15, 17
Momentum and Radiation Pressure	Test Bank Questions 4, 9, 10, 23, 29, 30, 33	Multimedia Manager See slides for Section 34.4	Coached Problems Problem 19 Interactive Worked Examples Example 34.4
Production of Electromagnetic Waves by and Antenna	Test Bank Question 14	Multimedia Manager See slides for Section 34.5	
The Spectrum of Electromagnetic Waves	Test Bank Questions 11-13, 28 Acetate 64	Multimedia Manager See slides for Section 34.6	



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CHAPTER 35 ■ THE NATURE OF LIGHT AND THE LAWS OF GEOMETRIC OPTICS

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume II, Chapter 35</p> <p>Student Solutions Manual and Study Guide Volume II, Chapter 35</p> <p>Test Bank Volume II, Chapter 35</p> <p>BCA Testing Volume II, Chapter 35 </p> <p>Transparency Package Volume II, Chapter 35</p>	<p>Companion Web Site Online Chapter 35 at http://www.pse6.com </p> <p>Online Course/Homework Management Systems Chapter 35</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage for WebCT and Blackboard  ■ PhysicsNow Plus ■ WebAssign ■ UT-Austin Homework System ■ CAPA <p>Multimedia Manager Volume II, Chapter 35 Microsoft® PowerPoint® lecture tool with images </p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action </p>	<p>PhysicsNow  Online Chapter 35 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
The Nature of Light	Test Bank Questions 1, 2	Multimedia Manager See slides for Section 35.1	
Measurements of the Speed of Light	Test Bank Questions 3, 4	Multimedia Manager See slides for Section 35.2	
The Ray Approximation of Geometric Optics	Acetate 65	Multimedia Manager See slides for Section 35.3	Active Figures Figure 35.4
Reflection	Test Bank Questions 5, 9, 10	Multimedia Manager See slides for Section 35.4	Active Figures Figure 35.6 Interactive Worked Examples Example 35.2
Refraction	Test Bank Questions 6-8, 11-13, 15-18, 24-26, 28-31, 34 Acetates 66, 67	Multimedia Manager See slides for Section 35.5	Active Figures Figures 35.10, 35.11 Coached Problems Problem 19 Interactive Worked Examples Example 35.6
Huygen's Principle		Multimedia Manager See slides for Section 35.6	
Dispersion and Prisms	Test Bank Questions 22, 23, 33 Acetate 68	Multimedia Manager See slides for Section 35.7	Active Figures Figure 35.23 Coached Problems Problem 35
Total Internal Reflection	Test Bank Questions 14, 19-21, 32 Acetate 68	Multimedia Manager See slides for Section 35.8	Active Figures Figure 35.26
Fermat's Principle	Test Bank Question 27	Multimedia Manager See slides for Section 35.9	

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CHAPTER 36 ■ IMAGE FORMATION

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume II, Chapter 36</p> <p>Student Solutions Manual and Study Guide Volume II, Chapter 36</p> <p>Test Bank Volume II, Chapter 36</p> <p>BCA Testing Volume II, Chapter 36 </p> <p>Transparency Package Volume II, Chapter 36</p>	<p>Companion Web Site Online Chapter 36 at http://www.pse6.com </p> <p>See Options for Online Course/Homework Management Systems Chapter 36 </p> <p>Multimedia Manager Volume II, Chapter 36 Microsoft® <i>PowerPoint</i>® lecture tool with images </p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action </p>	<p>PhysicsNow  Online Chapter 36 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Images Formed by Flat Mirrors	<p>Test Bank Questions 1, 33 Acetates 69, 70</p>	<p>Multimedia Manager See slides for Section 36.1</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 14.6: <i>Images</i> Video 14.7: <i>Flat and Spherical Mirrors</i></p>	<p>Active Figures Figure 36.2</p>
Images Formed by Spherical Mirrors	<p>Test Bank Questions 2-13, 28, 29, 35, 40 Acetate 71</p>	<p>Multimedia Manager See slides for Section 36.2</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 14.6: <i>Images</i> Video 14.7: <i>Flat and Spherical Mirrors</i></p>	<p>Active Figures Figure 36.15 Coached Problem 9 Interactive Worked Examples Examples 36.4, 36.5</p>
Images Formed by Refraction	<p>Test Bank Questions 14-16, 30, 31 Acetate 72</p>	<p>Multimedia Manager See slides for Section 36.3</p>	<p>Active Figures Figure 36.20</p>
Thin Lenses	<p>Test Bank Questions 17-20, 32, 34, 36, 37, 39, 41 Acetate 73</p>	<p>Multimedia Manager See slides for Section 36.4</p> <p>Core Concepts in Physics 2.0 CD-ROM Video 14.8: <i>Thin Lenses</i></p>	<p>Active Figure 36.28 Coached Problems 29, 33 Interactive Worked Examples Examples 36.9, 36.10, 36.12</p>
Lens Aberrations		<p>Multimedia Manager See slides for Section 36.5</p>	
The Camera	<p>Test Bank Question 21</p>	<p>Multimedia Manager See slides for Section 36.6</p>	
The Eye	<p>Test Bank Questions 22, 23 Acetate 74</p>	<p>Multimedia Manager See slides for Section 36.7</p>	
The Simple Magnifier	<p>Test Bank Questions 24, 38</p>	<p>Multimedia Manager See slides for Section 36.8</p>	
The Compound Microscope	<p>Test Bank Questions 25, 26 Acetate 75</p>	<p>Multimedia Manager See slides for Section 36.9</p>	<p>Active Figures Figure 36.44</p>
The Telescope	<p>Test Bank Question 27 Acetate 76</p>	<p>Multimedia Manager See slides for Section 36.10 Core Concepts in Physics 2.0 CD-ROM Video 14.9: <i>Optics in the Real World</i></p>	<p>Active Figures Figure 36.45</p>



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CHAPTER 37 ■ INTERFERENCE OF LIGHT WAVES

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume II, Chapter 37</p> <p>Student Solutions Manual and Study Guide Volume II, Chapter 37</p> <p>Test Bank Volume II, Chapter 37</p> <p>BCA Testing Volume II, Chapter 37 </p> <p>Transparency Package Volume II, Chapter 37</p>	<p>Companion Web Site Online Chapter 37 at http://www.pse6.com </p> <p>Online Course/Homework Management Systems Chapter 37</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage for WebCT and Blackboard  ■ PhysicsNow Plus  ■ WebAssign ■ UT-Austin Homework System ■ CAPA <p>Multimedia Manager Volume I, Chapter 37 Microsoft® PowerPoint® lecture tool with images </p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action </p>	<p>PhysicsNow Online  Chapter 37 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Conditions for Interference		Multimedia Manager See slides for Section 37.1	Coached Problems Problems 3, 5
Young's Double-Slit Experiment	Test Bank Questions 1-6, 26-31, 38 Acetates 77, 78	Multimedia Manager See slides for Section 37.2	Active Figures Figure 37.2 Interactive Worked Examples Example 37.1
Intensity Distribution of the Double-Slit Interference Pattern	Test Bank Questions 7-9, 24, 25, 37	Multimedia Manager See slides for Section 37.3	Coached Problems Problem 17
Phasor Addition of Waves	Test Bank Questions 10-12 Acetates 79, 80	Multimedia Manager See slides for Section 37.4	Active Figures Figures 37.11, 37.13 Coached Problems Problem 23
Change of Phase Due to Reflection	Test Bank Questions 13-16	Multimedia Manager See slides for Section 37.5	
Interference in Thin Films	Test Bank Questions 17-23, 32-36, 39-42	Multimedia Manager See slides for Section 37.6	Coached Problems Problem 39 Interactive Worked Examples Example 37.4
The Michelson Interferometer	Acetate 81	Multimedia Manager See slides for Section 37.7	Active Figures Figure 37.22








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CHAPTER 38 ■ DIFFRACTION PATTERNS AND POLARIZATION

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume II, Chapter 38</p> <p>Student Solutions Manual and Study Guide Volume II, Chapter 38</p> <p>Test Bank Volume II, Chapter 38</p> <p>BCA Testing Volume II, Chapter 38 </p> <p>Transparency Package Volume II, Chapter 38</p>	<p>Companion Web Site Online Chapter 38 at http://www.pse6.com </p> <p>Online Course/Homework Management Systems Chapter 38</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage  for WebCT and Blackboard ■ PhysicsNow Plus  ■ WebAssign ■ UT-Austin Homework System ■ CAPA <p>Multimedia Manager Volume II, Chapter 38 Microsoft® PowerPoint® lecture tool with images </p> <p>Core Concepts in Physics 2.0 CD-ROM Multimedia presentation of physics concepts in action </p>	<p>PhysicsNow Online  Chapter 38 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Introduction to Diffraction Patterns	Test Bank Questions 31-33	Multimedia Manager See slides for Section 38.1	
Diffraction Patterns from Narrow Slits	Test Bank Questions 1, 3-6, 34-38, 41 Acetates 82, 83	Multimedia Manager See slides for Section 38.2	Active Figures Figures 38.4, 38.11 Coached Problems Problem 3 Interactive Worked Examples Example 38.1
Resolution of Single-Slit and Circular Apertures	Test Bank Questions 2, 7-10, 28, 45	Multimedia Manager See slides for Section 38.3	Coached Problems Problem 13
The Diffraction Grating	Test Bank Questions 11-15, 26, 40, 42 Acetate 84	Multimedia Manager See slides for Section 38.4	Active Figures Figures 38.17, 38.18 Coached Problems Problems 25, 29 Interactive Worked Examples Example 38.7
Diffraction of X-Rays by Crystals	Test Bank Questions 16-18, 27, 44	Multimedia Manager See slides for Section 38.5	Coached Problems Problem 37
Polarization of Light Waves	Test Bank Questions 19-25, 29, 30, 39, 43 Acetates 85, 86	Multimedia Manager See slides for Section 38.6	Active Figures Figures 38.30, 38.31

CHAPTER 39 ■ RELATIVITY

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume II, Chapter 39</p> <p>Student Solutions Manual and Study Guide Volume II, Chapter 39</p> <p>Test Bank Volume II, Chapter 39</p> <p>BCA Testing Volume II, Chapter 39 </p> <p>Transparency Package Volume II, Chapter 39</p>	<p>Companion Web Site Online Chapter 39 at http://www.pse6.com </p> <p>Online Course/Homework Management Systems Chapter 39</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage  for WebCT and Blackboard ■ PhysicsNow Plus  ■ WebAssign ■ UT-Austin Homework System ■ CAPA <p>Multimedia Manager  Volume II, Chapter 39 Microsoft® PowerPoint® lecture tool with images</p> <p>Core Concepts in Physics 2.0 CD-ROM  Multimedia presentation of physics concepts in action</p>	<p>PhysicsNow  Online Chapter 39 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
The Principle of Galilean Relativity	Test Bank Questions 1-3, 6	Multimedia Manager See slides for Section 39.1	
The Michelson-Morley Experiment	Acetate 87	Multimedia Manager See slides for Section 39.2	Active Figures Figure 39.4
Einstein's Principle of Relativity	Test Bank Questions 29, 30	Multimedia Manager See slides for Section 39.3	
Consequences of the Special Theory of Relativity	Test Bank Questions 7-17, 26, 28, 31, 32, 38-40 Acetates 88, 89	Multimedia Manager See slides for Section 39.4	Active Figures 39.6, 39.11 Coached Problem 11 Interactive Worked Examples 39.4
The Lorentz Transformation Equations	Test Bank Question 27	Multimedia Manager See slides for Section 39.5	
The Lorentz Velocity Transformation Equations	Test Bank Questions 4, 5	Multimedia Manager See slides for Section 39.6	Coached Problems Problem 27 Interactive Worked Examples Example 39.9
Relativistic Linear Momentum and the Relativistic Form of Newton's Laws	Test Bank Questions 20, 34, 35	Multimedia Manager See slides for Section 39.7	Coached Problems Problem 33
Relativistic Energy	Test Bank Questions 18, 19, 21, 22, 25, 33, 36, 37	Multimedia Manager See slides for Section 39.8	Coached Problems Problem 39
Mass and Energy	Test Bank Questions 23, 24	Multimedia Manager See slides for Section 39.9	
The General Theory of Relativity		Multimedia Manager See slides for Section 39.10	

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CHAPTER 40 ■ INTRODUCTION TO QUANTUM MECHANICS

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume II, Chapter 40</p> <p>Student Solutions Manual and Study Guide Volume II, Chapter 40</p> <p>Test Bank Volume II, Chapter 40</p> <p>BCA Testing Volume II, Chapter 40</p> <p>Transparency Package Volume II, Chapter 40</p>	<p>Companion Web Site Online Chapter 40 at http://www.pse6.com</p> <p>Online Course/Homework Management Systems Chapter 40</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage for WebCT and Blackboard ■ PhysicsNow Plus ■ WebAssign ■ UT-Austin Homework System ■ CAPA <p>Multimedia Manager Volume II, Chapter 40 Microsoft® PowerPoint® lecture tool with images</p>	<p>PhysicsNow Online Chapter 40 at PhysicsNow</p> <p>http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Blackbody Radiation and Planck's Hypothesis	<p>Test Bank Question 1 Acetates 90, 91</p>	<p>Multimedia Manager See slides for Section 40.1</p>	<p>Active Figures Figures 40.3, 40.7</p> <p>Coached Problems Problem 7</p>
The Photoelectric Effect	<p>Test Bank Questions 2-8, 22, 37-40 Acetates 92, 93</p>	<p>Multimedia Manager See slides for Section 40.2</p>	<p>Active Figures Figures 40.9, 40.10, 40.11</p> <p>Interactive Worked Examples Example 40.3</p>
The Compton Effect	<p>Test Bank Questions 9-16, 23</p>	<p>Multimedia Manager See slides for Section 40.3</p>	<p>Coached Problems Problem 23</p> <p>Interactive Worked Examples Example 40.4</p>
Photons and Electromagnetic Waves		<p>Multimedia Manager See slides for Section 40.4</p>	
The Wave Properties of Particles	<p>Test Bank Questions 17-21, 31, 36, 41</p>	<p>Multimedia Manager See slides for Section 40.5</p>	<p>Coached Problems Problem 37</p>
The Quantum Particle	<p>Test Bank Question 32 Acetate 94</p>	<p>Multimedia Manager See slides for Section 40.6</p>	<p>Active Figures Figures 40.21, 40.22</p>
The Double-Slit Experiment Revisited	<p>Test Bank Questions 30, 33, 35</p>	<p>Multimedia Manager See slides for Section 40.7</p>	<p>Active Figures Figure 40.23</p> <p>Coached Problems Problem 45</p>
The Uncertainty Principle	<p>Test Bank Questions 24-29, 34, 42, 43</p>	<p>Multimedia Manager See slides for Section 40.8</p>	<p>Coached Problems Problem 49</p>



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CHAPTER 41 ■ QUANTUM MECHANICS

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume II, Chapter 41</p> <p>Student Solutions Manual and Study Guide Volume II, Chapter 41</p> <p>Test Bank Volume II, Chapter 41</p> <p>BCA Testing Volume II, Chapter 41 </p> <p>Transparency Package Volume II, Chapter 41</p>	<p>Companion Web Site Online Chapter 41 at http://www.pse6.com </p> <p>Online Course/Homework Management Systems Chapter 41</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage  for WebCT and Blackboard ■ PhysicsNow Plus  ■ WebAssign ■ UT-Austin Homework System ■ CAPA <p>Multimedia Manager Volume II, Chapter 41 Microsoft® PowerPoint® lecture tool with images </p>	<p>PhysicsNow Online  Chapter 41 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
An Interpretation of Quantum Mechanics	Test Bank Questions 16, 19-21	Multimedia Manager See slides for Section 41.1	Coached Problems Problem 1
A Particle in a Box	Test Bank Questions 2-9, 15, 18, 22 Acetate 95	Multimedia Manager See slides for Section 41.2	Active Figures Figures 41.4, 41.5 Coached Problems Problem 5 Interactive Worked Examples Example 41.2
The Particle Under Boundary Conditions		Multimedia Manager See slides for Section 41.3	
The Schrödinger Equation	Test Bank Question 17	Multimedia Manager See slides for Section 41.4	
A Particle in a Well of Finite Height	Test Bank Questions 23-25 Acetate 96	Multimedia Manager See slides for Section 41.5	Active Figures Figure 41.8
Tunneling Through a Potential-Energy Barrier	Test Bank Questions 10-12	Multimedia Manager See slides for Section 41.6	Active Figures Figure 41.10 Interactive Worked Examples Example 41.6
The Scanning Tunneling Microscope	Test Bank Question 26	Multimedia Manager See slides for Section 41.7	
The Simple Harmonic Oscillator	Test Bank Questions 1, 13, 14	Multimedia Manager See slides for Section 41.8	






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CHAPTER 42 ■ ATOMIC PHYSICS

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume II, Chapter 42</p> <p>Student Solutions Manual and Study Guide Volume II, Chapter 42</p> <p>Test Bank Volume II, Chapter 42</p> <p>BCA Testing Volume II, Chapter 42 </p> <p>Transparency Package Volume II, Chapter 42</p>	<p>Companion Web Site Online Chapter 42 at http://www.pse6.com </p> <p>Online Course/Homework Management Systems Chapter 42</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage  for WebCT and Blackboard ■ PhysicsNow Plus  ■ WebAssign ■ UT-Austin Homework System ■ CAPA <p>Multimedia Manager Volume II, Chapter 42  Microsoft® PowerPoint® lecture tool with images</p>	<p>PhysicsNow  Online Chapter 42 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Atomic Spectra of Gases	Test Bank Questions 2-4, 43, 51	Multimedia Manager See slides for Section 42.1	
Early Models of the Atom		Multimedia Manager See slides for Section 42.2	Coached Problems Problem 3
Bohr's Model of the Hydrogen Atom	Test Bank Questions 1, 5-12, 44, 45, 50, 52 Acetate 97	Multimedia Manager See slides for Section 42.3	Active Figures Figures 42.8, 42.9 Coached Problems Problem 7 Interactive Worked Examples Example 42.2
The Quantum Model of the Hydrogen Atom	Test Bank Questions 13-23, 28, 29, 49	Multimedia Manager See slides for Section 42.4	
The Wave Functions for Hydrogen	Test Bank Questions 24-27 Acetate 98	Multimedia Manager See slides for Section 42.5	Active Figures Figure 42.13 Coached Problems Problem 21
Physical Interpretation of the Quantum Numbers	Test Bank Questions 30-32, 34, 35, 46, 48	Multimedia Manager See slides for Section 42.6	Coached Problems Problem 27 Interactive Worked Examples Example 42.7
The Exclusion Principle and the Periodic Table	Test Bank Questions 33, 36, 37, 39-42, 47	Multimedia Manager See slides for Section 42.7	Coached Problems Problem 37
More on Atomic Spectra: Visible and X-Ray	Test Bank Questions 38	Multimedia Manager See slides for Section 42.8	
Spontaneous and Stimulated Transitions	Acetate 99	Multimedia Manager See slides for Section 42.9	Active Figures Figures 42.24, 42.25, 42.26
Lasers		Multimedia Manager See slides for Section 42.10	Coached Problems Problem 49

CHAPTER 43 ■ MOLECULES AND SOLIDS

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume II, Chapter 43</p> <p>Student Solutions Manual and Study Guide Volume II, Chapter 43</p> <p>Test Bank Volume II, Chapter 43</p> <p>BCA Testing Volume II, Chapter 43 </p> <p>Transparency Package Volume II, Chapter 43</p>	<p>Companion Web Site Online Chapter 43 at http://www.pse6.com </p> <p>Online Course/Homework Management Systems Chapter 43</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage for WebCT and Blackboard  ■ PhysicsNow Plus  ■ WebAssign ■ UT-Austin Homework System ■ CAPA <p>Multimedia Manager Volume II, Chapter 43 Microsoft® PowerPoint® lecture tool with images </p>	<p>PhysicsNow  Online Chapter 43 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Molecular Bonds	<p>Test Bank Questions 1, 2, 30 Acetate 100</p>	<p>Multimedia Manager See slides for Section 43.1</p>	<p>Active Figures Figure 43.3 Coached Problems Problem 1</p>
Energy States and Spectra of Molecules	<p>Test Bank Questions 3-21, 29, 31, 32, 39, 40 Acetates 101, 102, 103</p>	<p>Multimedia Manager See slides for Section 43.2</p>	<p>Active Figures Figures 43.5, 43.6, 43.7, 43.8 Coached Problems Problem 7, 13 Interactive Worked Examples Examples 43.1, 43.2</p>
Bonding in Solids	<p>Test Bank Questions 28, 37, 38</p>	<p>Multimedia Manager See slides for Section 43.3</p>	
Free-Electron Theory of Metals	<p>Test Bank Questions 22-25 Acetate 104</p>	<p>Multimedia Manager See slides for Section 43.4</p>	<p>Active Figures Figure 43.15</p>
Band Theory of Solids	<p>Test Bank Questions 26, 33</p>	<p>Multimedia Manager See slides for Section 43.5</p>	<p>Coached Problems Problem 31</p>
Electrical Conduction in Metals, Insulators, and Semiconductors	<p>Test Bank Questions 27, 34</p>	<p>Multimedia Manager See slides for Section 43.6</p>	<p>Coached Problems Problem 39</p>
Semiconductor Devices	<p>Test Bank Question 35</p>	<p>Multimedia Manager See slides for Section 43.7</p>	
Superconductivity	<p>Test Bank Question 36</p>	<p>Multimedia Manager See slides for Section 43.8</p>	

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CHAPTER 44 ■ NUCLEAR STRUCTURE

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume II, Chapter 44</p> <p>Student Solutions Manual and Study Guide Volume II, Chapter 44</p> <p>Test Bank Volume II, Chapter 44</p> <p>BCA Testing Volume II, Chapter 44</p> <p>Transparency Package Volume II, Chapter 44</p>	<p>Companion Web Site Online Chapter 44 at http://www.pse6.com</p> <p>Online Course/Homework Management Systems Chapter 44</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage for WebCT and Blackboard ■ PhysicsNow Plus ■ WebAssign ■ UT-Austin Homework System ■ CAPA <p>Multimedia Manager Volume II, Chapter 44 Microsoft® PowerPoint® lecture tool with images</p>	<p>PhysicsNow Online Chapter 44 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Some Properties of Nuclei	<p>Test Bank Questions 1-5, 29, 32-35 Acetate 105</p>	<p>Multimedia Manager See slides for Section 44.1</p>	<p>Active Figures Figure 44.1</p>
Nuclear Binding Energy	<p>Test Bank Questions 6-9, 26, 28</p>	<p>Multimedia Manager See slides for Section 44.2</p>	<p>Coached Problems Problem 17, 19</p>
Nuclear Models	<p>Test Bank Questions 36, 37</p>	<p>Multimedia Manager See slides for Section 44.3</p>	
Radioactivity	<p>Test Bank Questions 10-13, 15, 16, 27, 30, 40, 41</p>	<p>Multimedia Manager See slides for Section 44.4</p>	<p>Active Figures Figure 44.9 Coached Problems Problem 27 Interactive Worked Examples Example 44.5</p>
The Decay Processes	<p>Test Bank Questions 14, 17-23, 31, 38, 42, 43 Acetates 105, 106, 107</p>	<p>Multimedia Manager See slides for Section 44.5</p>	<p>Active Figures Figures 44.10, 44.11, 44.14a, 44.14b, 44.15 Interactive Worked Examples Example 44.10</p>
Natural Radioactivity		<p>Multimedia Manager See slides for Section 44.6</p>	
Nuclear Reactions	<p>Test Bank Questions 24, 25</p>	<p>Multimedia Manager See slides for Section 44.7</p>	<p>Coached Problems Problem 47</p>
Nuclear Magnetic Resonance and Magnetic Resonance Imaging	<p>Test Bank Question 39</p>	<p>Multimedia Manager See slides for Section 44.8</p>	



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CHAPTER 45 ■ APPLICATION OF NUCLEAR PHYSICS

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume II, Chapter 45</p> <p>Student Solutions Manual and Study Guide Volume II, Chapter 45</p> <p>Test Bank Volume II, Chapter 45</p> <p>BCA Testing Volume II, Chapter 45 </p> <p>Transparency Package Volume II, Chapter 45</p>	<p>Companion Web Site Online Chapter 45 at http://www.pse6.com </p> <p>Online Course/Homework Management Systems Chapter 45</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage  for WebCT and Blackboard ■ PhysicsNow Plus  ■ WebAssign ■ UT-Austin Homework System ■ CAPA <p>Multimedia Manager Volume II, Chapter 45 Microsoft® PowerPoint® lecture tool with images </p>	<p>PhysicsNow  Online Chapter 45 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
Interactions Involving Neutrons	Test Bank Questions 1-6, 11, 12, 25, 30	Multimedia Manager See slides for Section 45.1	
Nuclear Fission	Test Bank Questions 7-9, 23, 27-29, 34	Multimedia Manager See slides for Section 45.2	Coached Problems Problem 5
Nuclear Reactors	Test Bank Questions 10, 22 Acetate 108	Multimedia Manager See slides for Section 45.3	Active Figures Figure 45.3 Coached Problems Problem 11
Nuclear Fusion	Test Bank Questions 13-15, 21, 31, 35 Acetates 109, 110	Multimedia Manager See slides for Section 45.4	Active Figures Figure 45.14 Coached Problems Problem 17 Interactive Worked Examples Example 45.3
Radiation Damage	Test Bank Questions 16-19, 24, 32	Multimedia Manager See slides for Section 45.5	Coached Problems Problem 27
Radiation Detectors	Test Bank Question 20	Multimedia Manager See slides for Section 45.6	
Uses of Radiation	Test Bank Questions 26, 33	Multimedia Manager See slides for Section 45.7	

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CHAPTER 46 ■ PARTICLE PHYSICS AND COSMOLOGY

Chapter Outline	Print Resources	Media and Internet Resources	PhysicsNow
Chapter Resources	<p>See the Instructor's Solutions Manual for detailed solutions for all in-text problems. Volume II, Chapter 46</p> <p>Student Solutions Manual and Study Guide Volume II, Chapter 46</p> <p>Test Bank Volume II, Chapter 46</p> <p>BCA Testing Volume II, Chapter 46 </p> <p>Transparency Package Volume II, Chapter 46</p>	<p>Companion Web Site Online Chapter 46 at http://www.pse6.com </p> <p>Online Course/Homework Management Systems Chapter 46</p> <ul style="list-style-type: none"> ■ WebTutor™ Advantage  for WebCT and Blackboard ■ PhysicsNow Plus  ■ WebAssign ■ UT-Austin Homework System ■ CAPA <p>Multimedia Manager Volume II, Chapter 46 Microsoft® PowerPoint® lecture tool with images </p>	<p>PhysicsNow Online  Chapter 46 at http://www.pse6.com provides students with a powerful study tool that helps them maximize and manage their time. This interactive Web-based assessment program, featuring conceptually linked components, gives your students a <i>Personalized Learning Plan</i> to help meet learning goals.</p>
The Fundamental Forces in Nature	Test Bank Question 20	Multimedia Manager See slides for Section 46.1	
Positrons and Other Antiparticles	Test Bank Questions 1, 2, 26	Multimedia Manager See slides for Section 46.2	
Mesons and the Beginning of Particle Physics	Acetate 111	Multimedia Manager See slides for Section 46.3	Coached Problems Problems 5, 7
Classification of Particles	Test Bank Questions 6, 7	Multimedia Manager See slides for Section 46.4	
Conservation Laws	Test Bank Questions 3, 4, 8, 10, 27	Multimedia Manager See slides for Section 46.5	Coached Problems 15, 17 Interactive Worked Example 46.2
Strange Particles and Strangeness	Test Bank Question 9	Multimedia Manager See slides for Section 46.6	
Making Particles and Measuring Their Properties	Test Bank Questions 5, 15-18, 29	Multimedia Manager See slides for Section 46.7	
Finding Patterns in the Particles	Acetate 112	Multimedia Manager See slides for Section 46.8	
Quarks	Test Bank Questions 11, 14, 28 Acetate 113	Multimedia Manager See slides for Section 46.9	Active Figures Figure 46.12
Multicolored Quarks	Test Bank Question 19	Multimedia Manager See slides for Section 46.10	
The Standard Model	Test Bank Question 21	Multimedia Manager See slides for Section 46.11	
The Cosmic Connection	Test Bank Questions 12, 13, 22-24 Acetate 114	Multimedia Manager See slides for Section 46.12	Coached Problems Problem 39
Problems and Perspectives	Test Bank Question 25	Multimedia Manager See slides for Section 46.13	