WARREN COUNTY SCHOOL DISTRICT

PLANNED INSTRUCTION

COURSE DESCRIPTION

Course Title: Entomology
Course Number: 00315
Course Prerequisites: N/A

Course Description: Entomology is a one semester elective course open to all students in Grades 9 through 12. The course will explore the fascinating world of insects. Topics covered include insect origins, external and internal anatomy and physiology of insects, insect behavior, insect classification and how insects impact human life and ecosystems. Students will create an insect collection, classifying insects to the family level.

Suggested Grade Level: Grades 9-12
Length of Course: One Semester
Units of Credit: .5
PDE Certification and Staffing Policies and Guidelines (CSPG) Required Teacher Certifications:
CSPG 32 Biology; CSPG 30 Agriculture
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:	How to Know the Insects
Publisher:	WCB/McGraw Hill
ISBN #:	0-697-04752-0
Copyright Date:	1978
WCSD Board Approval Date:	5/14/2018

Supplemental Materials: Insect Appreciation, McGraw Hill, 1978

Curriculum Document

WCSD Board Approval:

Date Finalized:	2/19/2025
Date Approved:	3/10/2025
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

- Insect Collection
- Insect Origins
- External Anatomy of Insects

Marking Period 2

- External Anatomy of Insects (continued)
- Internal Anatomy of Insects
- Insect Order

Marking Period 3

- Insect Collection
- Insect Origins
- External Anatomy of Insects

Marking Period 4

- External Anatomy of Insects (continued)
- Internal Anatomy of Insects
- Insect Order

Standards/Eligible Content and Skills

Performance Indicator	PA Core Standard and/or Eligible Content	Marking Period Taught
Explain the characteristics common to all organisms.	BIO.A.1.1	MP1, MP3
Describe relationships between structure and function at biological levels of organization.	BIO.A.1.2	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).	BIO.A.1.2.2	MP1, MP3
Explain the mechanisms of evolution.	BIO.B.3.1	MP1, MP2, MP3, MP4
Explain how natural selection can impact allele frequencies of a population.	BIO.B.3.1.1	MP1, MP2, MP3, MP4
Describe the factors that can contribute to the development of new species (e.g., isolating mechanisms, genetic drift, founder effect, migration).	BIO.B.3.1.2	MP1, MP2, MP3, MP4
Analyze the sources of evidence for biological evolution.	BIO.B.3.2	MP1, MP3
Interpret evidence supporting the theory of evolution (i.e., fossil, anatomical, physiological, embryological, biochemical, and universal genetic code).	BIO.B.3.2.1	MP1, MP2, MP3, MP4
Apply scientific thinking, processes, tools, and technologies in the study of the theory of evolution.	BIO.B.3.3	MP1, MP2, MP3, MP4
Describe ecological levels of organization in the biosphere.	BIO.B.4.1	MP2, MP4
Describe biotic interactions in an ecosystem (e.g., competition, predation, symbiosis).	BIO.B.4.2.2	MP2, MP4
Describe how ecosystems change in response to natural and human disturbances (e.g., climate changes, introduction of nonnative species, pollution, fires).	BIO.B.4.2.4	MP2, MP4
Use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem.	SCI.3.1.9-12.H	MP2, MP4
Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions.	SCI.3.1.9-12.J	MP1, MP2, MP3, MP4
Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.	SCI.3.1.9-12.M	MP1, MP2, MP3, MP4
Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.	SCI.3.1.9-12.N	MP2, MP4
Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.	SCI.3.1.9-12.O	MP1, MP2, MP3, MP4
Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.	SCI.3.1.9-12.S	MP1, MP2, MP3, MP4

Performance Indicator	PA Core Standard and/or Eligible Content	Marking Period Taught
Analyze and interpret how issues, trends, technologies, and policies impact agricultural, food, and environmental systems and resources.	SCI.3.4.9-12.A	MP1, MP2, MP3, MP4
Plan and conduct an investigation utilizing environmental data about a local environmental issue.	SCI.3.4.9-12.E	MP1, MP2, MP3, MP4
Evaluate and communicate the effect of integrated pest management practices on indoor and outdoor environments.	SCI.3.4.9-12.F	MP1, MP2, MP3, MP4
Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.	CC.3.5.9-10.D	MP1,MP2, MP3, MP4
Summarize the flow of energy within an ecosystem with the support of a model (i.e., as it relates to the food web).	ELP.16.4.9-12.4W	MP2, 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: Exit tickets, projects, labs/dissections, quizzes, reflections, illustrations, diagrams

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: Teacher created quizzes, labs, tests, essays, final projects, final exams