WARREN COUNTY SCHOOL DISTRICT

PLANNED INSTRUCTION

COURSE DESCRIPTION

Course Title: Plants and Animals
Course Number: 00377
Course Prerequisites: Successful completion of Biology

Course Description: This one semester course introduces the student to botany, zoology, and classification. Emphasis will be placed on plant and animal classification, structure, and function. This class will be taught with a variety of instructional techniques which may include dissection.

Suggested Grade Level: Grades 10-12
Length of Course: One Semester
Units of Credit: .5
PDE Certification and Staffing Policies and Guidelines (CSPG) Required Teacher Certifications:
CSPG 32 Biology; CSPG 46 General Science 7-12
To find the CSPG information, go to CSPG
Certification verified by the WCSD Human Resources Department: ☒Yes ☐No

WCSD STUDENT DATA SYSTEM INFORMATION

Course Level: Academic
Mark Types: Check all that apply.
☒F – Final Average ☒MP – Marking Period ☒EXM – Final Exam

GPA Type: ☐ GPAEL-GPA Elementary ☐ GPAML-GPA for Middle Level ☒ NHS-National Honor Society
☒ UGPA-Non-Weighted Grade Point Average ☒ GPA-Weighted Grade Point Average

State Course Code: 03099
To find the State Course Code, go to State Course Code, download the Excel file for *SCED*, click on SCED 6.0 tab, and choose the correct code that corresponds with the course.

TEXTBOOKS AND SUPPLEMENTAL MATERIALS

Board Approved Textbooks, Software, and Materials:

Title:	Biology
Publisher:	HMH
ISBN #:	978-0-544-81799-9
Copyright Date:	2017
WCSD Board Approval Date:	5/14/2018

Supplemental Materials: Click or tap here to enter text.

Curriculum Document

WCSD Board Approval:

Date Finalized:	4/2/2025
Date Approved:	5/5/25
Implementation Year:	2024-2025

SPECIAL EDUCATION, 504, and GIFTED REQUIREMENTS

The teacher shall make appropriate modifications to instruction and assessment based on a student's Individual Education Plan (IEP), Chapter 15 Section 504 Plan (504), and/or Gifted Individual Education Plan (GIEP).

SCOPE AND SEQUENCE OF CONTENT AND CONCEPTS

Marking Period 1

- Plant Classification and Diversity
- Plant Structure and Function
- Plant Reproduction
- Plant Regulation

Marking Period 2

- Introduction to Animals
- Survey of the Major Groups of Invertebrates
- Survey of the Major Groups of Vertebrates

Marking Period 3

- Plant Classification and Diversity
- Plant Structure and Function
- Plant Reproduction
- Plant Regulation

Marking Period 4

- Introduction to Animals
- Survey of the Major Groups of Invertebrates
- Survey of the Major Groups of Vertebrates

Standards/Eligible Content and Skills

Performance Indicator	PA Core Standard and/or Eligible Content	Marking Period Taught
Explain the characteristics common to all organisms.	SCI.9-12.BIO.A.1.1	MP1, MP2 MP3, MP4
Describe relationships between structure and function at biological levels of organization.	SCI.9-12.BIO.A.1.2	MP1, MP2 MP3, MP4
Compare cellular structures and their function in prokaryotic and eukaryotic cells.	SCI.9-12.BIO.A.1.2.1	MP1, MP3
Describe how the unique properties of water support life on Earth.	SCI.9-12.BIO.A.2.1	MP1, MP3
Describe and interpret relationships between structure and function at various levels of biological organization (i.e., organelles, cells, tissues, organs, organ systems, and multicellular organisms).	SCI.9-12.BIO.A.1.2.2	MP1, MP3
Describe the fundamental roles of plastids (e.g., chloroplasts) and mitochondria in energy transformations.	SCI.9-12.BIO.A.3.1.1	MP1, MP3
Describe the factors that can contribute to the development of new species (e.g., isolating mechanisms, genetic drift, founder effect, migration).	SCI.9-12.BIO.A.3.1.2	MP2, MP4
Explain how genetic mutation may result in genotypic and phenotypic variations within a population.	SCI.9-12.BIO.A.3.1.3	MP2, MP4
Identify and describe how organisms obtain and transform energy for their life processes.	SCI.9-12.BIO.A.3.2	MP1, MP2 MP3, MP4
Compare the basic transformation of energy during photosynthesis and cellular respiration.	SCI.9-12.BIO.A.3.2.1	MP1, MP3
Identify and describe the cell structures involved in transport of materials into, out of, and throughout a cell.	SCI.9-12.BIO.A.4.1	MP1, MP3
Describe how the structure of the plasma membrane allows it to function as a regulatory structure and/or protective barrier for a cell.	SCI.9-12.BIO.A.4.1.1	MP1, MP3
Explain mechanisms that permit organisms to maintain biological balance between their internal and external environments.	SCI.9-12.BIO.4.2	MP1, MP2 MP3, MP4
Explain how organisms maintain homeostasis (e.g., thermoregulation, water regulation, oxygen regulation).	SCI.9-12.BIO.A.4.2.1	MP1, MP3
Compare the processes and outcomes of mitotic and meiotic nuclear divisions.	SCI.9-12.BIO.B.1.1.2	MP1, MP2 MP3, MP4
Explain how genetic information is inherited.	SCI.9-12.BIO.B.1.2	MP1, MP3
Analyze the sources of evidence for biological evolution.	SCI.9-12.BIO.B.3.2	MP1, MP2 MP3, MP4
Apply scientific thinking, processes, tools, and technologies in the study of the theory of evolution.	SCI.9-12.BIO.B.3.3	MP1, MP3
Describe interactions and relationships in an ecosystem.	SCI.9-12.BIO.4.2	MP1, MP2 MP3, MP4

ASSESSMENTS

PDE Academic Standards, Assessment Anchors, and Eligible Content: The teacher must be knowledgeable of the PDE Academic Standards, Assessment Anchors, and Eligible Content and incorporate them regularly into planned instruction.

Formative Assessments: The teacher will utilize a variety of assessment methods to conduct in-process evaluations of student learning.

Effective formative assessments for this course include: Bell ringers, exit tickets, notice and wonderings, progress checks, quizzes, lab assignments, teacher questioning, class discussions, peer assessments, and model trackers

Summative Assessments: The teacher will utilize a variety of assessment methods to evaluate student learning at the end of an instructional task, lesson, and/or unit.

Effective summative assessments for this course include: CER responses, chapter tests, culminating tasks, and projects