WARREN COUNTY SCHOOL DISTRICT

PLANNED INSTRUCTION

COURSE DESCRIPTION

Course Title: Science Kindergarten
Course Number: 08033
Course Prerequisites: None

Course Description: Students will develop an understanding of patterns and variations in local weather, the purpose of weather forecasting, and how to prepare for and respond to severe weather. Students will apply an understanding of the effects of different strengths and/or different directions of pushes and pulls on the motion of an object to analyze a design solution. Students will develop an understanding of what people, plants, and animals need to survive and the relationship between their needs and where they live.

Suggested Grade Level: Kindergarten
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: 03230
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 #:	978-0-07-678000-6
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

- Physical Science: Motion and Stability

Marking Period 2

- Earth and Space Sciences: Earth's Systems
- Life Science: From Molecules to Organisms

Marking Period 3

- Physical Science: Energy

Marking Period 4

- Earth and Space Sciences: Earth and Human Activity

Standards/Eligible Content and Skills

Performance Indicator/	PA Core Standard and/or Eligible Content	Marking Period Taught
Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.	K-2-ETS1.1	MP1, MP2, MP3, MP4
Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	K-2-ETS1.2	MP1, MP2, MP3, MP4
Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.	K-2-ETS1.3	MP1, MP2, MP3, MP4
Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.	K-PS2.1	MP1
Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.	K-PS2.2	MP1
Distinguish between scientific fact and opinion.	3.2.K.B.7.a	MP1
Ask questions about objects, organisms, and events.	3.2.K.B.7.b	MP1
Understand that all scientific investigations involve asking and answering questions and comparing the answer with what is already known.	3.2.K.B.7.c	MP1
Plan and conduct a simple investigation and understand that different questions require different kinds of investigations.	3.2.K.B.7.d	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.	3.2.K.B.7.e	MP1
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.K.B.7.f	MP1
Use and share observations of local weather conditions to describe patterns over time.	K-ESS2.1	MP2, MP4
Construct an argument, supported by evidence, for how plants and animals (including humans) can change the environment to meet their needs.	K-ESS2.2	MP2
Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.	K-ESS3.3	MP2, MP 4
Identify living and nonliving things.	3.1.K.A.1.a	MP2
Observe and document the growth of a living thing (e.g., drawing, writing, and/or photos).	3.1.K.A.1.c	MP2
Identify what plants and animals need to survive in a suitable habitat (e.g., food, air, water, shelter, space, sunlight).	3.1.K.A.2.a	MP2, MP 4
Identify how a plant or animal acquires basic needs in its habitat.	3.1.K.A.2.b	MP2, MP 4

Performance Indicator/	PA Core Standard and/or Eligible Content	Marking Period Taught
Compare and contrast ways plants and animals acquire basic needs.	3.1.K.A.2.c	MP2
Describe how features of animals help them to survive (e.g., wings/fly, talons/ grab, quills/protect, eyes/sight).	3.1 K.A.5.a	MP2, MP 4
Distinguish between scientific fact and opinion.	3.1 K.A.9.a	MP2, MP 4
Understand that all scientific investigations involve asking and answering questions and comparing the answer with what is already known.	3.1 K.A.9.c	MP2, MP 4
Plan and conduct a simple investigation and understand that different questions require different kinds of investigations.	3.1 K.A.9.d	MP2, MP 4
Observe, record, and share local weather conditions (e.g., graphing).	3.3 K.A.5.c	MP2, MP 3
Observe, record, and describe weather changes over time.	3.3 K.A.5.d	MP2, MP 3
Identify patterns in weather.	3.3 K.A.5.e	MP2, MP 3
Describe changes in seasons.	3.3 K.A.5.f	MP2, MP 3
Explain how environment is affected by season change.	4.1 K.E.b	MP2
Observe and compare similarities and differences in environment due to season change.	4.1 K.E.c	MP2, MP 4
Identify and discuss machinery used in agriculture (e.g., backhoe, combine, tractor, rototiller, plow, milking system).	4.4 K.D.d	MP2
Discuss sources of pollution (e.g., human, litter, trash; vehicle/power plant/factory exhaust; farm; pesticides).	4.5 K.C.c	MP2, MP 4
Define and discuss the term waste (e.g., plastic, paper, aluminum can, food, glass, cardboard, water, electricity).	4.5 K.D.a	MP2, MP 4
Identify ways to reduce, reuse, and recycle waste (e.g., use of cloth bag, hand-me-downs, compost, carpool).	4.5 K.D.b	MP2, MP 4
Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.	K-ESS3.1	MP2, MP4
Use observations to describe patterns of what plants and animals (including humans) need to survive.	K-LS1.1	MP2
Sort objects by living and nonliving.	3.1.K.A.1.b	MP2
Identify characteristics that living things have in common (e.g., air, food, water, reproduce).	3.1.K.A.1.f	MP2
Observe the life cycle of an animal (e.g., frog, butterfly).	3.1.K.A.3.d	MP2
Observe the life cycle of a plant (e.g., vegetable, flower).	3.1.K.A.3.e	MP2
Create a diagram and label specific features an animal needs to survive.	3.1 K.A.5.b	MP2
Ask questions about objects, organisms, and events.	3.1 K.A.9.b	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 K.A.9.f	MP2
Make observations to determine the effect of sunlight on Earth's surface.	K-PS3.1	MP3

Performance Indicator/	PA Core Standard and/or Eligible Content	Marking Period Taught
Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.	K-PS3.2	MP3
Identify plants need sunlight to grow.	3.2 K.B.6.a	MP3
Understand the sun is the largest source of energy.	3.2 K.B.6.b	MP3
Recognize the sun is essential for survival.	3.2 K.B.6.c	MP3
Read a thermometer.	3.3 K.A.5.b	MP3
Distinguish between scientific fact and opinion.	3.3 K.A.7.a	MP3
Understand that all scientific investigations involve asking and answering questions and comparing the answer with what is already known.	3.3 K.A.7.c	MP3
Plan and conduct a simple investigation and understand that different questions require different kinds of investigations.	3.3 K.A.7.d	MP3
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 K.A.7.e	MP3
Use data/evidence to construct explanations and understand that scientists develop explanations based on their evidence and compare them with their current scientific knowledge.	3.3 K.A.7.f	MP3
Identify sun as the source responsible for the water cycle.	4.2 K.A.a	MP3
Identify some renewable resources used in the classroom (e.g., air, water, plants, solar energy).	4.3 K.A.a	MP3
Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.	K-ESS3.2	MP4
Identify plant adaptations for the seasons (e.g., dormant trees, evergreen stays the same).	3.1 K.C.2.d	MP4
Name ways humans adapt for the seasons (e.g., clothing).	3.1 K.C.2.e	MP4
Describe why animals need to hibernate or migrate.	3.1 K.C.3.a	MP4
Describe how species adapt to temperature change.	3.1 K.C.3.b	
Discuss weather as it pertains to meaningful events (e.g., going outside for recess, going on a field trip).	3.3 K.A.5.a	MP4
Identify what living things need to grow and thrive (e.g., water, sunlight, air, food, shelter).	4.1 K.D.a	MP4
Understand an ecosystem as a community of living things and everything surrounding.	4.2 K.B.c	MP4
Identify natural resources (e.g., air, water, soil, plants, animals, rocks, minerals).	4.3 K.B.a	MP4
Identify ways to conserve natural resources (e.g., turn lights off, turn faucet off after use).	4.3 K.B.b	MP4
Identify and discuss the purposes of water (e.g., drinking, bathing).	4.5 K.A.a	MP4
Identify and discuss the purposes of wood (e.g., heat, shelter, pencil, paper).	4.5 K.A.b	MP4
Identify and discuss the purposes of energy (e.g., oil, coal, solar, wind energy).	4.5 K.A.c	MP4

Performance Indicator/	PA Core Standard and/or Eligible Content	Marking Period Taught
Define and discuss pollution.	4.5 K.C.a	MP4
Identify types of pollution (e.g., water, air, land).	4.5 K.C.b	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.**