WARREN COUNTY SCHOOL DISTRICT

PLANNED INSTRUCTION

COURSE DESCRIPTION

Course Title: **Exploring Our Environment**
Course Number: 00301
Course Prerequisites: None

Course Description: Exploring Our Environment is a one semester elective designed for middle level students. This course is designed to provide an introductory understanding of environmental science and conservation through hands-on activities, group projects, and field experiences. The curriculum is structured around the four stations of the Envirothon competition, providing students with an engaging and interactive learning experience. Focus will be placed on Pennsylvania specific issues and species.

Suggested Grade Level: Grades 6-8
Length of Course: One Semester
Units of Credit: .5
PDE Certification and Staffing Policies and Guidelines (CSPG) Required Teacher Certifications:
CSPG 32 Biology, CSPG 34 Chemistry, CSPG 40 Earth and Space Science, CSPG 41 Elementary Education K – 6, CSPG 45 Environmental Science, CSPG 46 General Science, CSPG 54 Middle Level Science, CSPG 56 Physics, CSPG 70 Grades 4 – 8 (3100-05)

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: 03239
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:	NA
Publisher:	NA
ISBN #:	NA
Copyright Date:	NA
WCSD Board Approval Date:	NA

Supplemental Materials: https://www.envirothonpa.org/, Content specific videos/video clips from Swank, YouTube, PBS or other WCSD approved source.

Curriculum Document

WCSD Board Approval:

Date Finalized:	3/13/2024
Date Approved:	6/10/2024
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

- Introduction to Aquatic Ecology
    - Aquatic ecosystems
    - Aquatic resource issues
    - Aquatic resource management and protection
- Introduction to Forest Ecology
    - Trees
    - Forest ecosystems
    - Forest resource management and protection

Marking Period 2

- Introduction to Land Ecology
    - Basic soil knowledge
    - Understanding maps, surveys, and landforms
    - Land use
    - Decision-making and protection of soils
- Introduction to Wildlife Ecology
    - Knowledge of birds and mammals
    - Understanding wildlife ecology
    - Conservation and management of wildlife
    - Issues involving wildlife and society

Marking Period 3

- Introduction to Land Ecology
    - Basic soil knowledge
    - Understanding maps, surveys, and landforms
    - Land use
    - Decision-making and protection of soils
- Introduction to Wildlife Ecology
    - Knowledge of birds and mammals
    - Understanding wildlife ecology
    - Conservation and management of wildlife
    - Issues involving wildlife and society

Marking Period 4

- Introduction to Aquatic Ecology
    - Aquatic ecosystems
    - Aquatic resource issues

  - Aquatic resource management and protection
- Introduction to Forest Ecology
  - Trees
  - Forest ecosystems
  - Forest resource management and protection

Standards/Eligible Content and Skills

Performance Indicator	**PA Core Standard and/or Eligible Content**	**Marking Period Taught**
Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.	3.1.6-8.I	MP1 MP2 MP3 MP4
Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.	3.1.6-8.J	MP1 MP2 MP3 MP4
Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.	3.1.6-8.K	MP1 MP2 MP3 MP4
Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.	3.1.6-8.L	MP1 MP2 MP3 MP4
Evaluate competing design solutions for maintaining biodiversity and ecosystem services.	3.1.6-8.U	MP1 MP2 MP3 MP4
Develop models to describe the atomic composition of simple molecules and extended structures.	3.2.6-8.A	MP1 MP2 MP3 MP4
Develop a model that predicts and describes changes in the particle motion, temperature, and state of a pure substance when thermal energy is added or removed.	3.2.6-8.B	MP1 MP2 MP3 MP4
Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.	3.3.6-8.F	MP1 MP2 MP3 MP4

Performance Indicator	**PA Core Standard and/or Eligible Content**	**Marking Period Taught**
Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity.	3.3.6-8.H	MP1 MP2 MP3 MP4
Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes.	3.3.6-8.K	MP1 MP2 MP3 MP4
Apply scientific principles to design a method for monitoring and minimizing human impact on the environment.	3.3.6-8.M	MP1 MP2 MP3 MP4
Construct an argument supported by evidence for how increases in human population and per capita consumption of natural resources impact Earth's systems.	3.3.6-8.N	MP1 MP2 MP3 MP4
Develop a model to describe how agricultural and food systems function, including the sustainable use of natural resources and the production, processing, and management of food, fiber, and energy.	3.4.6-8.A	MP1 MP2 MP3 MP4
Analyze and interpret data about how different societies (economic and social systems) and cultures use and manage natural resources differently.	3.4.6-8.B	MP1 MP2 MP3 MP4
Develop a model to describe how watersheds and wetlands function as systems, including the roles and functions they serve.	3.4.6-8.C	MP1 MP2 MP3 MP4
Gather, read, and synthesize information from multiple sources to investigate how Pennsylvania environmental issues affect Pennsylvania’s human and natural systems.	3.4.6-8.D	MP1 MP2 MP3 MP4
Collect, analyze, and interpret environmental data to describe a local environment.	3.4.6-8.E	MP1 MP2 MP3 MP4
Obtain and communicate information on how integrated pest management could improve indoor and outdoor environments.	3.4.6-8.F	MP1 MP2 MP3 MP4
Obtain and communicate information to describe how best resource management practices and environmental laws are designed to achieve environmental sustainability.	3.4.6-8.G	MP1 MP2 MP3 MP4

Performance Indicator	**PA Core Standard and/or Eligible Content**	**Marking Period Taught**
Design a solution to an environmental issue in which individuals and societies can engage as stewards of the environment.	3.4.6-8.H	MP1 MP2 MP3 MP4
Construct an explanation that describes regional environmental conditions and their implications on environmental justice and social equity.	3.4.6-8.I	MP1 MP2 MP3 MP4
Cite specific textual evidence to support analysis of science and technical texts.	CC.3.5.6-8.A	MP1 MP2 MP3 MP4
Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions.	CC.3.5.6-8.B	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 6–8 texts and topics.	CC.3.5.6-8.D	MP1 MP2 MP3 MP4
Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic.	CC.3.5.6-8.E	MP1 MP2 MP3 MP4
Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text.	CC.3.5.6-8.F	MP1 MP2 MP3 MP4
Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).	CC.3.5.6-8.G	MP1 MP2 MP3 MP4
Distinguish among facts, reasoned judgment based on research findings, and speculation in a text.	CC.3.5.6-8.H	MP1 MP2 MP3 MP4
Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic.	CC.3.5.6-8.I	MP1 MP2 MP3 MP4
By the end of grade 8, read and comprehend science/technical texts in the grades 6–8 text complexity band independently and proficiently.	CC.3.5.6-8.J	MP1 MP2 MP3 MP4

Performance Indicator	**PA Core Standard and/or Eligible Content**	**Marking Period Taught**
Write arguments focused on discipline-specific content. • Introduce claim(s) about a topic or issue, acknowledge and distinguish the claim(s) from alternate or opposing claims, and organize the reasons and evidence logically. • Support claim(s) with logical reasoning and relevant, accurate data and evidence that demonstrate an understanding of the topic or text, using credible sources. • Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), counterclaims, reasons, and evidence. • Establish and maintain a formal style. • Provide a concluding statement or section that follows from and supports the argument presented.	CC.3.6.6-8.A	MP1 MP2 MP3 MP4
Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes. • Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories as appropriate to achieving purpose; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension. • Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples. • Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts. • Use precise language and domain-specific vocabulary to inform about or explain the topic. • Establish and maintain a formal style and objective tone. • Provide a concluding statement or section that follows from and supports the information or explanation presented.	CC.3.6.6-8.B	MP1 MP2 MP3 MP4
Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	CC.3.6.6-8.C	MP1 MP2 MP3 MP4
With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed.	CC.3.6.6-8.D	MP1 MP2 MP3 MP4
Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently.	CC.3.6.6-8.E	MP1 MP2 MP3 MP4
Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.	CC.3.6.6-8.F	MP1 MP2 MP3 MP4

Performance Indicator	**PA Core Standard and/or Eligible Content**	**Marking Period Taught**
Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.	CC.3.6.6-8.G	MP1 MP2 MP3 MP4
Draw evidence from informational texts to support analysis reflection, and research.	CC.3.6.6-8.H	MP1 MP2 MP3 MP4
Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	CC.3.6.6-8.I	MP1 MP2 MP3 MP4

ASSESSMENTS

PDE Academic Standards: The teacher must be knowledgeable of the PDE STEELS Standards as well as the Reading and Writing in Science and Technology Standards 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: Bell ringers, exit tickets, notice and wonderings, progress checks, quizzes, lab assignments, practice tests, writing prompts, teacher questioning, class discussions, individual and team-based projects.

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: Lab reports, CER responses, projects, tests.