Block Schedule Planning Guide
9

Energy in a Cell

Chapter Pacing Guide

Please note that this pace is based on completing selected sections of the text in 90 classes, approximately 90 minutes each. Less time can be allotted for each chapter if you plan to teach the entire text.

Period	Content
0.5	9.1 ATP in a Molecule
1	9.2 Photosynthesis: Trapping the Sun's Energy
1	9.3 Getting Energy to Make ATP
0.5	Chapter Assessment

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Block Schedule Planning Guide 9.1

ATP in a Molecule

pages 227–230

Pacing Guide
1/2 period
Lesson & Problem-Solving Lab

KEY: *SE* = Student Edition, *TWE* = Teacher Wraparound Edition, *TCR* = Teacher Classroom Resources, *NGS* = National Geographic Society videodisc, *BDOL* = Biology: The Dynamics of Life

National Science Content Standards: UCP.2, UCP.3; A.1, A.2; B.3, B.6; C.1, C.5

Objectives

- **Explain** why organisms need a supply of energy.
- **Describe** how energy is stored and released by ATP.

Georgia QCC: 1.1, 2.1, 5.2, 5.3, 6.1, 6.4, 7.1

Lesson Resources

_____ Section Focus Transparency 21 and Master
_____ Basic Concepts Transparency 11 and Master
_____ *Reinforcement and Study Guide*, p. 37 *TCR*
_____ *Content Mastery*, p. 42 *TCR*

Multimedia Resources

_____ **BDOL CD-ROM** Section 9.1 Summary
_____ **MindJogger Videoquizzes**, Ch. 9
_____ **English/Spanish Audiocassettes**, Section 9.1
_____ *Using the Internet in the Science Classroom*, *TCR*
_____ Glencoe Science Web Site: **ga.science.glencoe.com**

Optional Resources

_____ *Tech Prep Applications*, pp. 15–16 *TCR*
_____ *Spanish Resources*

Lesson Plan

Activity	Resources	Suggested Time
Classroom Management • Distribute the corrected Chapter 8 tests while students complete the Bellringer for Section 9.1.	Section Focus Transparency 21 and Master	5 minutes
Discussion • Answer Chapter 8 test questions.	*Chapter Assessment*, pp. 257–259 *TCR*	5 minutes
Core Lesson • Introduce Chapter 9 with the Getting Started Demo. • Teach the main concepts of Section 9.1. • Have students complete Problem-Solving Lab 9-1.	*TWE*, p. 226 *TWE*, pp. 227–230 *SE*, p. 228	15–20 minutes
In-Class Check • Assess students' results to Problem-Solving Lab 9-1, and discuss the Thinking Critically questions. • Do the Check for Understanding and Reteach strategies.	*TWE*, p. 228 *TWE*, p. 230	5–10 minutes
Homework • Assign Section 9.1 Assessment. • Assign relevant questions from Chapter 9 Assessment.	*SE*, p. 230 *SE*, pp. 247–249	5 minutes
Closing • Assess students with the Close Demonstration.	*TWE*, p. 230	5 minutes

[total = 45 minutes]

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Block Schedule Planning Guide
9.2

Photosynthesis: Trapping the Sun's Energy

pages 231–236

Pacing Guide
1 period
Lesson & MiniLab

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National Science Content Standards: UCP.2, UCP.3; A.1, A.2; B.3, B.6; C.1, C.5; G.1

Objectives

- **Relate** the structure of chloroplasts to the events in photosynthesis.
- **Describe** the light-dependent reactions.
- **Explain** the reactions and products of the light-independent Calvin cycle.

Georgia QCC: 1.1, 2.1, 3.2, 4.4, 6.1, 6.3, 7.1, 7.2

Lesson Resources

_____ Section Focus Transparency 22 and Master
_____ Basic Concepts Transparency 12 and Master
_____ *BioLab and MiniLab Worksheets*, p. 39 *TCR*
_____ *Concept Mapping*, p. 9 *TCR*
_____ *Reinforcement and Study Guide*, pp. 38–39 *TCR*
_____ *Content Mastery*, p. 43 *TCR*

Multimedia Resources

_____ **BDOL CD-ROM** Section 9.2 Summary
_____ **MindJogger Videoquizzes**, Ch. 9
_____ **English/Spanish Audiocassettes**, Section 9.2
_____ **BDOL Videodisc**, Disc 1, Side 1
_____ *Using the Internet in the Science Classroom*, *TCR*
_____ Glencoe Science Web Site: **ga.science.glencoe.com**

Optional Resources

_____ *Critical Thinking/Problem Solving*, p. 9 *TCR*
_____ *Spanish Resources*

Lesson Plan

Activity	Resources	Suggested Time
Classroom Management • Have students complete the Bellringer for Section 9.2. • Have students check homework answers.	Section Focus Transparency 22 and Master *TWE*, pp. 230, 247–249	5 minutes
Discussion • Answer homework questions.	*TWE*, pp. 230, 247–249	5 minutes
Core Lesson • Teach the main concepts of Section 9.2. • Do the Quick Demo. • Have students complete MiniLab 9-1. • Assess students' results for the MiniLab, and discuss any questions they raise about the lab.	*TWE*, pp. 231–236 *TWE*, p. 233 *SE*, p. 234 *TWE*, p. 234	35 minutes
In-Class Check • Have students complete the Portfolio: Communications about Science in groups, and choose one member from each group to share their reports with the class. • Use the Teaching Strategy and Visual Learning guides to present the Inside Story. • Review Section 9.1 with the Basic Concepts Transparency.	*TWE*, p. 232 *TWE*, p. 235 Basic Concepts Transparency 12 and Master	25 minutes
Homework • Have students complete Section 9.2 Assessment. • Assign the Biology Journal: Oxygen Journey. • Assign relevant questions from Chapter 9 Assessment.	*SE*, p. 236 *TWE*, p. 234 *SE*, pp. 247–249	10 minutes
Closing • Assess students with the Close Discussion.	*TWE*, p. 236	10 minutes

[total = 90 minutes]

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Block Schedule Planning Guide
9.3

Getting Energy to Make ATP

pages 237–243

Pacing Guide
1 period
Lesson & BioLab

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National Science Content Standards: UCP1–3; A.1, A.2; B.3, B.6; C.1, C.5; F.6

Objectives

- **Compare and contrast** cellular respiration and fermentation.
- **Explain** how cells obtain energy from cellular respiration.

Georgia QCC: 1.1, 1.2, 1.3, 2.1, 4.4, 6.1, 7.1, 7.2, 7.3

Lesson Resources

_____ Section Focus Transparency 23 and Master
_____ Basic Concepts Transparency 13 and Master
_____ *BioLab and MiniLab Worksheets*, pp. 40–42 *TCR*
_____ *Reinforcement and Study Guide*, p. 40 *TCR*
_____ *Content Mastery*, p. 43 *TCR*
_____ Reteaching Skills Transparencies 14–15 and Masters

Multimedia Resources

_____ **BDOL CD-ROM** Section 9.3 Summary
_____ **MindJogger Videoquizzes**, Ch.9
_____ **English/Spanish Audiocassettes**, Section 9.3
_____ *Using the Internet in the Science Classroom*, *TCR*
_____ Glencoe Science Web Site: **ga.science.glencoe.com**

Optional Resources

_____ *Laboratory Manual*, pp. 61–64, 65–68 *TCR*
_____ *Spanish Resources*

Lesson Plan

Activity	Resources	Suggested Time
Classroom Management • Have students complete the Bellringer for Section 9.3. • Have students check homework answers.	Section Focus Transparency 23 and Master *TWE*, pp. 236, 247–249	5 minutes
Discussion • Answer homework questions.	*TWE*, pp. 236, 247–249	5 minutes
Core Lesson • Introduce Section 9.3 with the Concept Development strategy and the Quick Demo. • Teach the main concepts of Section 9.3.	*TWE*, p. 238 *TWE*, pp. 237–243	25–30 minutes
In-Class Check • Have students complete the BioLab and discuss their results. • Answer questions on Chapter 9 in preparation for the test.	*SE*, pp. 244–245 *TWE*, pp. 226–255	40–45 minutes
Homework • Have students complete Section 9.3 Assessment. • Encourage students with internet access at home to complete the Sharing Your Data: Internet Connection portion of the BioLab. • Assign relevant questions from Chapter 9 Assessment.	*SE*, p. 243 *SE*, p. 245 *SE*, pp. 247–249	5 minutes
Closing • Assess students with the Discussion Activity.	*TWE*, p. 243	5 minutes

[total = 90 minutes]

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Block Schedule Planning Guide
Review and Assessment

Energy in a Cell

Pacing Guide
1/2 period
Review/Assessment

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Assessment Resources

_____ *Chapter Assessment*, Ch. 9 *TCR*
_____ *Performance Assessment in the Biology Classroom*, *TCR*
_____ *Alternate Assessment in the Science Classroom*, *TCR*
_____ *5 Days to the Georgia High School Graduation Test*, *TCR*

Multimedia Resources

_____ **MindJogger Videoquizzes**, Ch. 9
_____ **ExamView® Pro Software**, Ch. 9
_____ **BDOL Interactive CD-ROM** Ch. 9 quiz

Lesson Plan

Activity	Resources	Suggested Time
Classroom Management • Have students check homework answers.	*TWE*, p. 243 *TWE*, pp. 247–249	5 minutes
Reviewing the Chapter • Answer homework questions. • Answer any final questions about Chapter 9.	*TWE*, pp. 226–255	5 minutes
Assessment • Distribute the test and allow students to work quietly.	*Chapter Assessment*, pp. 49–54 *TCR*	30–35 minutes
Closing • As students complete the test, let them explore the Internet connection for Chapter 10.	**ga.science.glencoe.com**	0–5 minutes

[total = 45 minutes]

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