

Florida Biology focuses on the mastery of basic biological concepts and models while building scientific inquiry skills and exploring the connections between living things and their environment. It is aligned with Florida's Next Generation Sunshine State Standards and prepares students for Florida's end-of-course assessment for Biology.

The course begins with an introduction to the nature of science and biology, including the major themes of structure and function, matter and energy flow, systems, and the interconnectedness of life. Students then apply those themes to the structure and function of the cell, cellular metabolism, and biogeochemical cycles. Building on this foundation, students explore the connections and interactions between living things by studying genetics, ecosystems and natural selection, and evolution. The course ends with an applied look at human biology.

Scientific inquiry skills are embedded in the direct instruction, wherein students learn to ask scientific questions, form and test hypotheses, and use logic and evidence to draw conclusions about the concepts.

Lab activities reinforce critical thinking, writing, and communication skills and help students develop a deeper understanding of the nature of science.

The content is specifically aligned with Florida's Next Generation Sunshine State Standards and Benchmarks.

Length: Two Semesters

## UNIT 1: INTRODUCTION TO BIOLOGY

---

### LESSON 1: BIOLOGY AS SCIENCE

#### **Study: The Nature of Science**

Learn about what a scientist does, and what is and is not science.

*Duration: 0 hrs 40*

*mins Scoring: 0 points*

#### **Quiz: The Nature of Science**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring:*

*20 points*

#### **Study: The Scientific Process**

Learn about the scientific process and the scientific method.

*Duration: 0 hrs 40 mins*

*Scoring: 0 points*

### **Quiz: The Scientific Process**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring:*

*20 points*

### **Study: Laboratory Safety**

Learn how to recognize and avoid common laboratory hazards and interpret safety symbols.

*Duration: 0 hrs 40 mins Scoring: 0 points*

### **Quiz: Laboratory Safety**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20*

*points*

### **Journal: What Is a Biologist**

Reflect on what it means to be a biologist and what type of questions biologists answer.

*Duration: 0 hrs 40 mins Scoring: 20 points*

---

## **LESSON 2: CONNECTIONS IN BIOLOGY**

### **Study: Themes in Biology**

Learn about the themes that connect all of biology.

*Duration: 0 hrs 40 mins Scoring: 0 points*

### **Quiz: Themes in Biology**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20*

*points*

### **Study: Science, Society, and Technology**

Learn about the connection between science and society.

*Duration: 0 hrs 40*

*mins Scoring: 0 points*

### **Quiz: Science, Society, and Technology**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20*

*mins Scoring: 20 points*

### **Study: Evaluating Scientific Claims**

Learn about the process of scientific inquiry.

*Duration: 0 hrs 40 mins Scoring: 0*

*points*

### **Quiz: Evaluating Scientific Claims**

---

*Core > Florida Biology*

*Copyright © 2013 Apex Learning Inc. Apex Learning®, the Apex Learning logo, ClassTools®, ClassTools Achieve®, ClassTools Virtual, Literacy Advantage, and Beyond Books® are either registered trademarks or trademarks of Apex Learning Inc.*

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins*

*Scoring: 20 points*

### **Practice: Themes in Biology**

Practice problem-solving skills related to concepts in the lesson.

*Duration: 1 hr Scoring: 25*

*points*

---

## **LESSON 3: DOING SCIENCE: INTRODUCTION TO BIOLOGY**

### **Study: Making a Rip-O-Meter**

Learn about the process of scientific inquiry.

*Duration: 0 hrs 40 mins Scoring: 0 points*

### **Quiz: Making a Rip-O-Meter**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring:*

*20 points*

### **Lab: Making a Rip-O-Meter**

Use the scientific method to perform a lab experiment

*Duration: 1 hr 30 mins Scoring: 50*

*points*

### **Discuss: Making a Rip-O-Meter**

Discuss the results of your lab.

*Duration: 0 hrs 20 mins Scoring: 15 points*

---

## **LESSON 4: INTRODUCTION TO BIOLOGY WRAP-UP**

### **Review: Unit Review**

Prepare for the unit test by reviewing key concepts and skills.

*Duration: 0 hrs 30 mins Scoring: 0*

*points*

### **Test (CS): Computer-Scored Unit Test**

Take a computer-scored test to assess what you have learned in this unit.

*Duration: 1 hr Scoring: 50 points*

### **Test (TS): Teacher-Scored Unit Test**

Take a teacher-scored test to assess what you have learned in this unit.

*Duration:*

---

## LESSON 5: DIAGNOSTIC

### **Diagnostic: Introduction to Biology**

Take a diagnostic unit test that will generate a study plan based on your responses.

*Duration: 1 hr Scoring: 25 points*

## UNIT 2: THE CHEMISTRY OF BIOLOGY

---

### LESSON 1: CHEMISTRY OF LIFE

#### **Study: Common Elements in Living Things**

Learn about the structure of an atom, and the six main elements living things are made from.

*Duration: 0 hrs 40 mins Scoring: 0 points*

#### **Quiz: Common Elements in Living Things**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20 points*

#### **Study: Chemical Reactions and Bonding**

Learn about covalent and ionic bonds. Learn the principles of the chemical reactions that occur in living things.

*Duration: 0 hrs 40 mins Scoring: 0 points*

#### **Quiz: Chemical Reactions and Bonding**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20 points*

#### **Journal: Chemistry in Biology**

Reflect on the role of chemistry in the study of biology

*Duration: 0 hrs 40 mins Scoring: 20 points*

---

## LESSON 2: CARBOHYDRATES, LIPIDS, AND NUCLEIC ACIDS

### **Study: Carbohydrates**

---

Learn about the structure and function of carbohydrate molecules.

*Duration: 0 hrs 40 mins*

*Scoring: 0 points*

### **Quiz: Carbohydrates**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20*

*points*

### **Study: Nucleic Acids and Lipids**

Learn about the structure and function of DNA, RNA, and lipids.

*Duration: 0 hrs 40*

*mins Scoring: 0 points*

### **Quiz: Nucleic Acids and Lipids**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins*

*Scoring: 20 points*

---

## **LESSON 3: PROTEINS, ENZYMES, AND WATER**

### **Study: Proteins and Enzymes**

Learn about the structure and function of protein molecules and enzymes

*Duration: 0 hrs*

*40 mins Scoring: 0 points*

### **Quiz: Proteins and Enzymes**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring:*

*20 points*

### **Study: Water**

Learn about the importance of water in living organisms, including the processes of hydrolysis, dehydration, and osmosis.

*Duration: 0 hrs 40 mins Scoring: 0 points*

### **Quiz: Water**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20 points*

### **Practice: Proteins, Enzymes and Water**

Practice problem-solving skills related to concepts in the lesson.

*Duration: 1 hr*

*Scoring: 25 points*

### **Explore: Trans Fats**

Explore the topic of trans-fats in foods and their impact on the human body

---

*Core > Florida Biology*

*Copyright © 2013 Apex Learning Inc. Apex Learning®, the Apex Learning logo, ClassTools®, ClassTools Achieve®, ClassTools Virtual, Literacy Advantage, and Beyond Books® are either registered trademarks or trademarks of Apex Learning Inc.*

*Duration: 1 hr Scoring:  
25 points*

---

## LESSON 4: DOING SCIENCE: THE CHEMISTRY OF BIOLOGY

### **Study: Way to Go, Indigo**

Learn about the different types of science and how scientific experiments are designed.

*Duration: 0 hrs 40 mins Scoring: 0 points*

### **Quiz: Way to Go, Indigo**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20  
points*

### **Lab: Way to Go, Indigo**

Perform a lab to observe the effects of enzymes

*Duration: 1 hr 30 mins Scoring: 50 points*

### **Discuss: Way to Go, Indigo**

Discuss the results of your lab.

*Duration: 0 hrs 20 mins Scoring: 15 points*

---

## LESSON 5: THE CHEMISTRY OF BIOLOGY WRAP-UP

### **Review: Unit Review**

Prepare for the unit test by reviewing key concepts and skills.

*Duration: 0 hrs 30 mins Scoring: 0  
points*

### **Test (CS): Computer-Scored Unit Test**

Take a computer-scored test to assess what you have learned in this unit.

*Duration: 1 hr Scoring: 50 points*

### **Test (TS): Teacher-Scored Unit Test**

Take a teacher-scored test to assess what you have learned in this unit.

*Duration:  
1 hr Scoring: 50 points*

---

## LESSON 6: DIAGNOSTIC

---

## Diagnostic: The Chemistry of Biology

Take a diagnostic unit test that will generate a study plan based on your responses.

*Duration: 1 hr Scoring: 25 points*

## UNIT 3: CELLS

---

### LESSON 1: CELL STRUCTURE

#### Study: General Structure of the Cell

Learn about the basic structure and function of cells.

*Duration: 0 hrs 40 mins*

*Scoring: 0 points*

#### Quiz: General Structure of the Cell

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins*

*Scoring: 20 points*

#### Study: Detailed Structure of the Cell

Learn about the functions of cellular organelles.

*Duration: 0 hrs 40 mins Scoring: 0*

*points*

#### Quiz: Detailed Structure of the Cell

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins*

*Scoring: 20 points*

#### Journal: Chloroplasts

Reflect on the structure and function of chloroplasts in plant cells

*Duration: 0 hrs 40 mins Scoring:*

*20 points*

---

### LESSON 2: CELL MEMBRANE

#### Study: Cell Membrane Structure

Learn about the structure of the cell membrane.

*Duration: 0 hrs 40 mins Scoring: 0*

*points*

#### Quiz: Cell Membrane Structure

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins*

---

Scoring: 20 points

### **Study: Cellular Transport**

Learn about the different ways that substances move in and out of cells

Duration: 0 hrs 40

mins Scoring: 0 points

### **Quiz: Cellular Transport**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 20

points

---

## **LESSON 3: CELL DIFFERENTIATION**

### **Study: Specialized Cells and Tissues**

Learn about how specialized cells in plants and animals perform many different functions

Duration: 0 hrs 40 mins Scoring: 0 points

### **Quiz: Specialized Cells and Tissues**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins

Scoring: 20 points

### **Study: Cell Differentiation and Stem Cells**

Learn about how cells in the body differentiate from stem cells and the controversies surrounding the use of stem cells in research.

Duration: 0 hrs 40 mins Scoring: 0 points

### **Quiz: Cell Differentiation and Stem Cells**

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20

mins Scoring: 20 points

### **Practice: Cell Differentiation**

Practice problem-solving skills related to concepts in the lesson.

Duration: 1 hr Scoring: 25

points

---

## **LESSON 4: DOING SCIENCE: CELLS**

### **Study: Design a Cell**

Learn about the size of cells and how they can be observed

Duration: 0 hrs 40 mins Scoring: 0

---



points

### **Quiz: Design a Cell**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20 points*

### **Lab: Design a Cell**

Perform a lab to observe how cell shape affects diffusion

*Duration: 1 hr 30 mins Scoring: 50 points*

### **Discuss: Design a Cell**

Discuss the results of your lab.

*Duration: 0 hrs 20 mins Scoring: 15 points*

---

## **LESSON 5: CELLS WRAP-UP**

### **Review: Unit Review**

Prepare for the unit test by reviewing key concepts and skills.

*Duration: 0 hrs 30 mins Scoring: 0*

points

### **Test (CS): Computer-Scored Unit Test**

Take a computer-scored test to assess what you have learned in this unit.

*Duration: 1 hr Scoring: 50 points*

### **Test (TS): Teacher-Scored Unit Test**

Take a teacher-scored test to assess what you have learned in this unit.

*Duration:*

*1 hr Scoring: 50 points*

---

## **LESSON 6: DIAGNOSTIC**

### **Diagnostic: Cells**

Take a diagnostic unit test that will generate a study plan based on your responses.

*Duration: 1 hr*

*Scoring: 25 points*

## **UNIT 4: ENERGY TRANSFER**

---

### **LESSON 1: PHOTOSYNTHESIS**

---

Core > Florida Biology

Copyright © 2013 Apex Learning Inc. Apex Learning®, the Apex Learning logo, ClassTools®, ClassTools Achieve®, ClassTools Virtual, Literacy Advantage, and Beyond Books® are either registered trademarks or trademarks of Apex Learning Inc.

**Study: Photosynthesis Introduction**

Learn about the main principles of photosynthesis.

*Duration: 0 hrs 40 mins*

*Scoring: 0 points*

**Quiz: Photosynthesis Introduction**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins*

*Scoring: 20 points*

**Study: Process of Photosynthesis**

Learn about the chemical reactions of photosynthesis.

*Duration: 0 hrs 40 mins*

*Scoring: 0 points*

**Quiz: Process of Photosynthesis**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins*

*Scoring: 20 points*

**Journal: Your Sources of Oxygen**

Reflect on different global sources of oxygen

*Duration: 0 hrs 40 mins Scoring: 20*

*points*

---

**LESSON 2: CELLULAR RESPIRATION****Study: Respiration Introduction**

Learn about how living things use respiration to get cellular energy

*Duration: 0 hrs 40*

*mins Scoring: 0 points*

**Quiz: Respiration Introduction**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins*

*Scoring: 20 points*

**Study: Process of Respiration**

Learn about the chemical reactions of respiration and compare the reactions of respiration and photosynthesis.

*Duration: 0 hrs 40 mins Scoring: 0 points*

**Quiz: Process of Respiration**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins*

*Scoring: 20 points*

---

## LESSON 3: MATTER AND ENERGY

### **Study: Relationships in an Ecosystem**

Learn about the types of relationships between organisms in an ecosystem.

*Duration: 0 hrs 40 mins Scoring: 0 points*

### **Quiz: Relationships in an Ecosystem**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins*

*Scoring: 20 points*

### **Study: Energy in the Food Web**

Learn about how energy flows through ecosystems in complex food webs

*Duration: 0*

*hrs 40 mins Scoring: 0 points*

### **Quiz: Energy in the Food Web**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins*

*Scoring: 20 points*

### **Practice: Matter and Energy**

Practice problem-solving skills related to concepts in the lesson.

*Duration: 1 hr Scoring: 25 points*

---

## LESSON 4: DOING SCIENCE: ENERGY TRANSFER

### **Study: A Twist on Fermentation**

Learn about writing predictions, reading graphs and analyzing variables in lab experiments.

*Duration: 0 hrs 40 mins Scoring: 0 points*

### **Quiz: A Twist on Fermentation**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins*

*Scoring: 20 points*

### **Lab: A Twist on Fermentation**

Perform a lab to observe how sugar availability affects fermentation

*Duration: 1 hr 30*

*mins Scoring: 50 points*

### **Discuss: A Twist on Fermentation**

Discuss the results of your lab.

---

*Core > Florida Biology*

*Copyright © 2013 Apex Learning Inc. Apex Learning®, the Apex Learning logo, ClassTools®, ClassTools Achieve®, ClassTools Virtual, Literacy Advantage, and Beyond Books® are either registered trademarks or trademarks of Apex Learning Inc.*

Duration: 0 hrs 20 mins Scoring: 15 points

---

## LESSON 5: ENERGY TRANSFER WRAP-UP

### Review: Unit Review

Prepare for the unit test by reviewing key concepts and skills.

Duration: 0 hrs 30 mins Scoring: 0 points

### Test (CS): Computer-Scored Unit Test

Take a computer-scored test to assess what you have learned in this unit.

Duration: 1 hr Scoring: 50 points

### Test (TS): Teacher-Scored Unit Test

Take a teacher-scored test to assess what you have learned in this unit.

Duration:  
1 hr Scoring: 50 points

---

## LESSON 6: DIAGNOSTIC

### Diagnostic: Energy Transfer

Take a diagnostic unit test that will generate a study plan based on your responses.

Duration: 1 hr Scoring: 25 points

## UNIT 5: EARTH'S RESOURCES

---

### LESSON 1: BIOGEOCHEMICAL CYCLES

#### Study: Water and Oxygen Cycles

Learn about the cycles of water and oxygen in the atmosphere and the importance of these to the preservation of life.

Duration: 0 hrs 40 mins Scoring: 0 points

#### Quiz: Water and Oxygen Cycles

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins  
Scoring: 20 points

#### Study: Carbon and Nitrogen Cycles

---

Core > Florida Biology

Copyright © 2013 Apex Learning Inc. Apex Learning®, the Apex Learning logo, ClassTools®, ClassTools Achieve®, ClassTools Virtual, Literacy Advantage, and Beyond Books® are either registered trademarks or trademarks of Apex Learning Inc.

Learn about how carbon and nitrogen cycle through living things and the earth

*Duration: 0 hrs 40 mins Scoring: 0 points*

**Quiz: Carbon and Nitrogen Cycles**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins*

*Scoring: 20 points*

**Journal: Your Contribution**

Reflect on how using coal for energy impacts the carbon cycle

*Duration: 0 hrs 40 mins*

*Scoring: 20 points*

**Explore: Glaciers and Carbon Dioxide**

Investigate more about glaciers and the water cycle

*Duration: 1 hr Scoring: 25*

*points*

---

**LESSON 2: A CHANGING EARTH**

**Study: Climate Change**

Learn about the growing problem of climate change.

*Duration: 0 hrs 40 mins Scoring: 0 points*

**Quiz: Climate Change**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20*

*points*

**Study: Human Population**

Learn about how the growing human population is impacting the earth

*Duration: 0 hrs 40*

*mins Scoring: 0 points*

**Quiz: Human Population**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20*

*points*

**Explore: Coral Reef Health**

Investigate coral reef ecosystem health.

*Duration: 1 hr Scoring: 25 points*

---

**LESSON 3: SOLUTIONS FOR THE FUTURE**

*Core > Florida Biology*

*Copyright © 2013 Apex Learning Inc. Apex Learning®, the Apex Learning logo, ClassTools®, ClassTools Achieve®, ClassTools Virtual, Literacy Advantage, and Beyond Books® are either registered trademarks or trademarks of Apex Learning Inc.*

**Study: Sustaining Resources**

Learn about how science can impact the use of resources and waste management

*Duration: 0 hrs 40 mins Scoring: 0 points*

**Quiz: Sustaining Resources**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20 points*

**Study: Alternative Energy**

Learn about the different types of alternative energy

*Duration: 0 hrs 40 mins Scoring: 0 points*

**Quiz: Alternative Energy**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20 points*

**Practice: Solutions for the Future**

Practice problem-solving skills related to concepts in the lesson.

*Duration: 1 hr Scoring: 25 points*

---

**LESSON 4: DOING SCIENCE: EARTH'S RESOURCES****Study: Can Lake Life Remain Despite Acid Rain?**

Learn about pH acids and bases

*Duration: 0 hrs 40 mins Scoring: 0 points*

**Quiz: Can Lake Life Remain Despite Acid Rain?**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20 points*

**Lab: Can Lake Life Remain Despite Acid Rain?**

Perform a lab to observe the impacts of acid rain on the environment

*Duration: 1 hr 30 mins Scoring: 50 points*

**Discuss: Can Lake Life Remain Despite Acid Rain?**

Discuss the results of your lab.

*Duration: 0 hrs 20 mins Scoring: 15 points*

## LESSON 5: EARTH'S RESOURCES WRAP-UP

### Review: Unit Review

Prepare for the unit test by reviewing key concepts and skills.

*Duration: 0 hrs 30 mins Scoring: 0 points*

### Test (CS): Computer-Scored Unit Test

Take a computer-scored test to assess what you have learned in this unit.

*Duration: 1 hr Scoring: 50 points*

### Test (TS): Teacher-Scored Unit Test

Take a teacher-scored test to assess what you have learned in this unit.

*Duration:  
1 hr Scoring: 50 points*

---

## LESSON 6: DIAGNOSTIC

### Diagnostic: Earth's Resources

Take a diagnostic unit test that will generate a study plan based on your responses.

*Duration: 1 hr Scoring: 25 points*

## UNIT 6: BIOLOGY SEMESTER 1 REVIEW AND EXAM

---

### LESSON 1: BIOLOGY SEMESTER 1

#### Review: Biology Semester 1

Prepare for the semester exam by reviewing key concepts covered in this semester.

*Duration: 1 hr Scoring: 0 points*

#### Exam: Biology Semester 1

Take a computer-scored exam to demonstrate your mastery of concepts and skills covered in this semester.

*Duration: 1 hr Scoring: 100 points*

#### Final Exam: Biology Semester 1

Take a teacher-scored exam to demonstrate your mastery of concepts and skills covered in this semester.

*Duration: 1 hr Scoring: 100 points*

---

## UNIT 7: DNA AND HEREDITY

---

### LESSON 1: THE CODE OF LIFE

#### **Study: Organization of DNA**

Learn about the organization of DNA into alleles, genes, and chromosomes.

*Duration: 0*

*hrs 40 mins Scoring: 0 points*

#### **Quiz: Organization of DNA**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring:*

*20 points*

#### **Study: Mitosis**

Learn about the process of mitosis.

*Duration: 0 hrs 40 mins Scoring: 0 points*

#### **Quiz: Mitosis**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20 points*

#### **Journal: Your Traits**

Reflect on the uniqueness of human traits.

*Duration: 0 hrs 40 mins Scoring: 20 points*

---

### LESSON 2: PASSING ON TRAITS

#### **Study: Meiosis**

Learn about the process of meiosis.

*Duration: 0 hrs 40 mins Scoring: 0 points*

#### **Quiz: Meiosis**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20 points*

#### **Study: Principles of Heredity**

Learn about the principles of heredity and the importance of genetics to organisms.

*Duration: 0 hrs 40 mins Scoring: 0 points*

#### **Quiz: Principles of Heredity**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring:*

---



## LESSON 3: MENDELIAN GENETICS

### Study: Basics of Mendelian Genetics

Learn about the history and principles of Mendelian genetics.

*Duration: 0 hrs 40*

*mins Scoring: 0 points*

### Quiz: Basics of Mendelian Genetics

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins*

*Scoring: 20 points*

### Study: Predicting Genetic Outcomes

Learn how to predict genetic outcomes. Learn how to use Punnett squares.

*Duration: 0 hrs 40 mins Scoring: 0 points*

### Quiz: Predicting Genetic Outcomes

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins*

*Scoring: 20 points*

### Practice: DNA and Heredity

Practice problem-solving skills related to concepts in the lesson.

*Duration: 1 hr Scoring: 25*

*points*

---

## LESSON 4: DOING SCIENCE: DNA AND HEREDITY

### Study: The Right Prescription for Bacteria

Learn about bacteria.

*Duration: 0 hrs 40 mins Scoring: 0 points*

### Quiz: The Right Prescription for Bacteria

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20*

*mins Scoring: 20 points*

### Lab: The Right Prescription for Bacteria

Perform a lab about the effect of antibiotics on bacteria

*Duration: 1 hr 30 mins*

*Scoring: 50 points*

---

## **Discuss: The Right Prescription for Bacteria**

Discuss the results of your lab.

*Duration: 0 hrs 20 mins Scoring: 15 points*

---

## **LESSON 5: DNA AND HEREDITY WRAP-UP**

### **Review: Unit Review**

Prepare for the unit test by reviewing key concepts and skills.

*Duration: 0 hrs 30 mins Scoring: 0 points*

### **Test (CS): Computer-Scored Unit Test**

Take a computer-scored test to assess what you have learned in this unit.

*Duration: 1 hr Scoring: 50 points*

### **Test (TS): Teacher-Scored Unit Test**

Take a teacher-scored test to assess what you have learned in this unit.

*Duration: 1 hr Scoring: 50 points*

---

## **LESSON 6: DIAGNOSTIC**

### **Diagnostic: DNA and Heredity**

Take a diagnostic unit test that will generate a study plan based on your responses.

*Duration: 1 hr Scoring: 25 points*

## **UNIT 8: DNA TO PROTEIN**

---

### **LESSON 1: STRUCTURE OF GENETIC MATERIAL**

#### **Study: DNA Replication**

Learn about the structure of DNA. Learn about the process of DNA replication.

*Duration: 0 hrs 40 mins Scoring: 0 points*

#### **Quiz: DNA Replication**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20 points*

---

**Study: Viruses and Bacteria**

Learn about the structure of viruses and bacteria, how they obtain food and reproduce, and their significance to ecosystems.

*Duration: 0 hrs 40 mins Scoring: 0 points*

**Quiz: Viruses and Bacteria**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20 points*

**Journal: Nucleic Acids**

Reflect on how many scientists contributed to the discovery of the structure of DNA

*Duration: 0 hrs 40 mins Scoring: 20 points*

**Explore: Diversity in Science**

Investigate more about the contributions of different scientists

*Duration: 1 hr Scoring: 25 points*

---

**LESSON 2: FROM DNA TO PROTEIN****Study: Transcription**

Learn about how DNA is read to make mRNA in the process of transcription

*Duration: 0 hrs 40 mins Scoring: 0 points*

**Quiz: Transcription**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20 points*

**Study: Translation**

Learn about mRNA is used to build molecules of protein

*Duration: 0 hrs 40 mins Scoring: 0 points*

**Quiz: Translation**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20 points*

---

**LESSON 3: CHANGES TO DNA****Study: Genetic Mutations**

Learn how genetic mutations occur, the effect of mutations, and different types of mutations.

*Duration: 0 hrs 40 mins Scoring: 0 points*

**Quiz: Genetic Mutations**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20 points*

**Study: DNA Technology**

Learn about technologies related to DNA, their significance, and the ethical and societal issues related to them.

*Duration: 0 hrs 40 mins Scoring: 0 points*

**Quiz: DNA Technology**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20 points*

**Explore: Personalized Medicine**

Investigate how the human genome project is affecting health care.

*Duration: 1 hr*

*Scoring: 25 points*

**Journal: History of Genetics**

Use your knowledge, skills, and resources to make sense of and persevere in solving a real-world problem.

*Duration: 0 hrs 40 mins Scoring: 20 points*

**Practice: DNA to Protein**

Practice problem-solving skills related to concepts in the lesson.

*Duration: 1 hr Scoring: 25 points*

---

**LESSON 4: DOING SCIENCE: DNA TO PROTEIN**

**Study: Radical Radishes**

Learn about methods to study DNA.

*Duration: 0 hrs 40 mins Scoring: 0 points*

**Quiz: Radical Radishes**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20 points*

**Lab: Radical Radishes**

Perform a lab to test how radiation affects the germination of radish seedlings.

*Duration: 1 hr 30 mins Scoring: 50 points*

**Discuss: Radical Radishes**

Discuss the results of your lab.

*Duration: 0 hrs 20 mins Scoring: 15 points*

---

**LESSON 5: DNA TO PROTEIN WRAP-UP****Review: Unit Review**

Prepare for the unit test by reviewing key concepts and skills.

*Duration: 0 hrs 30 mins Scoring: 0 points*

**Test (CS): Computer-Scored Unit Test**

Take a computer-scored test to assess what you have learned in this unit.

*Duration: 1 hr Scoring: 50 points*

**Test (TS): Teacher-Scored Unit Test**

Take a teacher-scored test to assess what you have learned in this unit.

*Duration: 1 hr Scoring: 50 points*

---

**LESSON 6: DIAGNOSTIC****Diagnostic: DNA to Protein**

Take a diagnostic unit test that will generate a study plan based on your responses.

*Duration: 1 hr Scoring: 25 points*

**UNIT 9: ECOSYSTEMS AND NATURAL SELECTION**

---

**LESSON 1: ECOSYSTEMS****Study: Ecosystems and Biomes**

Learn about what makes up an ecosystem and about different types of ecosystems.

*Duration: 0 hrs 40 mins Scoring: 0 points*

**Quiz: Ecosystems and Biomes**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20 points*

---

### **Study: Stability and Change in an Ecosystem**

Learn how an ecosystem responds to change.

*Duration: 0 hrs 40 mins*

*Scoring: 0 points*

### **Quiz: Stability and Change in an Ecosystem**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs*

*20 mins Scoring: 20 points*

### **Journal: Your Ecosystem**

Reflect on the qualities of the ecosystem you live in

*Duration: 0 hrs 40 mins Scoring: 20*

*points*

---

## **LESSON 2: POPULATIONS**

### **Study: Population Structure**

Learn about factors that affect populations.

*Duration: 0 hrs 40 mins Scoring: 0 points*

### **Quiz: Population Structure**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring:*

*20 points*

### **Study: Population Dynamics**

Learn about how genes are passed through populations.

*Duration: 0 hrs 40 mins Scoring:*

*0 points*

### **Quiz: Population Dynamics**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring:*

*20 points*

---

## **LESSON 3: ADAPTATION AND NATURAL SELECTION**

### **Study: Variation and Adaptation**

Learn how species vary geographically and over time and how they adapt to their habitats.

*Duration: 0 hrs 40 mins Scoring: 0 points*

### **Quiz: Variation and Adaptation**

---

*Core > Florida Biology*

*Copyright © 2013 Apex Learning Inc. Apex Learning®, the Apex Learning logo, ClassTools®, ClassTools Achieve®, ClassTools Virtual, Literacy Advantage, and Beyond Books® are either registered trademarks or trademarks of Apex Learning Inc.*

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins*

*Scoring: 20 points*

### **Study: Natural Selection**

Learn how and why natural selection occurs, what affects natural selection, and what is and is not natural selection.

*Duration: 0 hrs 40 mins Scoring: 0 points*

### **Quiz: Natural Selection**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20*

*points*

### **Practice: Adaptation and Natural Selection**

Practice problem-solving skills related to concepts in the lesson.

*Duration:*

*1 hr Scoring: 25 points*

---

## **LESSON 4: DOING SCIENCE: ECOSYSTEMS AND NATURAL SELECTION**

### **Study: Birds on an Island**

Learn about using simulations models and other experimental techniques

*Duration: 0 hrs 40*

*mins Scoring: 0 points*

### **Quiz: Birds on an Island**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20*

*points*

### **Lab: Birds on an Island**

Perform a lab to observe how the frequency of traits in a population changes over time

*Duration: 1 hr 30 mins Scoring: 50 points*

### **Discuss: Birds on an Island**

Discuss the results of your lab.

*Duration: 0 hrs 20 mins Scoring: 15 points*

---

## **LESSON 5: ECOSYSTEMS AND NATURAL SELECTION WRAP-UP**

### **Review: Unit Review**

Prepare for the unit test by reviewing key concepts and skills.

*Duration: 0 hrs 30 mins Scoring: 0 points*

### **Test (CS): Computer-Scored Unit Test**

Take a computer-scored test to assess what you have learned in this unit.

*Duration: 1 hr Scoring: 50 points*

### **Test (TS): Teacher-Scored Unit Test**

Take a teacher-scored test to assess what you have learned in this unit.

*Duration:*

*1 hr Scoring: 50 points*

---

## **LESSON 6: DIAGNOSTIC**

### **Diagnostic: Ecosystems and Natural Selection**

Take a diagnostic unit test that will generate a study plan based on your responses.

*Duration: 1 hr Scoring: 25 points*

## **UNIT 10: EVOLUTION AND CLASSIFICATION**

---

### **LESSON 1: EVOLUTION**

#### **Study: Mechanism for Evolution**

Learn about the process of evolution and the history of the theory of evolution.

*Duration: 0 hrs 40 mins Scoring: 0 points*

#### **Quiz: Mechanism for Evolution**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins*

*Scoring: 20 points*

#### **Study: Evidence for Evolution**

Learn about the fossil record and the implications for evolutionary thought.

*Duration: 0*

*hrs 40 mins Scoring: 0 points*

#### **Quiz: Evidence for Evolution**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins*

*Scoring: 20 points*

---



**Journal: Theories and Laws**

Reflect on the different of theories, hypotheses and laws

*Duration: 0 hrs 40 mins Scoring:*

*20 points*

**Explore: Human Evolution**

Investigate more about the evolution of humans

*Duration: 1 hr Scoring: 25 points*

---

**LESSON 2: CLASSIFICATION****Study: Speciation**

Learn what defines a living thing.

*Duration: 0 hrs 40 mins Scoring: 0 points*

**Quiz: Speciation**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20 points*

**Study: Methods for Classification**

Learn about the taxonomic systems for classifying organisms.

*Duration: 0 hrs 40*

*mins Scoring: 0 points*

**Quiz: Methods for Classification**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins*

*Scoring: 20 points*

---

**LESSON 3: DIVERSITY OF LIFE****Study: Life on Earth**

Learn about microorganisms and fungi.

*Duration: 0 hrs 40 mins Scoring: 0 points*

**Quiz: Life on Earth**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20 points*

**Study: Plants and Animals**

Learn about plant and animal structure and function.

*Duration: 0 hrs 40 mins Scoring: 0*

*points*

---

**Quiz: Plants and Animals**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20*

*points*

**Practice: Diversity of Life**

Practice problem-solving skills related to concepts in the lesson.

*Duration: 1 hr Scoring: 25*

*points*

---

**LESSON 4: DOING SCIENCE: EVOLUTION AND CLASSIFICATION****Study: Bones, Feathers, and Fur**

Learn about the scientific process of classifying living things.

*Duration: 0 hrs 40 mins*

*Scoring: 0 points*

**Quiz: Bones, Feathers, and Fur**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins*

*Scoring: 20 points*

**Lab: Bones, Feathers, and Fur**

Perform a lab to observe some characteristics of two classes of vertebrates.

*Duration: 1*

*hr 30 mins Scoring: 50 points*

**Discuss: Bones, Feathers, and Fur**

Discuss the results of your lab.

*Duration: 0 hrs 20 mins Scoring: 15 points*

---

**LESSON 5: EVOLUTION AND CLASSIFICATION WRAP-UP****Review: Unit Review**

Prepare for the unit test by reviewing key concepts and skills.

*Duration: 0 hrs 30 mins Scoring: 0*

*points*

**Test (CS): Computer-Scored Unit Test**

Take a computer-scored test to assess what you have learned in this unit.

*Duration: 1 hr Scoring: 50 points*

**Test (TS): Teacher-Scored Unit Test**

---

Take a teacher-scored test to assess what you have learned in this unit.

*Duration:*

*1 hr Scoring: 50 points*

---

## LESSON 6: DIAGNOSTIC

### **Diagnostic: Evolution and Classification**

Take a diagnostic unit test that will generate a study plan based on your responses.

*Duration: 1 hr Scoring: 25 points*

## UNIT 11: HUMAN BIOLOGY

---

### LESSON 1: STRUCTURE OF THE BODY

#### **Study: The Nervous System**

Learn about tissues and the muscular and skeletal systems.

*Duration: 0 hrs 40 mins*

*Scoring: 0 points*

#### **Quiz: The Nervous System**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring:*

*20 points*

#### **Study: Respiration and Circulation**

Learn about respiration and circulation.

*Duration: 0 hrs 40 mins Scoring: 0 points*

#### **Quiz: Respiration and Circulation**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins*

*Scoring: 20 points*

#### **Study: Bones and Muscles**

Learn about bones and muscles.

*Duration: 0 hrs 40 mins Scoring: 0 points*

#### **Quiz: Bones and Muscles**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20*

*points*

#### **Journal: Diet and Your Body**

---

*Core > Florida Biology*

*Copyright © 2013 Apex Learning Inc. Apex Learning®, the Apex Learning logo, ClassTools®, ClassTools Achieve®, ClassTools Virtual, Literacy Advantage, and Beyond Books® are either registered trademarks or trademarks of Apex Learning Inc.*

Reflect on how understanding biology helps you care for your body

*Duration: 0 hrs 40*

*mins Scoring: 20 points*

---

## LESSON 2: FUEL, DEFENSE, AND SIGNALING

### **Study: Digestive and Excretory Systems**

Learn about the digestive and excretory systems.

*Duration: 0 hrs 40 mins*

*Scoring: 0 points*

### **Quiz: Digestive and Excretory Systems**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20*

*mins Scoring: 20 points*

### **Study: The Immune System**

Learn about the immune system.

*Duration: 0 hrs 40 mins Scoring: 0 points*

### **Quiz: The Immune System**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring:*

*20 points*

### **Study: The Endocrine System**

Learn about the endocrine system.

*Duration: 0 hrs 40 mins Scoring: 0 points*

### **Quiz: The Endocrine System**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring:*

*20 points*

### **Journal: Finding Information About Disease**

Use your knowledge, skills, and resources to make sense of and persevere in solving a real-world problem.

*Duration: 0 hrs 40 mins Scoring: 20 points*

### **Explore: Genes, Environment, Pathogens, and Health**

Investigate how environmental factors affect health.

*Duration: 1*

*hr Scoring: 25 points*

---

## LESSON 3: REPRODUCTION AND DEVELOPMENT

Core > Florida Biology

Copyright © 2013 Apex Learning Inc. Apex Learning®, the Apex Learning logo, ClassTools®, ClassTools Achieve®, ClassTools Virtual, Literacy Advantage, and Beyond Books® are either registered trademarks or trademarks of Apex Learning Inc.

**Study: Males and Females**

Learn about males and females.

*Duration: 0 hrs 40 mins Scoring: 0 points*

**Quiz: Males and Females**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20 points*

**Study: Fertilization and Development**

Learn about fertilization and development.

*Duration: 0 hrs 40 mins Scoring: 0 points*

**Quiz: Fertilization and Development**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20 points*

**Practice: Reproduction and Development**

Practice problem-solving skills related to concepts in the lesson.

*Duration: 1 hr Scoring: 25 points*

**Explore: Pollution and Brain Development**

Investigate the relationship between pollution and brain defects

*Duration: 1 hr Scoring: 25 points*

---

**LESSON 4: DOING SCIENCE: HUMAN BIOLOGY****Study: Breaking Down Fat**

Learn about how the human body metabolizes lipids.

*Duration: 0 hrs 40 mins Scoring: 0 points*

**Quiz: Breaking Down Fat**

Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 20 mins Scoring: 20 points*

**Lab: Breaking Down Fat**

Perform a lab to explore the breakdown of fat during digestion

*Duration: 1 hr 30 mins Scoring: 50 points*

**Discuss: Breaking Down Fat**

---

*Core > Florida Biology*

*Copyright © 2013 Apex Learning Inc. Apex Learning®, the Apex Learning logo, ClassTools®, ClassTools Achieve®, ClassTools Virtual, Literacy Advantage, and Beyond Books® are either registered trademarks or trademarks of Apex Learning Inc.*

Discuss the results of your lab.

*Duration: 0 hrs 20 mins Scoring: 15 points*

---

## LESSON 5: HUMAN BIOLOGY WRAP-UP

### **Review: Unit Review**

Prepare for the unit test by reviewing key concepts and skills.

*Duration: 0 hrs 30 mins Scoring: 0 points*

### **Test (CS): Computer-Scored Unit Test**

Take a computer-scored test to assess what you have learned in this unit.

*Duration: 1 hr Scoring: 50 points*

### **Test (TS): Teacher-Scored Unit Test**

Take a teacher-scored test to assess what you have learned in this unit.

*Duration: 1 hr Scoring: 50 points*

---

## LESSON 6: DIAGNOSTIC

### **Diagnostic: Human Biology**

Take a diagnostic unit test that will generate a study plan based on your responses.

*Duration: 1 hr Scoring: 25 points*

## UNIT 12: BIOLOGY SEMESTER 2 REVIEW AND EXAM

---

### LESSON 1: BIOLOGY SEMESTER 2

#### **Review: Biology Semester 2**

Prepare for the semester exam by reviewing key concepts covered in this semester.

*Duration: 1 hr Scoring: 0 points*

#### **Exam: Biology Semester 2**

Take a computer-scored exam to demonstrate your mastery of concepts and skills covered in this semester.

*Duration: 1 hr Scoring: 100 points*

---

## **Final Exam: Biology Semester 2**

Take a teacher-scored exam to demonstrate your mastery of concepts and skills covered in this semester.

*Duration: 1 hr Scoring: 100 points*