

WARREN COUNTY SCHOOL DISTRICT

PLANNED INSTRUCTION

COURSE DESCRIPTION

Course Title: Science 7
Course Number: 00305
Course Prerequisites: None

Course Description: Life science is based on structure and function of organism, continuity of life, and ecological behavior and systems.

Suggested Grade Level: Grade 7
Length of Course: Two Semesters
Units of Credit: 1

PDE Certification and Staffing Policies and Guidelines (CSPG) Required Teacher Certifications:
CSPG 32 Biology, CSPG 46 General Science, CSPG 43 Environmental Science, CSPG 40 Earth Science, CSPG 54 Middle Level Science
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: 03237
To find the State Course Code, go to [State Course Code](#), download the Excel file for SCED, click on SCED 6.0 tab, and chose the correct code that corresponds with the course.

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TEXTBOOKS AND SUPPLEMENTAL MATERIALS

Board Approved Textbooks, Software, and Materials:

Title: Life Science 2017
Publisher: McGraw Hill Education
ISBN #: 978-0-07-677284-1
Copyright Date: 2017
WCSD Board Approval Date: 4/9/2018

Supplemental Materials:

Curriculum Document

WCSD Board Approval:

Date Finalized: 4/9/2018
Date Approved: 4/9/2018
Implementation Year: 2018-2019

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).

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SCOPE AND SEQUENCE OF CONTENT, CONCEPTS, AND SKILLS

Performance Indicator	PA Core Standard and/or Eligible Content	Month Taught and Assessed for Mastery
Demonstrate understanding of scientific inquiry by identifying a questions and then following the appropriate steps of the scientific methods to formulate an answer to that question.	RST.6-8.3	September
Make and use tables/graphs to accurately portray data collected during a scientific experiment.	RST.6-8.3 RST.6-8.4	September
Identify and manipulate variables and controls.	RST.6-8.3 RST.6-8.4	September
Accurately and precisely measure length, mass, volume, and temperature using SI units	RST.6-8.3 RST.6-8.3	September
Demonstrate proficiency with tools commonly used by life scientists.	RST.6-8.3	September
Explain how similarities are used to classify organisms.	3.1.7.A.2	September
Explain the system of binomial nomenclature	3.1.7.A.2	September
Compare and contrast the characteristics of the organisms that make up the six kingdoms of life.	3.1.7.A.2	September
Demonstrate how to correctly focus a microscope	RST.6-8.3 -	September
Demonstrate understanding of scientific inquiry by identifying a questions and then following the appropriate steps of the scientific methods to formulate and answer to that question.	WHST.6-8.2.d	September
Make and use tables/graphs to accurately portray data collected during a scientific experiment. Identify and manipulate variables and controls.	RST.6-8.4	September
Accurately and precisely measure length, mass, volume, and temperature using SI units	RST.6-8.4	September
Demonstrate proficiency with tools commonly used by life scientists.	3.4.7.B.3	September
Summarize the discoveries that lead to the development of the cell theory.	3.1.7.A.1	October
Identify the biomolecules found in all cells. Compare and Contrast prokaryotic and eukaryotic cells. Identify names and functions of each part of a cell.	3.1.7.A.1	October
Explain how important a nucleus is to a eukaryotic cell.	3.1.7.A.1	October
Demonstrate how to make a wet mount slide. Identify key cell parts using a microscope	3.1.7.A.1 - 3.4.7.D.2	October
Identify the biomolecules found in all cells.	3.1.7.A.5	November

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Performance Indicator	PA Core Standard and/or Eligible Content	Month Taught and Assessed for Mastery
Compare and Contrast prokaryotic and eukaryotic cells.	3.1.7.A.5	November
Identify names and functions of each part of a cell. Explain how important a nucleus is to a eukaryotic cell.	3.1.7.A.5	November
Explain how important a nucleus is to a eukaryotic cell. Identify the cellular processes used to transport materials into and out of a cell.	3.1.7.A.5	December November
Model the processes of diffusion and osmosis. Model how surface area affects cell size. Compare and contrast cellular respiration and fermentation.	3.1.7.A.5	December
Identify the relationship between photosynthesis and cellular respiration.	3.1.7.A.5	November December
Compare tissues, organs, and organ systems.	3.1.7.A.6	December
Explain why mitosis is important. Examine the steps of mitosis. Describe the stages of meiosis and how sex cells are produced	3.1.7.A.7	November December
Compare and contrast sexual reproduction and asexual reproduction, Explain how fertilization occurs in sexual reproduction	3.1.7.B.2	December
Compare and contrast cloning in plants and animals.	3.1.7.A.5	December
Identify the parts of a DNA molecule and its structure. Explain how DNA is copied.	3.1.7.B.4	January
Compare and contrast innate and learned behaviors in animals with an emphasis on nature VS nurture.	3.1.7.B.4	January
Compare and contrast the difference between an individual's genotype and phenotype.	3.1.7.B.4	January
Use a Punnett square to predict the results of crosses.	3.1.7.B.4	January
Identify Mendel's role in the history of genetics	3.1.7.B.1	January
Explain how various traits are inherited. Describe human genetic disorders and how they are inherited,	3.1.7.B.1	January
Explain how sex-linked traits are passed to offspring.	3.1.7.B.13.1.7. B.4	January
Evaluate the importance of advances in genetics.	3.1.7.B.4	January February
Sequence the steps for making genetically engineered organisms.	3.1.7.B.4	January February
Identify the type of inheritance pattern from a pedigree.	3.1.7.B.4	January February
Understand the ethics involved with human genetic engineering.	3.4.7.E.1	January February
Identify why variations in organisms are important	3.1.7.C.1 3.1.7.C.2	March

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Performance Indicator	PA Core Standard and/or Eligible Content	Month Taught and Assessed for Mastery
Identify the importance of fossils as evidence for evolution. Identify how relative and radiometric dating are used to estimate the age of a fossil.	3.1.7.C.1 3.1.7.C.2	March
Investigate five different types of evidence for evolution.	3.1.7.C.1 3.1.7.C.2	March
Compare and contrast natural selection and artificial selection.	3.1.7.C.1 3.1.7.C.2	March
Identify the biotic and abiotic parts in a given ecosystem. Interpret the various cycles of matter.	4.5.7.A	April
Identify the flow of energy in given food chains and food webs.	4.1.7.A	April
Compare and contrast renewable and nonrenewable resources. Analyze uses and conservation of fossil fuels Identify alternatives to fossil fuels.	4.5.7.A	May
Describe types of air pollution. Explain methods that can be used to prevent erosion. Recognize ways that you can reduce your use of natural resources. Explain how you can reuse resources to promote conservation. Describe how many materials can be recycled.	4.5.7.C 4.5.7.E	June

ASSESSMENTS

PSSA Academic Standards, Assessment Anchors, and Eligible Content: The teacher must be knowledgeable of the PDE Academic Standards, Assessment Anchors, and Eligible Content 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: Exit tickets, project, labs, etc.

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: Teacher created tests, quizzes, etc.