**Danville Area School District**
**Course Overview and Scope and Sequence**

**Course Title:** Entomology
**Content Area:** Science
**Grade Level:** 11th and/or 12th
**Date Developed:** June 2023

COURSE OVERVIEW: This course explores the world of insects from a practical and scientific perspective. Topics covered include methods of insect collection and identification, insect ecology and taxonomy, insect anatomy, and the economic and environmental impacts of insects. Students will utilize various insect sampling methods and study the samples collected throughout the course. This course is recommended for students with an interest in environmental science, wildlife biology, biodiversity, or insect surveying used in agricultural applications.

**ANCHOR STANDARDS**:

1. Structure and Function
2. Growth and Development of Organisms
3. Ecosystem Dynamics, Functioning, and Resilience
4. Social Interactions and Group Behavior
5. Evidence of Common Ancestry and Diversity
6. Natural Selection and Adaptation

KEY COURSE TEXT AND MATERIALS: None - all material is teacher generated

KEY ASSESSMENTS: Teacher-generated rubrics for project-based assessments, one per unit of study
Diagnostic: None

Formative: Labs, activities, identifications, dissections, class discussion/notes/journal reports
Summative: Projects

| SCOPE AND SEQUENCE | | | | | |
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| Unit | PRIORITY STANDARDS | SUPPORTING STANDARDS | ASSESSMENT | MATERIALS | TIMEFRAME |
| **Unit 1: Introduction to Entomology** | 3.1.9-12N<br>3.1.9-12V | 3.1.9-12.I<br>3.1.9-12.O | Insect specimen examination | Content is teacher created. In addition to lab/project supplies, materials are posted in Google Classroom. | 12 days |
| Unit 2: Insects 101 | 3.1.9-12B | 3.1.9-12C<br>3.1.9-12M<br>3.1.9-12.I<br>3.1.9-12.O | Mimicry complex project and insect order identification lab practical | Content is teacher created. In addition to lab/project supplies, materials are posted in Google Classroom. | 13 days |
| Unit 3: Insect Anatomy | 3.1.9-12B | 3.1.9-12.O | Insect senses project and grasshopper dissection lab practical | Content is teacher created. In addition to lab/project supplies, materials are posted in Google Classroom. | 13 days |
| Unit 4: Insect Taxonomy and Evolution | 3.1.9-12B<br>3.1.9-12S<br>3.1.9-12.X | 3.1.9-12M<br>3.1.9-12U<br>3.1.9-12.I | Model insect evolution through timeline, taxonomy/evolution case study project | Content is teacher created. In addition to lab/project supplies, materials are posted in Google Classroom. | 13 days |

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| Unit 5: Insect Ecology | 3.1.9-12B<br>3.1.9-12.M | 3.1.9-12A<br>3.1.9-12M<br>3.1.9-12O<br>3.1.9-12.S<br>3.1.9-12.T | Insect ecology journal article report | Content is teacher created. In addition to lab/project supplies, materials are posted in Google Classroom. | 13 days |
| Unit 6: Insect Identification and Microscopy | 3.1.9-12B | 3.1.9-12.O<br>3.1.9-12.S | Insect identification and lab practical | Content is teacher created. In addition to lab/project supplies, materials are posted in Google Classroom. | 13 days |
| Unit 7: Uses of Entomology in Society | 3.1.9-12V | 3.1.9-12.N | Cumulative project | Content is teacher created. In addition to lab/project supplies, materials are posted in Google Classroom. | 13 days |