

**Warren County School District**

**PLANNED INSTRUCTION**

**COURSE DESCRIPTION**

**Course Title:** Plants and Animals

**Course Number:** 00377

**Course Prerequisites:** Successful completion of Academic Biology or Applied 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                      ☐ Two Semesters                      ☐ Other (Describe)

**Units of Credit:** .5 (Insert *None* if appropriate)

**PDE Certification and Staffing Policies and Guidelines (CSPG) Required Teacher Certifications:**

CSPG: 32 Biology

**Certification verified by WCSD Human Resources Department:** ☒ Yes    ☐ No

**TEXTBOOK AND SUPPLEMENTAL MATERIALS**

**Continue using Board approved textbook?** ☒ Yes    ☐ No (*If yes, then complete the information below.*)

**Board Approved Textbooks, Software, Supplemental Materials:**

**Title:** Biology

**Publisher:** HMH

**ISBN #:** 978-0-544-81799-9

**Copyright Date:** 2017

**Date of WCSD Board Approval:**

**BOARD APPROVAL:**

**Date Written:** 3/19/18

**Date Approved:** \_\_\_\_\_

**Implementation Date:** 2018-2019

## **SPECIAL EDUCATION AND GIFTED REQUIREMENTS**

The teacher shall make appropriate modification to instruction and assessment based on a student's Individual Education Plan (IEP) or Gifted Individual Education Plan (GIEP).

### **COURSE OVERVIEW**

*(List the content to be taught)*

#### **I. Plants**

- A. Plant classification and diversity
  - 1. Evolution and adaptation to land
  - 2. Classification of vascular and nonvascular plants
  - 3. Alternation of generations life cycle
- B. Plant structure and function
  - 1. Specialized cells and tissues
  - 2. Roots, stems, and leaves
  - 3. Nutrition and transport
- C. Plant Reproduction
  - 1. Life cycles of vascular and nonvascular plants
  - 2. Dispersal and propagation
- D. Plant Regulation
  - 1. Plant hormones
  - 2. Responses

#### **II. Animals**

- A. Introduction to animals
  - 1. Patterns of symmetry
  - 2. Multicellular organization
  - 3. Fertilization and development
- B. Survey of the major groups of invertebrates (Porifera, Cnidaria, Platyhelminthes, Nematoda, Mollusca, Annelida, Arthropoda, Echinodermata)
  - 1. Classification and phylogeny
  - 2. Major structural features of each group
  - 3. Basic physiology of each group
- C. Survey of the major groups of vertebrates (Agnatha, Chondrichthyes, Osteichthyes, Amphibians, Reptiles, Birds, Mammals)
  - 1. Classification and phylogeny
  - 2. Major structural features of each group
  - 3. Basic physiology of each group

#### **Objectives:**

- 1. Describe how plants have evolved and adapted to life on land.
- 2. Discuss the differences between vascular and nonvascular plants.
- 3. Explain the alternation of generations life cycle.
- 4. Explain the main characteristics of gymnosperms and angiosperms.
- 5. Explain the differences between monocots and dicots.
- 6. Describe the three types of plant cells.
- 7. Describe the three types of plant tissue systems.
- 8. Explain the functions of the major plant organs.
- 9. Describe the anatomy of roots, stems and leaves.

10. Explain how primary and secondary growth occurs.
11. Explain how water and food are transported throughout the plant.
12. Explain how plant processes and responses are regulated.
13. Describe how animals have evolved.
14. Explain how animals are classified
15. Explain the different patterns of symmetry found in animals.
16. Describe the 3 types of body cavities found among animals.
17. Explain the advantages of segmentation in the animal kingdom.
18. Describe the advantages of the amniotic egg among vertebrates.
19. Describe the basic structural characteristics of the nine major groups of animals.
20. Describe the basic characteristics of the seven major groups of vertebrates.

### **Course Standards**

#### **PA Academic Standards:**

- 3.1.B.A: BIOLOGY
- 3.2.B.A: BIOLOGY
- 3.3.B.B: BIOLOGY

#### **Common Core Standards:**

- CC.3.5.11-12 Reading Informational Text
- CC.3.6.11-12 Writing

### **ASSESSMENT**

**Portfolio Assessment:** ☐ Yes ☒ No

**District-Wide Common Final Examination Required:** ☒ Yes ☐ No

**Course Challenge Assessment (Describe):** Students must pass the final exam with a minimum score of 80%.

**WRITING TEAM:** Warren County School District Teachers

### **WCSD STUDENT DATA SYSTEM INFORMATION**

1. Is there a required final examination? ☒ Yes ☐ No  
*\*Warren County School District Policy 9741 and 9744 state, "All classes in grades 9-12 shall have a final exam."*
2. Does this course issue a mark/grade for the report card? ☒ Yes ☐ No
3. Does this course issue a Pass/Fail mark? ☐ Yes ☒ No
4. Is the course mark/grade part of the GPA calculation? ☒ Yes ☐ No
5. Is the course eligible for Honor Roll calculation? ☒ Yes ☐ No
6. What is the academic weight of the course?  

☐ No weight/Non credit
☒ Standard weight
☐ Enhanced weight