WARREN COUNTY SCHOOL DISTRICT

PLANNED INSTRUCTION

COURSE DESCRIPTION

Course Title: STEM Kindergarten
Course Number: 08053
Course Prerequisites: None

Course Description: Technological Literacy courses expose students to the communication, transportation, energy, production, biotechnology, and integrated technology systems and processes that affect their lives. The study of these processes enables students to better understand technological systems and their applications and uses.

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 50 Mathematics; CSPG 53 Middle Level Math; CSPG 54 Middle Level Science; CSPG 65 Technology Education PK-12; CSPG 69 Grades PK-4; CSPG 70 Grades 4-8; CSPG 71 Computer Science 7-12
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: 21051
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:	SmartLab Learning Hub
Publisher:	n/a
ISBN #:	n/a
Copyright Date:	n/a
WCSD Board Approval Date:	n/a

Supplemental Materials: Creative Learning Systems (CLS) SmartLab and included materials

Curriculum Document

WCSD Board Approval:

Date Finalized:	7/3/2023
Date Approved:	8/14/2023
Revision Date:	6/3/2024
Implementation Year:	2023-2024

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 Units

- Mechanics and Structures: Exploring Gears: Gears in Motion
- Mechanics and Structures: Exploring Gears: Build It Better
- Mechanics and Structures: Choose Your Technology: Tessellations
- Mechanics and Structures: City Engineer and Design: Build a Pulley
- Mechanics and Structures: City Engineer and Design: My City
- Mechanics and Structures: City Engineer and Design: Find A Solution
- Mechanics and Structures: Primary Physics: Wheels and Axles
- Mechanics and Structures: Primary Physics: Archimedes Screw
- Mechanics and Structures: Primary Physics: Lever Launch
- Mechanics and Structures: Primary Physics: Lifting Levers
- Mechanics and Structures: Primary Physics: Pendulum
- Mechanics and Structures: Primary Physics: Fixed Pulley
- Mechanics and Structures: Primary Physics: Friction
- Mechanics and Structures: Primary Physics: Conservation of Energy
- Communication and Media Arts: Pixie: Habitats for Computer
- Scientific Data and Analysis: Vernier Science: A Hot Hand and the Scientific Method for Computer
- Environmental Technology: Solar Oven: Make a Meal
- Earth and Space Science: Weather and Climate
- Communication and Media Arts: Animationish: Wiggledoodleish
- Communication and Media Arts: Pixie App

Standards/Eligible Content and Skills

Performance Indicator	PA Core Standard and/or Eligible Content	Marking Period Taught
Identify and use everyday symbols.	3.5.K-2.A	MP1,MP2, MP3, MP4
Describe qualities of everyday products.	3.5.K-2.B	MP1,MP2, MP3, MP4
Explain ways that technology helps with everyday tasks.	3.5.K-2.C	MP1,MP2, MP3, MP4
Select ways to reduce, reuse, and recycle resources in daily life.	3.5.K-2.D	MP1,MP2, MP3, MP4
Illustrate helpful and harmful effects of technology.	3.5.K-2.E	MP1,MP2, MP3, MP4
Investigate the use of technologies in the home and community.	3.5.K-2.F	MP1,MP2, MP3, MP4
Explain the tools and techniques that people use to help them do things.	3.5.K-2.G	MP1,MP2, MP3, MP4
Explain the needs and wants of individuals and societies.	3.5.K-2.H	MP1,MP2, MP3, MP4
Compare simple technologies to evaluate their impacts.	3.5.K-2.I	MP1,MP2, MP3, MP4
Safely use tools to complete tasks.	3.5.K-2.K	MP1,MP2, MP3, MP4
Explore how technologies are developed to meet individual and societal needs and wants.	3.5.K-2.L	MP1,MP2, MP3, MP4
Demonstrate essential skills of the engineering design process.	3.5.K-2.M	MP1,MP2, MP3, MP4
Analyze how things work.	3.5.K-2.N	MP1,MP2, MP3, MP4
Illustrate that there are different solutions to a design and that none are perfect.	3.5.K-2.O	MP1,MP2, MP3, MP4
Discuss that all designs have different characteristics that can be described.	3.5.K-2.P	MP1,MP2, MP3, MP4
Apply skills necessary for making in design.	3.5.K-2.Q	MP1,MP2, MP3, MP4
Draw connections between technology and human experience.	3.5.K-2.R	MP1,MP2, MP3, MP4
Apply design concepts, principles, and processes through play and exploration.	3.5.K-2.S	MP1,MP2, MP3, MP4
Demonstrate that designs have requirements.	3.5.K-2.T	MP1,MP2, MP3, MP4
Explain that design is a response to wants and needs.	3.5.K-2.U	MP1,MP2, MP3, MP4
Explain that materials are selected for use because they possess desirable properties and characteristics.	3.5.K-2.V	MP1,MP2, MP3, MP4
Apply concepts and skills from technology and engineering activities that reinforce concepts and skills across multiple areas.	3.5.K-2.W	MP1,MP2, MP3, MP4
Develop a plan in order to complete a task.	3.5.K-2.X	MP1,MP2, MP3, MP4
Discuss how the way people live and work has changed throughout history because of technology.	3.5.K-2.Y	MP1,MP2, MP3, MP4
Illustrate how systems have parts or components that work together to accomplish a goal.	3.5.K-2.Z	MP1,MP2, MP3, MP4

Performance Indicator	PA Core Standard and/or Eligible Content	Marking Period Taught
Demonstrate that creating can be done by anyone.	3.5.K-2.AA	MP1,MP2, MP3, MP4
Compare the natural world and the human made world.	3.5.K-2.BB	MP1,MP2, MP3, MP4
Discuss the roles of scientists, engineers, technologists, and others who work with technology.	3.5.K-2.CC	MP1,MP2, MP3, MP4
Collaborate effectively as a member of a team.	3.5.K-2.DD	MP1,MP2, MP3, 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, and narrative presentations.