SPRING GROVE AREA SCHOOL DISTRICT

PLANNED COURSE OVERVIEW

Course Title: Science	**Length of Course:** Full Year
Grade Level(s): 2	**Periods Per Cycle:** 6
Units of Credit: NA	**Length of Period:** 30 Minutes
Classification: Required	**Total Instructional Time:** 90 Hours

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

Assessments

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

Materials/Resources

Core Knowledge Science	Leveled Readers	Supplemental Readings
Guest Speakers	Resource Books	Videos / DVDs
Internet	SAS (Standards Aligned System)	

Adopted: 1/27/88
Revised: 9/3/91, 12/8/97, 11/15/01, 5/19/14, 5/22/23

PLANNED COURSE: Science LEVEL: Grade 2

3.1 Life Science	
CONTENT/KEY CONCEPTS	**OBJECTIVES/STANDARDS**
Interdependent Relationships in Ecosystems Biodiversity and Humans Taught using Core Knowledge Unit – Organisms and their Habitats Lessons 1-4	3.1.2.A - Plan and conduct an investigation to determine if plants need sunlight and water to grow. 3.1.2.B - Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants. 3.1.2.C - Make observations of plants and animals to compare the diversity of life in different habitats.

3.2 Physical Science	
CONTENT/KEY CONCEPTS	**OBJECTIVES/STANDARDS**
Structure and Properties of Matter Chemical Reactions Taught using Core Knowledge Unit Properties of Matter Lessons 1-4	3.2.2.A - Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties. 3.2.2.B - Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose. 3.2.2.C - 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. 3.2.2.D - Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.

3.3 Earth and Space Science	
CONTENT/KEY CONCEPTS	**OBJECTIVES/STANDARDS**
The History of Planet Earth Earth Materials and Systems Plate Tectonics and Large-Scale System Interactions The Roles of Water in Earth's Surface Processes Taught using Core Knowledge Unit Exploring Land and Water Lessons 1-6	3.3.2.A - Use information from several sources to provide evidence that Earth events can occur quickly or slowly. 3.3.2.B - Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land. 3.3.2.C - Develop a model to represent the shapes and kinds of land and bodies of water in an area. 3.3.2.D - Obtain information to identify where water is found on Earth and that it can be solid or liquid.

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

3.5 Technology and Engineering	
CONTENT/KEY CONCEPTS	**OBJECTIVES/STANDARDS**
Applying, Maintaining, and Assessing Technological Products and Systems Impacts of Technology Influence of Society on Technological Development Taught through use of presentation software and applications, discussion of the scientific method and inquiry design framework	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.

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

3.5 Technology and Engineering	
CONTENT/KEY CONCEPTS	**OBJECTIVES/STANDARDS**
Nature of Characteristics of Technology and Engineering Core Concepts of Technology and Engineering History of Technology Taught using Technology Research Project	3.5.K-2.B - Describe qualities of everyday products. 3.5.K-2.C - Explain ways that technology helps with everyday tasks. 3.5.K-2.D - Select ways to reduce, reuse, and recycle resources in daily life. 3.5.K-2.E - Illustrate helpful and harmful effects of technology. 3.5.K-2.F - Investigate the use of technologies in the home and community. 3.5.K-2.G - Explain the tools and techniques that people use to help them do things. 3.5.K-2.H - Explain the needs and wants of individuals and societies. 3.5.K-2.I - Compare simple technologies to evaluate their impacts. 3.5.K-2.L - Explore how technologies are developed to meet individual and societal needs and wants. 3.5.K-2.Y - Discuss how the way people live and work has changed throughout history because of technology. 3.5.K-2.BB - Compare the natural world and human-made world. 3.5.K-2.CC - Discuss the roles of scientists, engineers, technologists, and others who work with technology.