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.

<table>
<thead>
<tr>
<th>Period</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>11.1 DNA: The Molecule of Heredity</td>
</tr>
<tr>
<td>2</td>
<td>11.2 From DNA to Protein</td>
</tr>
<tr>
<td>0.5</td>
<td>11.3 Genetic Changes</td>
</tr>
<tr>
<td>0.5</td>
<td>Chapter Assessment</td>
</tr>
</tbody>
</table>
DNA: The Molecule of Heredity

Objectives
• Analyze the structure of DNA.
• Determine how the structure of DNA enables it to reproduce itself accurately.

Georgia QCC: 1.1, 2.1, 6.1, 6.4, 8.1, 9.3

Lesson Resources
_____ Section Focus Transparency 26 and Master
_____ Basic Concepts Transparency 16 and Master
_____ Concept Mapping, p. 11 TCR
_____ Reinforcement and Study Guide, p. 47 TCR
_____ Content Mastery, p. 54 TCR

Multimedia Resources
_____ BDOL CD-ROM Section 11.1 Summary
_____ MindJogger Videoquizzes, Ch. 11

Optional Resources
_____ English/Spanish Audiocassettes, Section 11.1
_____ BDOL Videodisc, Disc 1, Side 1
_____ Using the Internet in the Science Classroom, TCR
_____ Glencoe Science Web Site: ga.science.glencoe.com

Activity Plan

<table>
<thead>
<tr>
<th>Activity</th>
<th>Resources</th>
<th>Suggested Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom Management</td>
<td>Section Focus Transparency 26 and Master</td>
<td>5 minutes</td>
</tr>
<tr>
<td>Discussion</td>
<td>Chapter Assessment, pp. 263–265 TCR</td>
<td>5 minutes</td>
</tr>
</tbody>
</table>
| Core Lesson              | TWE, p. 286
|                          | TWE, pp. 287–293
|                          | TWE, p. 288
|                          | TWE, pp. 288, 291 | 40 minutes |
| In-Class Check           | SE and TWE, p. 289 | 25 minutes |
|                          | TWE, p. 290
|                          | TWE, p. 293 |
| Homework                 | SE, p. 293
|                          | SE, p. 292
|                          | SE, pp. 311–313 | 10 minutes |
| Closing                  | TWE, p. 293 | 5 minutes |

[total = 90 minutes]
### From DNA to Protein

**pages 294–301**

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

**Objectives**
- Relate the concept of the gene to the sequences of nucleotides in DNA.
- Sequence the steps involved in protein synthesis.

**Georgia QCC:** 1.1, 1.2, 4.3, 4.4, 6.1, 6.4, 8.2, 12.1

**Lesson Resources**
- Section Focus Transparency 27 and Master
- Basic Concepts Transparencies 17–18 and Masters
- BioLab and MiniLab Worksheets, pp. 49–50 TCR
- Reinforcement and Study Guide, pp. 48–49 TCR
- Content Mastery, p. 55 TCR
- Reteaching Skills Transparency 18 and Master

**Multimedia Resources**
- BDOL CD-ROM Section 11.2 Summary
- MindJogger Videoquizzes, Ch. 11
- English/Spanish Audiocassettes, Section 11.2
- 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. 11 TCR
- Spanish Resources

### Lesson Plan

<table>
<thead>
<tr>
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<th>Suggested Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom Management</td>
<td>Section Focus Transparency 27 and Master TWE, pp. 292, 293, 311–313</td>
<td>5 minutes</td>
</tr>
<tr>
<td>- Have students complete the Bellringer for Section 11.2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Have students check homework answers.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discussion</td>
<td>TWE, pp. 292, 293, 311–313</td>
<td>5 minutes</td>
</tr>
<tr>
<td>- Answer homework questions.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core Lesson</td>
<td>TWE, p. 295 TWE, pp. 294–301 Critical Thinking/Problem Solving, p. 11 TCR</td>
<td>65 minutes</td>
</tr>
<tr>
<td>- Introduce Section 11.2 with the Quick Demo.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Teach the main concepts of Section 11.2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Have students complete the Critical Thinking/Problem Solving worksheet in small groups.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>In-Class Check</td>
<td>SE, pp. 308–309 TWE, pp. 308–309</td>
<td>70 minutes</td>
</tr>
<tr>
<td>- Have students read the BioLab, follow the Procedure, and answer the Analyze and Conclude questions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Assess students’ answers to the BioLab, and discuss their results.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Review Section 11.2 concepts with the Reinforcement and Study Guide.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Homework</td>
<td>SE, p. 301 SE, pp. 311–313 TWE, p. 296</td>
<td>25 minutes</td>
</tr>
<tr>
<td>- Have students complete Section 11.2 Assessment.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Assign relevant questions from Chapter 11 Assessment.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Have interested students do the Enrichment activity and share their results with the class.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Closing</td>
<td>TWE, p. 301</td>
<td>10 minutes</td>
</tr>
<tr>
<td>- Assess students with the Close Activity: Using a Table.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[total = 180 minutes]
Genetic Changes

**Objectives**
- **Categorize** the different kinds of mutations that can occur in DNA.
- **Compare** the effects of different kinds of mutations on cells and organisms.

**Georgia QCC:** 1.1, 1.2, 2.1, 3.2, 5.2, 6.1, 6.4, 8.1, 8.2, 11.2, 12.1, 12.3

**Lesson Resources**
- Section Focus Transparency 28 and Master
- BioLab and MiniLab Worksheets, pp. 51–56, TCR
- Reinforcement and Study Guide, p. 50 TCR
- Reteaching Skills Transparencies 19a–19b and Masters

**Multimedia Resources**
- BDOL CD-ROM Section 11.3 Summary
- MindJogger Videoquizzes, Ch. 11
- English/Spanish Audiocassettes, Section 11.3
- Using the Internet in the Science Classroom, TCR
- Glencoe Science Web Site: ga.science.glencoe.com

**Optional Resources**
- Laboratory Manual, pp. 79–82 TCR
- Spanish Resources

**Activity**

| Classroom Management |

- Have students complete the Bellringer for Section 11.3.
- Have students check homework answers.

| Discussion |

- Answer homework questions.

| Core Lesson |

- To introduce Section 11.3, have students complete the Biology Journal: Mutations and share their ideas with the class.
- Teach the main concepts of Section 11.3.
- Have students complete MiniLab 11-2 in small groups.

| In-Class Check |

- Do the Quick Demo.
- Use the Reinforcement activity.
- Do the Check for Understanding and Reteach strategies.
- Answer questions on Chapter 11 in preparation for the test.

| Homework |

- Have students complete Section 11.3 Assessment.
- Assign relevant questions from Chapter 11 Assessment.

| Closing |

- Assess students with the Close Discussion.

**Resources**

| Resources |

- Section Focus Transparency 28 and Master
- TWE, pp. 301, 311–313
- TWE, pp. 301, 311–313
- TWE, p. 302
- TWE, pp. 302–307
- SE, p. 306
- TWE, p. 304
- TWE, p. 304
- TWE, p. 304
- TWE, p. 307
- TWE, pp. 286–313
- SE, p. 307
- SE, pp. 311–313
- TWE, p. 307

**Suggested Time**

| 5 minutes |
| 5 minutes |
| 15 minutes |
| 10 minutes |
| 5 minutes |

[total = 45 minutes]
Assessment Resources

- Chapter Assessment, Ch. 11 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. 11
- ExamView® Pro Software, Ch. 11
- BDOL Interactive CD-ROM Ch. 11 quiz

Lesson Plan

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</tr>
</thead>
<tbody>
<tr>
<td>Classroom Management</td>
<td>TWE, p. 307</td>
<td>5 minutes</td>
</tr>
<tr>
<td>• Have students check homework answers.</td>
<td>TWE, pp. 311–313</td>
<td></td>
</tr>
<tr>
<td>Reviewing the Chapter</td>
<td>TWE, pp. 286–313</td>
<td>5 minutes</td>
</tr>
<tr>
<td>• Answer homework questions.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Answer any final questions about Chapter 11.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assessment</td>
<td>Chapter Assessment, pp. 61–66 TCR</td>
<td>30–35 minutes</td>
</tr>
<tr>
<td>• Distribute the test and allow students to work quietly.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Closing</td>
<td>ga.science.glencoe.com</td>
<td>0–5 minutes</td>
</tr>
<tr>
<td>• As students complete the test, let them explore the Internet connection for Chapter 12.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[total = 45 minutes]