Warren County School District

PLANNED INSTRUCTION

COURSE DESCRIPTION

Course Title: Plants and Animals

Course Number: 00377

Course Prerequisites: Successful completion of Academic Biology or Biology

Course Description: (Include "no final exam" or "final exam required")
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. Successful completion of Biology-CP or Biology is a prerequisite for this class.

Suggested Grade Level: 10-12

Length of Course: X One Semester _____ Two Semesters _____ Other (Describe)

Units of Credit: 0.5 (Insert ***NONE*** if appropriate.)/

PDE *Certification and Staffing Policies and Guidelines (CSPG)* Required Teacher Certification(s)
(Insert certificate title and CSPG#) Biology

Certification verified by WCSD Human Resources Department:
X Yes _____ No

Board Approved Textbooks, Software, Materials:
Title:
Publisher:
ISBN #:
Copyright Date:
Date of WCSD Board Approval:

BOARD APPROVAL:

Date Written: September 2009

Date Approved: _____

Implementation Year: _____

Suggested Supplemental Materials: (List or insert **None**)

Course Standards

PA Academic Standards: (List by Number and Description)

3.1.12 Unifying Themes

B. Apply concepts of models as a method to predict and understand science and technology.
E. Evaluate change in nature, physical systems and man made systems.

3.2.12 Inquiry and Design

A. Evaluate the nature of scientific and technological knowledge.
C. Apply the elements of scientific inquiry to solve multi-step problems..

3.3.12 Biological Sciences

A. Explain the relationship between structure and function at all levels of organization.
B. Analyze the chemical and structural basis of living organisms.

3.7.12 Technological Devices

B. Evaluate appropriate instruments and apparatus to accurately measure materials and processes.

4.7.12 Threatened, Endangered and extinct Species

A. Analyze biological diversity as it relates to the stability of an ecosystem.
B. Examine the effects of extinction, both natural and human caused, on the environment.

WCSD Academic Standards: (List or **None**)
None

Industry or Other Standards: (List, Identify Source or **None**)
None

WCSD EXPECTATIONS

WCSD K-12 Expectations for instruction in writing, reading, mathematics and, technology have been developed and revised annually. The teacher will integrate all WCSD Expectations into this planned instruction.

SPECIAL EDUCATION AND GIFTED REQUIREMENTS

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

ASSESSMENTS

PSSA Assessment Anchors Addressed:

This course is written to the 12th grade standards. No assessment anchors have been written for this level.

Suggested Formative Assessments: The teacher will develop and use standards-based assessments throughout the course.

- Pre-Assessments of prior knowledge (e.g. entrance cards or KWL chart)

- Labs/lab reports
- Bell ringers/Problems of the Day(PODs)
- Discussions
- Teacher observation/Questioning
- Graphic organizers (e.g. Venn diagrams, word mapping, webbing, KWL chart, etc.)
- Summarizing
- Retelling
- Notetaking
- Problem-based learning modules
- Authentic assessment
- Oral presentations
- Outlining
- Journaling
- Student presentations/projects
- Open-ended response
- Quizzes/tests
- Activities
- Classroom Performance System (CPS)
- White boards

Suggested Summative Assessments:

- Essays
- Open-Ended Responses
- Projects
- Quizzes/tests
- Student presentations
- Portfolios
- Lab Practical
- Lab Report

District Approved Assessment Instruments

- PSSA Tests-Grades 4, 8 and 11 only

Differentiated Instructional Assessment Strategies

Portfolio Assessment: _____ Yes __X__ No

District-wide Final Examination Required: _____ Yes __X__ No

Course Challenge Assessment (Describe):

REQUIRED COURSE SEQUENCE AND TIMELINE

(Content must be tied to objectives)

Content Sequence	Dates
I. Plants	
A. Plant classification and diversity	**8 weeks**
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	**10 weeks**
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, Platylhelminthes, 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.

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WCSD STUDENT DATA SYSTEM INFORMATION

1. Is there a required final examination? ___X___ Yes _____ No
2. Does this course issue a mark/grade for the report card?

   ___X___Yes _____ No
3. Does this course issue a Pass/Fail mark? _____Yes ___X___ No
4. Is the course mark/grade part of the GPA calculation?

   ___X___Yes _____ No
5. Is the course eligible for Honor Roll calculation? ___X___ Yes _____ No
6. What is the academic weight of the course?

   _____ No weight/Non credit ___X___ Standard weight

   _____ Enhanced weight (Describe)