

Wilson Area School District Planned Course Guide

Title of planned course: Kindergarten Science

Subject Area: Science

Grade Level: Kindergarten

Course Description: Through this course, students will be acquainted with and learn about the following:

1. Pushes and Pulls
 - Observe how, understand why, and investigate how objects move
2. Matter
 - Name the five senses
 - Describe and sort objects
 - Observe the three states of matter
3. Sunlight
 - Describe the sun
 - Observe how sunlight warms objects on the Earth's surface
4. Earth's Weather
 - Describe different types of weather
 - Observe that weather changes from day to day
 - Observe patterns in the weather
 - Describe the seasons
 - Understand why it is important to prepare for severe weather
5. Needs of Living Things
 - Recognize what plants need to survive
 - Recognize what animals need to survive
 - Recognize what people need to survive
 - Recognize that plants and animals change as they grow through life cycles
6. Environments
 - Observe different places where plants and animals live
 - Observe ways that plants and animals change their environment
 - Observe ways people can change their environment
 - Tell how they protect their environment

Time/Credit for this Course: One Full Academic Year

Curriculum Writing Committee: Robin Stem and Stephanie Hlcks

Curriculum Map

August: Introduction to School Routines

September:

October: Topic 3 Sunlight (10 days)

November: Topic 4 Earth's Weather (20 days)

December:

January: Topic 1 Pushes and Pulls (15 days)

February: Topic 2 Matter (15 days)

March:

April: Topic 5 Needs of Living Things (20 days)

May: Topic 6 Environments (20 days)

June:

Wilson Area School District Planned Course Materials

Course Title: Kindergarten Science

Textbook: Elevate Science

Teacher Resources:

- Teacher Manual
- Student Edition/workbook
- Lab Kits
- Videos
- Interactivities

Curriculum Scope & Sequence

Planned Course: Kindergarten Science

Unit: Earth Science ~ Topic 3 Sunlight

Time frame: 10 Days

State Standards

- K-PS3-1: Make observations to determine the effect of sunlight on Earth's surface
- K-PS3-2: Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area
- SEP.4: Use observations to describe patterns in the natural world in order to answer scientific questions

Essential content/objectives: At end of the unit, students will be able to:

- Describe the sun
- Observe how sunlight warms objects on the Earth's surface

Core Activities: Students will complete/participate in the following:

- Jumpstart Discovery
- Quest Kickoff
- Activate Prior Knowledge
- Literacy Connections/etext
- Lesson Videos
- Vocabulary Activities
- Investigate Labs
- Scaffolding
- Digital Activities
- Worksheets/workbook pages
- STEM Activities
- Journaling

Extensions:

- Enrichment Activities to reinforce learning objectives
- Ask higher level thinking questions (in manual)
- Have students explain rather than describe events

Remediation:

- Address preconceptions
- Make connections
- Restate, ask different or lower level questions (in manual)
- Have students describe events

Instructional Methods:

- Whole Group
- Partner Work
- Discussions
- Labs
- Videos
- Online Resources

Materials & Resources:

- Videos
- Labs
- Chromebooks
- Student Edition Pages/Supplemental Worksheets
- Games/Songs

Assessments:

- Checkpoint Questions
- Class Discussions
- Observations

Curriculum Scope & Sequence

Planned Course: Kindergarten Science

Unit: Earth Science ~ Topic 4 Earth's Weather

Time frame: 20 Days

State Standards

- K-ESS2: Use and share observations about local weather conditions to describe patterns over time
- K-ESS3: Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to severe weather

Essential content/objectives: At end of the unit, students will be able to:

- Describe different types of weather
- Observe that weather changes from day to day
- Observe patterns in the weather
- Describe the seasons
- Understand why it is important to prepare for severe weather

Core Activities: Students will complete/participate in the following:

- Jumpstart Discovery
- Quest Kickoff
- Activate Prior Knowledge
- Literacy Connections/eText
- Lesson Videos
- Vocabulary Activities
- Investigate Labs
- Scaffolding
- Digital Activities
- Worksheets/workbook pages
- STEM Activities
- Journaling- School Day Forecast sheet

Extensions:

- Enrichment Activities to reinforce learning objectives
- Ask higher level thinking questions (in manual)
- Have students explain rather than describe events

Remediation:

- Address preconceptions
- Make connections
- Restate, ask different or lower level questions (in manual)
- Have students describe events

Instructional Methods:

- Whole Group
- Partner Work
- Discussions
- Labs
- Videos
- Online Resources

Materials & Resources:

- Videos
- Labs
- Chromebooks
- Student Edition Pages/Supplemental Worksheets
- Games/Songs

Assessments:

- Checkpoint Questions
- Class Discussions
- Observations

Curriculum Scope & Sequence

Planned Course: Kindergarten Science

Unit: Physical Science ~ Topic 1 Pushes and Pulls

Time frame: 15 Days

State Standards

- K-PS2-1: Plan and conduct investigations to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object
- K-PS2-2: Analyze data to determine if a design solution works as intended to change speed or direction of an object with a push or a pull
- SEP.3: With guidance, plan and conduct an investigation in collaboration with peers

Essential content/objectives: At end of the unit, students will be able to:

- Observe how objects move
- Understand why objects move
- Investigate how objects move

Core Activities: Students will complete/participate in the following:

- Jumpstart Discovery
- Quest Kickoff
- Activate Prior Knowledge
- Literacy Connections/eText
- Lesson Videos
- Vocabulary Activities
- Investigate Labs
- Scaffolding
- Digital Activities
- Worksheets/workbook pages
- STEM Activities
- Journaling~ draw/sort ways objects move

Extensions:

- Enrichment Activities to reinforce learning objectives
- Ask higher level thinking questions (in manual)
- Have students explain rather than describe events

Remediation:

- Address preconceptions
- Make connections
- Restate, ask different or lower level questions (in manual)
- Have students describe events

Instructional Methods:

- Whole Group
- Partner Work
- Discussions
- Labs
- Videos

- Online Resources

Materials & Resources:

- Videos
- Labs
- Chromebooks
- Student Edition Pages/Supplemental Worksheets
- Games/Songs

Assessment

- Checkpoint Questions
- Class Discussions
- Observations

Curriculum Scope & Sequence

Planned Course: Kindergarten Science

Unit: Physical Science ~ Topic 2 Matter

Time frame: 15 Days

State Standards

- K-2-ETS1-1: Define a simple problem that can be solved through the development of a new or improved object or tool
- K-2-ETS1-2: Illustrate how the shape of an object helps it function as needed to solve a problem

Essential content/objectives: At end of the unit, students will be able to:

- Name the five senses
- Describe and sort objects
- Observe the three states of matter

Core Activities: Students will complete/participate in the following:

- Jumpstart Discovery
- Quest Kickoff
- Activate Prior Knowledge
- Literacy Connections/eText
- Lesson Videos
- Vocabulary Activities
- Investigate Labs
- Scaffolding
- Digital Activities
- Worksheets/workbook pages
- STEM Activities
- Journaling ~ drawings of senses and states of matter
- Sorting

Extensions:

- Enrichment Activities to reinforce learning objectives
- Ask higher level thinking questions (in manual)
- have students explain rather than describe events

Remediation:

- Address preconceptions
- Make connections
- Restate, ask different or lower level questions (in manual)
- Have students describe events

Instructional Methods:

- Whole Group
- Partner Work
- Discussions
- Labs
- Videos
- Online Resources

Materials & Resources:

- Videos
- Labs
- Chromebooks
- Student Edition Pages/Supplemental Worksheets
- Games/Songs

Assessments:

- Checkpoint Questions
- Class Discussions
- Observations

Curriculum Scope & Sequence

Planned Course: Kindergarten Science

Unit: Physical Science ~ Topic 5 Needs of Living Things

Time frame: 20 Days

State Standards

- K-LS1-1: Use observations to describe patterns of what plants and animals need to survive
- K-2-ETS1-1: Ask questions, make observations, and gather information to define a simple problem that can be solved through the development of a new or improved object or tool
- K-2-ETS1-2: Illustrate how the shape of an object helps it function as needed to solve a problem

Essential content/objectives: At end of the unit, students will be able to:

- Recognize what plants need to survive
- Recognize what animals need to survive
- Recognize what people need to survive
- Recognize that plants and animals change as they grow through life cycles

Core Activities: Students will complete/participate in the following:

- Jumpstart Discovery
- Quest Kickoff
- Activate Prior Knowledge
- Literacy Connections/eText
- Lesson Videos
- Vocabulary Activities
- Investigate Labs
- Scaffolding
- Digital Activities
- Worksheets/workbook pages
- STEM Activities
- Journaling
- Crafts

Extensions:

- Enrichment Activities to reinforce learning objectives
- Ask higher level thinking questions (in manual)
- Have students explain rather than describe events

Remediation:

- Address preconceptions
- Make connections
- Restate, ask different or lower level questions (in manual)
- Have students describe events

Instructional Methods:

- Whole Group
- Partner Work
- Discussions
- Labs
- Videos
- Online Resources

Materials & Resources:

- Videos
- Labs
- Chromebooks
- Student Edition Pages/Supplemental Worksheets
- Games/Songs

Assessments:

- Checkpoint Questions
- Class Discussions
- Observations

Curriculum Scope & Sequence

Planned Course: Kindergarten Science

Unit: Physical Science ~ Topic 6 Environments

Time frame: 20 Days

State Standards

- K-ESS2-2: Construct an argument supported by evidence for how plants and animals can change the environment to meet their needs
- K-ESS3-1: Use a model to represent the relationship between the needs of different plants or animals and the places they live
- K-ESS3-3: Communicate solutions that will reduce the impact of humans on the land, water, air and/or other living things in the local environment

Essential content/objectives: At end of the unit, students will be able to:

- Observe different places where plants and animals live
- Observe ways that plants and animals change their environment
- Observe ways people can change their environment
- Tell how they protect their environment

Core Activities: Students will complete/participate in the following:

- Jumpstart Discovery
- Quest Kickoff
- Activate Prior Knowledge
- Literacy Connections/eText
- Lesson Videos
- Vocabulary Activities
- Investigate Labs
- Scaffolding
- Digital Activities
- Worksheets/workbook pages
- STEM Activities
- Journaling
- Crafts

Extensions:

- Enrichment Activities to reinforce learning objectives
- Ask higher level thinking questions (in manual)
- Have students explain rather than describe events

Remediation:

- Address preconceptions
- Make connections
- Restate, ask different or lower level questions (in manual)
- Have students describe events

Instructional Methods:

- Whole Group
- Partner Work
- Discussions
- Labs
- Videos
- Online Resources

Materials & Resources:

- Videos
- Labs
- Chromebooks
- Student Edition Pages/Supplemental Worksheets
- Games/Songs

Assessments:

- Checkpoint Questions
- Class Discussions
- Observations