



**SPRING GROVE AREA SCHOOL DISTRICT**



**PLANNED COURSE OVERVIEW**

<b>Course Title:</b> Science <b>Grade Level(s):</b> 1 <b>Units of Credit:</b> NA <b>Classification:</b> Required	<b>Length of Course:</b> Full Year <b>Periods Per Cycle:</b> 6 <b>Length of Period:</b> 30 Minutes <b>Total Instructional Time:</b> 90 Hours
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**Course Description**

This course provides students with a foundation of skills in Life, Earth, Physical Science, Environmental Literacy and Sustainability, and Engineering and Technology.

**Instructional Strategies, Learning Practices, Activities, and Experiences**

Anchor Charts Anticipatory Sets Bell Ringers Class Discussions Closure Critical Thinking Graphic Organizers Guided Reading Higher Level Questioning Homework	Interaction Sequence Internet Research Journals Paper and Pencil Activities Posted Objectives Practice Exercises Presentations PSSA Released Materials Question-Answer Relationships Quizzes	Reports and Speeches Research Small Group Interventions Teacher Demonstrations Teacher Made tests Technology Integration Videos / DVDs Wait Time Wait Time Extended
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**Assessments**

Homework Oral Projects Presentations	Projects Reports Teacher Observations	Teacher Made Tests and Quizzes PSSA Practice Materials PSSA Item Samplers
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**Materials/Resources**

Core Knowledge Science Guest Speakers Internet	Leveled Readers Resource Books SAS (Standards Aligned System)	Supplemental Readings Videos / DVDs
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**Adopted:** 1/27/88

**Revised:** 9/3/91, 12/8/97, 11/15/01, 5/19/14, 5/22/23

<b>3.1. Life Science</b>	
<b>CONTENT/KEY CONCEPTS</b>	<b>OBJECTIVES/STANDARDS</b>
Structure and Function Growth and Development of Organisms Inheritance of Traits  Taught using: Core Knowledge Unit – Plant and Animal Survival Lessons 1-4	3.1.1.A - Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.  3.1.1.B - Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.  3.1.1.C - Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.

<b>3.2 Physical Science</b>	
<b>CONTENT/KEY CONCEPTS</b>	<b>OBJECTIVES/STANDARDS</b>
<p>Wave Properties</p> <p>Electromagnetic Radiation</p> <p>Information Technologies and Instrumentation</p> <p>Taught using Core Knowledge Unit Exploring Light and Sound Lessons 1-4</p>	<p>3.2.1.A - Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.</p> <p>3.2.1.B - Make observations to construct an evidence-based account that objects can be seen only when illuminated.</p> <p>3.2.1.C - Plan and conduct an investigation to determine the effect of placing objects made with different materials in the path of a beam of light.</p> <p>3.2.1.D - Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.</p>

<b>3.3 Earth and Space Science</b>	
<b>CONTENT/KEY CONCEPTS</b>	<b>OBJECTIVES/STANDARDS</b>
The Universe and its Stars	3.3.1.A - Use observations of the sun, moon, and stars to describe patterns that can be predicted.
The Earth and the Solar System	3.3.1.B - Make observations at different times of year to relate the amount of daylight to the time of year.
Taught using Core Knowledge Unit Sun, Moon, and Stars Lessons 1-4	

<b>3.4 Environmental Literacy and Sustainability</b>	
<b>CONTENT/KEY CONCEPTS</b>	<b>OBJECTIVES/STANDARDS</b>
<p>Agricultural and Environmental Systems and Resources – Agricultural systems</p> <p>Agricultural and Environmental Systems and Resources – Environment and Society</p> <p>Environmental Literacy Skills – Environmental Experiences</p> <p>Sustainability and Stewardship – Environmental Sustainability</p> <p>Taught using Lecture, problem-based learning, demonstrations, and collaborative learning</p>	<p>3.4.K-2.A – Categorize ways people harvest, redistribute, and use natural resources.</p> <p>3.4.K-2.B – Examine how people from different cultures and communities, including one's own, interact and express their beliefs about nature.</p> <p>3.4.K-2.C – Explain ways that places differ in their physical characteristics, their meaning, and their value and/or importance.</p> <p>3.4.K-2.D – Plan and carry out an investigation to address an issue in the local environment and community.</p>

<b>3.5 Technology and Engineering</b>	
<b>CONTENT/KEY CONCEPTS</b>	<b>OBJECTIVES/STANDARDS</b>
Applying, Maintaining, and Assessing Technological Products and Systems  Impacts of Technology  Influence of Society on Technological Development  Taught using Technology Apps, introduction to the scientific method, and ways to present and share information	3.5.K-2.A - Identify and use everyday symbols.  3.5.K-2.K - Safely use tools to complete tasks.  3.5.K-2.Z - Illustrate how systems have parts or components that work together to accomplish a goal.

<b>3.5 Technology and Engineering</b>	
<b>CONTENT/KEY CONCEPTS</b>	<b>OBJECTIVES/STANDARDS</b>
<p>Design and Design Thinking in Technological and Engineering Education</p> <p>Integration of Knowledge, Technologies, and Practices</p> <p>Taught using NGSS lessons using hands on inquiry and design collaborative learning, demonstration, and problem-based learning</p>	<p>3.5.K-2.J - Design new technologies that could improve their daily lives.</p> <p>3.5.K-2.M - Demonstrate essential skills of the engineering design process.</p> <p>3.5.K-2.N - Analyze how things work.</p> <p>3.5.K-2.O - Illustrate that there are different solutions to a design and that none are perfect.</p> <p>3.5.K-2.P - Discuss that all designs have different characteristics that can be described.</p> <p>3.5.K-2.Q - Apply skills necessary for making in design.</p> <p>3.5.K-2.R - Draw connections between technology and human experience.</p> <p>3.5.K-2.S - Apply design concepts, principles, and processes through play and exploration.</p> <p>3.5.K-2.T - Demonstrate that designs have requirements.</p> <p>3.5.K-2.U - Explain that design is a response to wants and needs.</p> <p>3.5.K-2.V - Explain that materials are selected for use because they possess desirable properties and characteristics.</p> <p>3.5.K-2.W - Apply concepts and skills from technology and engineering activities that reinforce concepts and skills across multiple areas.</p> <p>3.5.K-2.X - Develop a plan in order to complete a task.</p> <p>3.5.K-2.Z - Illustrate how systems have parts or components that work together to accomplish a goal.</p> <p>3.5.K-2.AA - Demonstrate that creating can be done by anyone.</p> <p>3.5.K-2.DD – Collaborate effectively as a member of a team.</p>

<https://springgroveareascho.sharepoint.com/sites/PrivateSGASD/Shared Documents/AASG/NEWCURR/SCIENCE/2023/Grade 1/Planned Course - Science Grade 1.docx>