WARREN COUNTY SCHOOL DISTRICT

PLANNED INSTRUCTION

COURSE DESCRIPTION

Course Title: Science 2
Course Number: 08233
Course Prerequisites: None

Course Description: Students will develop an understanding of what plants need to grow and how plants depend on animals for seed dispersal and pollination. Students will compare the diversity of life in different habitats and observe properties of materials through analysis and classification. Students will apply their understanding of the idea that wind and water can change the shape of the land to compare design solutions to slow or prevent such change. Students will be able to use information and models to identify and represent the shapes and kinds of land and bodies of water in an area and where water is found on Earth.

Suggested Grade Level: Grade 2
Length of Course: Two Semesters
Units of Credit: None
PDE Certification and Staffing Policies and Guidelines (CSPG) Required Teacher Certifications:
CSPG 69 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: 03232
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:	Inspire Science
Publisher:	McGraw Hill
ISBN #:	978-0-07-678002-0
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

Marking Period 2

- Earth and Space Sciences: Earth's Systems
- Life Science: Ecosystems

Marking Period 3

- Life Science: Biological Evolution

Marking Period 4

- Physical Science: Matter and its Interactions

Standards/Eligible Content and Skills

Performance Indicator	PA Core Standard and/or Eligible Content	Marking Period Taught
Use information from several sources to provide evidence that Earth events can occur quickly or slowly.	2-ESS1.1	MP1
Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.	2-ESS2.1	MP1, MP2
Distinguish between scientific fact and opinion.	3.3 2.A.7.1	MP1
Ask questions about objects, organisms, and events.	3.3 2.A.7.2	MP1
Understand that all scientific investigations involve asking and answering questions and comparing the answer with what is already known.	3.3 2.A.7.3	MP1
Plan and conduct a simple investigation and understand that different questions require different kinds of investigations.	3.3 2.A.7.4	MP1
Use simple equipment (e.g., tools, other technologies) to gather data and understand that this allows scientists to collect more information than relying only on their senses to gather information.	3.3 2.A.7.5	MP1
Illustrate and discuss how the sun's position changes during the day.	3.3 2.B.1.1	MP1
Identify that the sun rotates over a 24-hour period.	3.3 2.B.1.2	MP1
Chart how the moon changes over the course of a month (e.g., new, waxing and waning crescent, full).	3.3 2.B.1.3	MP1
Identify summer as having more hours of sunlight, and winter with less hours of sunlight.	3.3 2.B.1.4	MP1
Develop a model to represent the shapes and kinds of land and bodies of water in an area.	2-ESS2.2	MP2
Obtain information to identify where water is found on Earth and that it can be solid or liquid.	2-ESS2.3	MP2
Plan and investigate to describe and classify different kinds of materials by their observable properties.	2-PS1.1	MP2, MP 4
Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.	2-PS1.2	MP2, MP 4
Make observations to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object.	2-PS1.3	MP2, MP 4
Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.	2-PS1.4	MP2, MP 4
Identify solid, liquid, and gas when presented with real objects.	3.2 2.A.5.1	MP2, MP 4
Prove why a material is a specific type of matter, sharing evidence.	3.2 2.A.5.2	MP2, MP 4
Recognize matter takes on different shapes (e.g., solids have shape, liquids take the shape of container, gas lacks shape).	3.2 2.A.5.3	MP2, MP 4
Describe water in a solid and liquid form.	3.3 2.A.4.1	MP2

Performance Indicator	PA Core Standard and/or Eligible Content	Marking Period Taught
Compare and contrast water in solid and liquid form on Earth (e.g., glacier, pond, river, ice, cloud).	3.3 2.A.4.2	MP2
Identify water in solid form (e.g., frozen pond/river, glacier).	3.3 2.A.4.4	MP2
Identify water in liquid form (e.g., ocean, stream, river).	3.3 2.A.4.5	MP2
Identify and compare different aquatic habitats (e.g., ocean, pond, stream, river, swamp).	4.2 2.C.4	MP2
Plan and investigate to determine if plants need sunlight and water to grow.	2-LS2.1	MP2
Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.	2-LS2.2	MP2
Observe, describe, and document the growth of living things (e.g., writing, journaling).	3.1 2.A.3.1	MP2, MP 3
Create and label a diagram to demonstrate the life cycle of a living organism.	3.1 2.A.3.2	MP2, MP 3
Compare and contrast one life cycle to another.	3.1 2.A.3.3	MP2, MP 3
Observe the life cycle of a plant (e.g., radish, lima bean, marigold, cacti).	3.1 2.A.3.5	MP2
Identify the energy source as the sun.	3.1 2.A.5.2	MP2
Draw and label a plant diagram.	3.1 2.A.5.3	MP2
Compare and contrast parts of plants.	3.1 2.A.5.4	MP2, MP 3
Distinguish between scientific fact and opinion.	3.1 2.A.9.1	MP2, MP 3
Ask questions about objects, organisms, and events.	3.1 2.A.9.2	MP2
Understand that all scientific investigations involve asking and answering questions and comparing the answer with what is already known.	3.1 2.A.9.3	MP2, MP 3
Plan and conduct a simple investigation and understand that different questions require different kinds of investigations.	3.1 2.A.9.4	MP2, MP 3
Use simple equipment (e.g., tools, other technologies) to gather data and understand that this allows scientists to collect more information than relying only on their senses to gather information.	3.1 2.A.9.5	MP2
Use data/evidence to construct explanations and understand that scientists develop explanations based on their evidence and compare them with their current scientific knowledge.	3.1 2.A.9.6	MP2, MP 3
Explain what a plant or animal needs to survive within its habitat (e.g., food, air, water, shelter, space, sunlight).	3.1 2.C.2.1	MP2, MP 3
Explain how a plant or animal acquires basic needs within its habitat.	3.1 2.C.2.2	MP2, MP 3
Compare and contrast ways plants and animals acquire basic needs.	3.1 2.C.2.3	MP2, MP 3
Describe why living things need sunlight to grow and survive.	3.2 2.B.6.1	MP2

Performance Indicator	PA Core Standard and/or Eligible Content	Marking Period Taught
Understand the sun as the largest source of energy.	3.2 2.B.6.2	MP2
Recognize the sun is essential for survival.	3.2 2.B.6.3	MP2
Identify elements within a habitat necessary for organisms to live.	4.1 2.A.1	MP2, MP 3
Explain and illustrate how each element contributes to the basic need of an organism.	4.1 2.A.2	MP2, MP 3
Identify sunlight as a source of energy in an aquatic habitat.	4.1 2.C.1	MP2
Explain how sunlight is used for survival in an aquatic habitat.	4.1 2.C.2	MP2
Make observations of plants and animals to compare the diversity of life in different habitats.	2-LS4.1	MP3
Observe the life cycle of an animal (e.g., frog, butterfly, meal worm, honey bee).	3.1 2.A.3.4	MP3
Observe the life cycle of a plant (e.g., radish, lima bean, marigold, cacti).	3.1 2.A.3.5	MP3
Communicate procedures and explanations giving priority to evidence and understanding that scientists share findings.	3.1 2.A.9.7	MP3
sk questions about objects, organisms, and events.	3.1 2.B.6.2	MP3
Brainstorm what to include in a suitable habitat for an animal to survive.	3.1 2.C.2.4	MP3
Calculate the appropriate dimensions for a suitable habitat (e.g., how big should the habitat be).	3.1 2.C.2.5	MP3
Plan and analyze steps needed to design a suitable habitat.	3.1 2.C.2.6	MP3
Design and investigate (e.g., what method will change a solid to liquid).	3.2 2.A.3.1	MP4
Make a prediction (e.g., what will happen during the experiment).	3.2 2.A.3.2	MP4
Diagram the cause-and-effect relationship and describe the process.	3.2 2.A.3.3	MP4
Sort materials based on type of matter (e.g., solid, liquid, gas).	3.2 2.A.5.4	MP4
Distinguish between scientific fact and opinion.	3.2 2.A.6.1	MP4
Ask questions about objects, organisms, and events.	3.2 2.A.6.2	MP4
Understand that all scientific investigations involve asking and answering questions and comparing the answer with what is already known.	3.2 2.A.6.3	MP4
Plan and conduct a simple investigation and understand that different questions require different kinds of investigations.	3.2 2.A.6.4	MP4
Use data/evidence to construct explanations and understand that scientists develop explanations based on their evidence and compare them with their current scientific knowledge.	3.2 2.A.6.6	MP4
Communicate procedures and explanations giving priority to evidence and understanding that scientists share findings.	3.2 2.A.6.7	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.**