

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.

Block	Content
0.5	9.1 The Need for Energy
1	9.2 Photosynthesis: Trapping the Sun's Energy
1	9.3 Getting Energy to Make ATP
0.5	Chapter Assessment

Block Schedule Planning Guide

9.1

The Need for Energy

pages 221–224

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

Pacing Guide

1/2 block

Lesson & Problem-Solving Lab

KEY: SE = Student Edition, TWE = Teacher Wraparound Edition, TCR = Teacher Classroom Resources, BDOL = Biology: The Dynamics of Life, URB = Unit Resources Booklet

Objectives

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

State/local objectives: _____

Lesson Resources

- _____ Section Focus Transparency 21 and Master, *TCR/URB*
- _____ Basic Concepts Transparency 11 and Master, *TCR/URB*
- _____ *Reinforcement and Study Guide*, *URB* English, p. 127; Spanish, p. 131

- _____ *MindJogger Videoquizzes*, Ch. 9
- _____ **Guided Reading Audio Summaries MP3**
- _____ *Using the Internet in the Science Classroom*, *TCR*
- _____ Glencoe Science Web site: bdol.glencoe.com

Optional Resources

- _____ *Real World BioApplications*, pp. 125–126 *URB*

Multimedia Resources

- _____ **Interactive Chalkboard CD-ROM:** Section 9.1 Presentation

Lesson Plan

Activity	Resources	Suggested Time
Classroom Management <ul style="list-style-type: none"> • Distribute the corrected Chapter 8 tests while students complete the Bellringer for Section 9.1. 	Section Focus Transparency 21 and Master, <i>TCR/URB</i>	5 minutes
Discussion <ul style="list-style-type: none"> • Answer Chapter 8 test questions. 	<i>Chapter Assessment</i> , pp. 192–193 <i>TCR</i>	5 minutes
Core Lesson <ul style="list-style-type: none"> • Introduce Chapter 9 with the Two-Minute Chapter Launcher. • Teach the main concepts of Section 9.1. • Have students complete Problem-Solving Lab 9.1. 	<i>TWE</i> , p. 220 <i>TWE</i> , pp. 221–224 <i>SE</i> , p. 222	15–20 minutes
In-Class Check <ul style="list-style-type: none"> • Assess students' results to Problem-Solving Lab 9.1, and discuss the Thinking Critically questions. • Do the Check for Understanding and Reteach strategies. 	<i>TWE</i> , p. 222 <i>TWE</i> , p. 224	5–10 minutes
Homework <ul style="list-style-type: none"> • Assign Section 9.1 Assessment. • Assign relevant questions from Chapter 9 Assessment. 	<i>SE</i> , p. 224 <i>SE</i> , pp. 241–243	5 minutes
Closing <ul style="list-style-type: none"> • Assess students with the Modified Assessment. 	<i>TWE</i> , p. 224	5 minutes

[total = 45 minutes]

Block Schedule Planning Guide

9.2

Photosynthesis: Trapping the Sun's Energy

pages 225–230

Pacing Guide

1 block

Lesson & MiniLab

KEY: *SE* = Student Edition, *TWE* = Teacher Wraparound Edition, *TCR* = Teacher Classroom Resources, *BDOL* = Biology: The Dynamics of Life, *URB* = Unit Resources Booklet

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

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.

State/local objectives: _____

Lesson Resources

- _____ Section Focus Transparency 22 and Master, *TCR/URB*
- _____ Basic Concepts Transparency 12 and Master, *TCR/URB*
- _____ *MiniLab Worksheet*, p. 122 *URB*
- _____ *BioLab Worksheet*, pp. 123–124 *URB*
- _____ *Concept Mapping*, p. 135 *URB*
- _____ *Reinforcement and Study Guide*, *URB* English, pp. 128–129; Spanish, pp. 132–133

Multimedia Resources

- _____ **Interactive Chalkboard CD-ROM:** Section 9.2 Presentation
- _____ **MindJogger Videoquizzes**, Ch. 9
- _____ **Guided Reading Audio Summaries MP3** *Using the Internet in the Science Classroom*, *TCR*
- _____ Glencoe Science Web site: bdol.glencoe.com

Optional Resources

- _____ *Critical Thinking/Problem Solving*, p. 136 *URB*

Lesson Plan

Activity	Resources	Suggested Time
Classroom Management <ul style="list-style-type: none"> • Have students complete the Bellringer for Section 9.2. • Have students check homework answers. 	Section Focus Transparency 22 and Master, <i>TCR/URB</i> <i>TWE</i> , pp. 224, 241–243	5 minutes
Discussion <ul style="list-style-type: none"> • Answer homework questions. 	<i>TWE</i> , pp. 224, 241–243	5 minutes
Core Lesson <ul style="list-style-type: none"> • Teach the main concepts of Section 9.2. • Do the Quick Demo. • Have students complete MiniLab 9.1. • Have students complete MiniLab 9.2. • Assess students' results for the MiniLabs, and discuss any questions they raise about the labs. 	<i>TWE</i> , pp. 225–230 <i>TWE</i> , p. 227 <i>SE</i> , p. 226 <i>SE</i> , p. 228 <i>TWE</i> , pp. 226, 228	35 minutes
In-Class Check <ul style="list-style-type: none"> • Use the Teaching Strategy and Visual Learning guides to present the Inside Story. • Review Section 9.1 with the Basic Concepts Transparency. 	<i>TWE</i> , p. 229 Basic Concepts Transparency 12 and Master	25 minutes
Homework <ul style="list-style-type: none"> • Have students complete Section 9.2 Assessment. • Assign relevant questions from Chapter 9 Assessment. 	<i>SE</i> , p. 230 <i>SE</i> , pp. 241–243	10 minutes
Closing <ul style="list-style-type: none"> • Assess students with the Teaching Strategies activity. 	<i>TWE</i> , p. 229	10 minutes

[total = 90 minutes]

Block Schedule Planning Guide

9.3

Getting Energy to Make ATP

pages 231–237

Pacing Guide

1 block

Lesson & BioLab

KEY: *SE* = Student Edition, *TWE* = Teacher Wraparound Edition, *TCR* = Teacher Classroom Resources, *BDOL* = Biology: The Dynamics of Life, *URB* = Unit Resources Booklet

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

Objectives

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

State/local objectives: _____

Lesson Resources

- _____ Section Focus Transparency 23 and Master, *TCR/URB*
- _____ Basic Concepts Transparency 13 and Master, *TCR/URB*
- _____ *Reinforcement and Study Guide*, *URB* English, p. 130; Spanish, p. 134
- _____ Reteaching Skills Transparencies 14–15 and Masters, *TCR/URB*

- _____ *MindJogger Videoquizzes*, Ch.9
- _____ **Guided Reading Audio Summaries MP3**
- _____ *Using the Internet in the Science Classroom*, *TCR*
- _____ Glencoe Science Web site: bdol.glencoe.com

Optional Resources

- _____ *Laboratory Manual*, pp. 49–52 *TCR*
- _____ *Probeware Labs*, pp. 13–16 *TCR*

Multimedia Resources

- _____ **Interactive Chalkboard CD-ROM:** Section 9.3 Presentation

Lesson Plan

Activity	Resources	Suggested Time
Classroom Management <ul style="list-style-type: none"> • Have students complete the Bellringer for Section 9.3. • Have students check homework answers. 	Section Focus Transparency 23 and Master, <i>TCR/URB</i> <i>TWE</i> , pp. 230, 241–243	5 minutes
Discussion <ul style="list-style-type: none"> • Answer homework questions. 	<i>TWE</i> , pp. 230, 241–243	5 minutes
Core Lesson <ul style="list-style-type: none"> • Introduce Section 9.3 with the Concept Development strategy and the Quick Demo. • Teach the main concepts of Section 9.3. 	<i>TWE</i> , p. 232 <i>TWE</i> , pp. 231–239	25–30 minutes
In-Class Check <ul style="list-style-type: none"> • Have students complete the BioLab and discuss their results. • Answer questions on Chapter 9 in preparation for the test. 	<i>SE</i> , pp. 238–239 <i>TWE</i> , pp. 221–243	40–45 minutes
Homework <ul style="list-style-type: none"> • Have students complete Section 9.3 Assessment. • Encourage students with internet access at home to complete the Share Your Data: Internet Connection portion of the BioLab. • Assign relevant questions from Chapter 9 Assessment. 	<i>SE</i> , p. 237 <i>SE</i> , p. 239 <i>SE</i> , pp. 241–243	5 minutes
Closing <ul style="list-style-type: none"> • Assess students with the Modified Assessment. 	<i>TWE</i> , p. 235	5 minutes

[total = 90 minutes]

Pacing Guide

1/2 block

Review/Assessment

KEY: *SE* = Student Edition,
TWE = Teacher Wraparound
Edition, *TCR* = Teacher Classroom
Resources, *BDOL* = Biology: The
Dynamics of Life, *URB* = Unit
Resources Booklet

Assessment Resources

- _____ *Chapter Assessment*, Ch. 9 *URB*
- _____ *Performance Assessment in the Biology Classroom*, *TCR*
- _____ *Alternate Assessment in the Science Classroom*, *TCR*

Multimedia Resources

- _____ *MindJogger Videoquizzes*, Ch. 9
- _____ *ExamView®Pro Testmaker CD-ROM*, Ch. 9
- _____ *Interactive Chalkboard CD-ROM*: Ch. 9
Assessment

Lesson Plan

Activity	Resources	Suggested Time
Classroom Management <ul style="list-style-type: none"> • Have students check homework answers. 	<i>TWE</i> , p. 237 <i>TWE</i> , pp. 241–243	5 minutes
Reviewing the Chapter <ul style="list-style-type: none"> • Answer homework questions. • Answer any final questions about Chapter 9. 	<i>TWE</i> , pp. 221–243	5 minutes
Assessment <ul style="list-style-type: none"> • Distribute the test and allow students to work quietly. 	<i>Chapter Assessment</i> , pp. 151–156 <i>URB</i>	30–35 minutes
Closing <ul style="list-style-type: none"> • As students complete the test, let them explore the Internet connection for Chapter 10. 	bdol.glencoe.com	0–5 minutes

[total = 45 minutes]

The Life of a Cell

pages 244–247

Pacing Guide

1 block

BioDigest

KEY: *SE* = Student Edition, *TWE* = Teacher Wraparound Edition, *TCR* = Teacher Classroom Resources, *BDOL* = Biology: The Dynamics of Life, *URB* = Unit Resources Booklet

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

Lesson Resources

_____ *Reinforcement and Study Guide, URB*
English, pp. 159–160; Spanish, pp. 161–162

Multimedia Resources

_____ *Using the Internet in the Science Classroom, TCR*
_____ Glencoe Science Web site: bdol.glencoe.com

Lesson Plan

Activity	Resources	Suggested Time
Classroom Management <ul style="list-style-type: none"> Have students complete the Focus Bellringer activity. 	<i>TWE</i> , p. 244	5 minutes
Discussion <ul style="list-style-type: none"> If the BioDigest is being used as an introduction for Unit 3 or in place of Unit 3, return Chapter 5 tests and answer any test questions. 	<i>Chapter Assessment</i> , p. 202 <i>URB</i>	5 minutes
Core Lesson <ul style="list-style-type: none"> Introduce BioDigest 3 with the Quick Demo. Teach the main concepts of BioDigest 3. 	<i>TWE</i> , p. 245 <i>TWE</i> , pp. 244–247	30 minutes
In-Class Check <ul style="list-style-type: none"> Do the Check for Understanding and Reteach strategies. 	<i>TWE</i> , p. 247	30 minutes
Homework <ul style="list-style-type: none"> Assign the Assessment. 	<i>SE</i> , p. 247	10 minutes
Closing <ul style="list-style-type: none"> Assess students with the Assessment activity 	<i>TWE</i> , p. 247	10 minutes

[total = 90 minutes]