Warren County School District

PLANNED INSTRUCTION

COURSE DESCRIPTION

Course Title: Wildlife Ecology

Course Number: _____

Course Prerequisites: Successful completion of Biology-CP or Biology

Course Description: (Include "no final exam" or "final exam required")

This course introduces the student to wildlife biology, ecology and management. An emphasis will be placed on the identification and classification of PA wildlife species. Appropriate lab activities will be used including elements of scientific inquiry, concepts of models, and the use of technological devices. Final exam required. Successful completion of Biology-CP or Biology is required before taking this course. Recommended for fall semester.

Suggested Grade Level: 11-12

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

Units of Credit: .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)

None

Course Standards

PA Academic Standards: (List by Number and Description)

3.1 Unifying Themes

12B. Apply concepts of models as a method to predict and understand science and technology.

12C. Assess and apply patterns in science and technology.

12E. Evaluate change in nature, physical systems and man made systems.

3.2 Inquiry and Design

12A. Evaluate the nature of scientific and technological knowledge.

12B. Evaluate experimental information for appropriateness and adherence to relevant science process.

12C. Apply the elements of the scientific inquiry to solve multi-step problems.

12D. Analyze and use the technological design process to solve problems.

4.6 Ecosystems and Their Interactions

12A. Analyze the interdependence of an ecosystem.

12B. Analyze the impact of cycles on the ecosystem.

12C. Analyze how human action and natural changes affect the balance within an ecosystem.

4.7 Threatened, Endangered and Extinct Species

12A. Analyze biological diversity as it relates to the stability of an ecosystem.

12B. Examine the effects of extinction, both natural and human caused, on the environment.

12C. Analyze the effects of threatened, endangered or extinct species on human and natural systems.

4.8 Humans and the Environment

12A. Explain how technology has influenced the sustainability of natural resources over time.

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).

SPECIFIC EDUCATIONAL OBJECTIVES/CORRESPONDING STANDARDS AND ELIGIBLE CONTENT WHERE APPLICABLE

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. Wildlife Ecology — **4 weeks**
- A. Ecosystem Dynamics
  1. Energy Flow
  2. Predator – Prey Relationships
- B. Population Dynamics and Research Techniques
  1. Marking, Tagging and Banding
  2. Age and Sex Determination
  3. Food Habit Assessment
  4. Determination of Home Range, Movement, and Territory

II. Wildlife Species and Their Biology — **6 weeks**
- A. Identification of Selected Mammals, Birds and Reptiles/Amphibians
- B. Use of Dichotomous Keys
- C. Life History, Food, Behavior and Adaptations of Selected Species
- D. Habitat Management for Selected Species

III. Wildlife Management — **4 weeks**
- A. Game Laws and Seasons
- B. Habitat Improvement Techniques
- C. Wildlife Management Plans
- D. Population Size Management

IV. Wildlife and Society Issues — **4 weeks**
- A. Biodiversity
- B. Endangered and Threatened Species
- C. Invasive Species
- D. Habitat Loss / Fragmentation

Objectives:

1. Describe and be able to model food chains, food webs, trophic levels.
2. Describe factors that limit or enhance population growth.
3. Identify and describe methods that can be used to determine the abundance and distribution of wildlife.
4. Identify common wildlife species and describe their natural history.
5. Describe ways habitat can be managed / improved for specific wildlife species.
6. Correlate the use of game laws and regulations to sound wildlife management principles.
7. Describe methods used to manage and conserve wildlife and wildlife habitat.
8. Define biodiversity and provide examples of how biodiversity is important to people and

wildlife.
9. Identify and explain factors that have led to species become endangered threatened.
10. Explain how invasive species impact wildlife populations.
11. Describe major causes of habitat loss in PA and how habitat loss affects wildlife.

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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)