

## WARREN COUNTY SCHOOL DISTRICT

### PLANNED INSTRUCTION

#### **COURSE DESCRIPTION**

**Course Title:** Science 5

**Course Number:** 08533

**Course Prerequisites:** None

**Course Description:** Students will describe that matter is made of particles too small to be seen through the development of a model and understand that regardless of the type of change that matter undergoes, the total weight of matter is conserved. Students determine whether the mixing of two or more substances results in new substances. Students will develop a model to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact. Students will describe and graph data to provide evidence about the distribution of water on Earth. Students will understand that plants get the materials they need for growth chiefly from air and water. Using models, students will describe the movement of matter among plants, animals, decomposers, and the environment and that energy in animals' food was once energy from the sun. Students will develop understand patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.

**Suggested Grade Level:** Grade 5

**Length of Course:** Two Semesters

**Units of Credit:** None

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

CSPG 70 or Elementary K-6

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:** 03235

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.

## WARREN COUNTY SCHOOL DISTRICT

### PLANNED INSTRUCTION

#### **TEXTBOOKS AND SUPPLEMENTAL MATERIALS**

##### **Board Approved Textbooks, Software, and Materials:**

**Title:** Inspire Science  
**Publisher:** McGraw Hill  
**ISBN #:** 978-0-07-678000-6  
**Copyright Date:** 2017  
**WCSD Board Approval Date:** 12/03/2018

**Supplemental Materials:** STEM Lab Activities

#### **Curriculum Document**

##### **WCSD Board Approval:**

**Date Finalized:** 7/19/2022  
**Date Approved:** Click or tap to enter a date.  
**Implementation Year:** 2022-2023

#### **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**

- Earth and Space Sciences: Earth's Place in the Universe
- Earth and Space Sciences: Earth's Systems

**Marking Period 2**

- Earth and Space Sciences: Earth and Human Activity
- Life Science: From Molecules to Organisms

**Marking Period 3**

- Life Science: Ecosystems
- Physical Science: Motion and Stability
- Physical Science: Energy

**Marking Period 4**

- Physical Science: Matter and its Interactions

**WARREN COUNTY SCHOOL DISTRICT**

PLANNED INSTRUCTION

**Standards/Eligible Content and Skills**

Performance Indicator	PA Core Standard and/or Eligible Content	Marking Period Taught
Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.	5-ESS2.1	MP1
Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.	5-ESS2.2	MP1
Examine how energy can be transferred from one form to another.	3.2.5.B.2	MP1, MP 2, MP 3
Demonstrate how heat energy is usually a byproduct of an energy transformation.	3.2.5.B.3	MP1, MP 3
Provide evidence that the earth revolves around (orbits) the sun in a year's time and that the earth rotates on its axis once approximately every 24 hours.	3.3.5.B.1	MP1, MP 3
Support an argument that the gravitational force exerted by Earth on objects is directed down.	5-PS2.1	MP1, MP 3
Describe how life on earth depends on energy from the sun.	3.1.5.A.2	MP1, MP 3
Describe how water can be changed from one state to another by adding or taking away heat.	3.2.5.A.1	MP1, MP 4
Describe how landforms are the result of a combination of destructive forces such as erosion and constructive erosion, deposition of sediment, etc.	3.3.5.A.1	MP1
Explain how geological processes observed today such as erosion, movement of lithospheric plates, and changes in the composition of the atmosphere are similar to those in the past.	3.3.5.A.3	MP1
Explain the basic components of the water cycle.	3.3.5.A.4	MP1, MP 2
Differentiate between weather and climate. Explain how the cycling of water, both in and out of the atmosphere, has an effect on climate.	3.3.5.A.5	MP1
Understand that a subsystem is a system that operates as part of a larger system.	3.4.5.A.2	MP1, MP 2, MP 3, MP 4
Explain the water cycle.	4.2.5.A	MP1
Identify important wetlands in the United States.	4.2.5.B	MP1
Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.	5-ESS3.1	MP2
Describe the usefulness of Earth's physical resources as raw materials for the human made world.	3.3.5.A.2	MP2
Explain how people use tools and techniques to help them do things.	3.4.5.A.1	MP2
Describe how waste may be appropriately recycled or disposed of to prevent unnecessary harm to the environment.	3.4.5.B.2	MP2
Identify how invention and innovation are creative ways to turn ideas into real things.	3.4.5.C.3	MP2
Identify ways to improve a design solution.	3.4.5.D.1	MP2

WARREN COUNTY SCHOOL DISTRICT		
PLANNED INSTRUCTION		
Performance Indicator	PA Core Standard and/or Eligible Content	Marking Period Taught
Use information provided in manuals, protocols, or by experienced people to see and understand how things work.	3.4.5.D.2	MP2
Determine if the human use of a product or system creates positive or negative results.	3.4.5.D.3	MP2
Explain how tools, machines, products, and systems use energy in order to do work.	3.4.5.E.3	MP2
Describe how the use of symbols, measurements, and drawings promotes clear communication by providing a common language to express ideas.	3.4.5.E.4	MP2
Examine reasons why a transportation system may lose efficiency or fail (e.g., one part is missing or malfunctioning or if a subsystem is not working).	3.4.5.E.5	MP2
Examine how manufacturing technologies have become an integral part of the engineered world.	3.4.5.E.6	MP2
Describe the importance of guidelines when planning a community.	3.4.5.E.7	MP2
Explain the difference between point and non-point source pollution.	4.5.5.C	MP2
Explain how different items are recycled and reused.	4.5.5.D	MP2
Support an argument that plants get the materials they need for growth chiefly from air and water.	5-LS1.1	MP2
Describe how organisms meet some of their needs in an environment by using behaviors (patterns of activities) in response to information (stimuli) received from the environment.	3.1.5.C.1	MP2, MP 3
Investigate the factors influencing plant and animal growth (e.g., soil, water, nutrients, and light).	4.4.5.C	MP2, MP 3
Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.	5-LS2.1	MP3
Compare and contrast the similarities and differences in life cycles of different organisms.	3.1.5.A.3	MP3
Explain the concept of a cell as the basic unit of life. Compare and contrast plant and animal cells.	3.1.5.A.5	MP3
Differentiate between inherited and acquired characteristics of plants and animals.	3.1.5.B.1	MP3
Describe the roles of producers, consumers, and decomposers within a local ecosystem.	4.1.5.A	MP3
Describe different food webs including a food web containing humans.	4.1.5.C	MP3
Explain the differences between threatened, endangered, and extinct organisms.	4.1.5.D	MP3
Explain why animal production is dependent upon plant production.	4.4.5.A	MP3
Explain how mass of an object resists change to motion.	3.2.5.B.1	MP3
Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.	5-PS3.1	MP3

WARREN COUNTY SCHOOL DISTRICT		
PLANNED INSTRUCTION		
Performance Indicator	PA Core Standard and/or Eligible Content	Marking Period Taught
Develop a model to describe that matter is made of particles too small to be seen.	5-PS1.1	MP4
Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved.	5-PS1.2	MP4
Make observations and measurements to identify materials based on their properties.	5-PS1.3	MP4
Investigate to determine whether the mixing of two or more substances results in new substances.	5-PS1.4	MP4
Explain how the design process is a purposeful method of planning practical solutions to problems.	3.4.5.C.1	MP4

## **ASSESSMENTS**

**PDE 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:** center activities, cooperative learning activities, games, online activities, oral responses, teacher observations, local assessments, writing, and worksheets.

**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:** performance assessments, projects, writing, tests, and quizzes.