Grade: Kindergarten **Course Title: Science/Social Studies** **Topic/Concept: Colors**

Time Allotment: 1 Week **Unit Sequence: 1**

Major Concepts to be learned:

- "Where do colors come from?"
- "Why do we see different colors?"
- "Does every human and animal see the same amount of color?"
- "What part of our body allows us to see colors?"

Expected Skills to be demonstrated :

- Make observations to determine the effect of sunlight on Earth's surface.
- Make observations to construct an evidence-based account that objects can be seen only when illuminated.
- Plan and conduct an investigation to determine the effect of placing objects made with different materials in the path of a beam of light.

PA Standards/Anchors:	Eligible Content:
3.2.K.C 3.2.1.B 3.2.1.C	

Instructional Strategies:	Assessments:
• Small group • Manipulatives • Worksheets • Kinesthetic activities • Creative Projects • Literature/Videos	• Informal (observational) Assessment • Projects

Grade: Kindergarten **Course Title: Science/Social Studies** **Topic/Concept: Me Bags**

Time Allotment: 1 Week **Unit Sequence: 2**

Major Concepts to be learned:

- Me Bags – where children bring in items to share that describe their likes and personality

Expected Skills/Standards to be demonstrated:

- Define respect for self and others.
- Identify documents and artifacts important to the classroom community.
- Explain how cultures celebrate.

PA Standards/Anchors:	Eligible Content:
5.1.K.C 8.3.K.B 8.4.K.A	

Instructional Strategies:	Assessments:
• Small group • Manipulatives • Worksheets • Kinesthetic activities • Creative Projects • Literature	• Informal (observational) Assessment • Projects • Weekly Stoplight Behavior Chart

Grade: Kindergarten **Course Title: Science/Social Studies** **Topic/Concept: Fall/Apples**

Time Allotment: 3 Weeks **Unit Sequence: 3**

Major Concepts to be learned:

- "Why are plants like apples important to our environment?"
- "How do farmers make different variations of apples?"
- "Who benefits from an apple tree?"

Expected Skills/Standards to be demonstrated:

- Make observations to determine the effect of sunlight on Earth's surface
- Use and share observations of local weather conditions to describe patterns over time.
- Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.
- Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.
- Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.
- Draw connections between technology and human experience
- Discuss how the way people live and work has changed throughout history because of technology.

PA Standards/Anchors:

3.2.K.C	3.3.K.A
3.3.K.B	3.3.K.C
3.3.K.D	3.5.K-2.R
3.5.K-2.Y	

Eligible Content:

Instructional Strategies:

- Small group
- Manipulatives
- Worksheets
- Kinesthetic activities
- Creative Projects
- Literature

Assessments:

- Informal (observational) Assessment
- Projects
- Weekly Stoplight Behavior Chart

Grade: Kindergarten **Course Title: Science/Social Studies** **Topic/Concept: Nursery Rhymes**

Time Allotment: 1 Week **Unit Sequence: 4**

Major Concepts to be learned:

- Nursery Rhymes – get familiar with common nursery rhymes and recite a few from memory

Expected Skills/Standards to be demonstrated:

- Know and use basic elements and principles of music and movement.
- Respond to different types of music and dance through participation and discussion.

PA Standards/Anchors:	Eligible Content:
9.1.M.K.A1 9.1.M.K.B1	

Instructional Strategies:	Assessments:
• Small group • Manipulatives • Worksheets • Kinesthetic activities • Creative Projects • Literature	• Informal (observational) Assessment • Projects • Weekly Stoplight Behavior Chart

Grade: Kindergarten **Course Title: Science/Social Studies** **Topic/Concept: Transportation**

Time Allotment: 3 Weeks **Unit Sequence: 5**

Major Concepts to be learned:

- "Are all places the same?" "How do we get from place to place?"
- "What does the word *transportation* mean?" "What are some ways people travel?"
- "What are some ways things travel?"
- "What is the most efficient way to travel if you want to get somewhere close, farther away, or really far away?"
- "How has transportation changed over time to be helpful (or harmful)?"

Expected Skills/Standards to be demonstrated:

- Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs
- Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.
- Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment
- Categorize ways people harvest, redistribute, and use natural resources.
- Explain ways that places differ in their physical characteristics, their meaning, and their value and/or importance.
- Describe qualities of everyday products.
- Explain ways that technology helps with everyday tasks.
- Explain the needs and wants of individuals and societies.
- Explore how technologies are developed to meet individual and societal needs and wants.
- Draw connections between technology and human experience
- Explain that design is a response to wants and needs
- Discuss how the way people live and work has changed throughout history because of technology.
- Illustrate how systems have parts or components that work together to accomplish a goal.

PA Standards/Anchors:

3.3.K.B	3.3.K.C	3.3.K.E	3.4.K-2.A
3.4.K-2.C	3.5.K-2.B	3.5.K-2.C	3.5.K-2.H
3.5.K-2.L.	3.5.K-2.R	3.5.K-2.U	3.5.K-2.Y
3.5.K-2.Z			

Eligible Content:

Instructional Strategies:

- Small group
- Manipulatives
- Kinesthetic activities
- Literature
- Worksheets
- Creative Projects

Assessments:

- Informal (observational) Assessment
- Projects
- Weekly Stoplight Behavior Chart

Grade: Kindergarten | **Course Title: Science/Social Studies** | **Topic/Concept: Pumpkins/ Red Ribbon Week**

Time Allotment: 1 Week | **Unit Sequence: 6**

Major Concepts to be learned:

- Pumpkins – explore and learn about this vegetable and it's symbolic significance to harvest time/Halloween
- Red Ribbon Week – promote awareness for healthy habits

Expected Skills/Standards to be demonstrated:

- Identify significant American holidays and their symbols.
- Identify products produced in the region or state.
- Identify American people related to national holidays.
- Categorize ways people harvest, redistribute, and use natural resources.
- Distinguish between healthy and unhealthy behaviors.

PA Standards/Anchors:	Eligible Content:
5.1.K.F 6.3.K.D 8.3.K.A 3.4.K-2.A 10.1.K.D1	

Instructional Strategies:	Assessments:
• Small group • Manipulatives • Worksheets • Kinesthetic activities • Creative Projects • Literature	• Informal (observational) Assessment • Projects • Weekly Stoplight Behavior Chart

Grade: Kindergarten **Course Title: Science/Social Studies** **Topic/Concept: Community Helpers**

Time Allotment: 3 Weeks **Unit Sequence: 7**

Major Concepts to be learned:

- What is a community? (A group of people who live in the same area)
- What is our local community called? (Mercer)
- What are some features and characteristics of our local community? (Courthouse, Coolspring Ranch, Talbot's Restaurant, Mercer Schools, Pizza Joes, Bethany Church, Walt's Grocery Store, Interstates 79 & 80, Lake Latonka, etc.)
- Can you locate some of these landmarks in Mercer on a map? (teach direction words North, South, East, West)
- What are some places outside of Mercer that are still considered close by? (Closer - Outlet Mall, Keystone Safari, Olympic Fun Center; Farther – Pittsburgh, Erie, Ohio)

Expected Skills/Standards to be demonstrated:

- Identify local bodies of water and landforms to gain an understanding of their impact on the local community.
- Examine photographs of documents, artifacts, and places unique to Pennsylvania.
- Describe the characteristics of homes and businesses located in the community to gain an understanding of physical features.
- Describe the location of places in the home, school, and community to gain an understanding of relative location.
- Interpret a simple map of a known environment.
- Identify individuals who volunteer in the community.
- Identify goods and services provided by local businesses
- Identify products produced in the region or state.
- Identify roles of fire fighters, police officers, and emergency workers.
- Identify the role of adults in authority at home or in school.

PA Standards/Anchors:

7.4.K.A	8.2.K.B	7.2.K.A	7.1.K.B
7.1.K.A	6.5.K.A	6.5.K.C	6.3.K.D
5.3.K.C	5.3.K.B		

Eligible Content:

Instructional Strategies:

- Small group
- Worksheets
- Creative Projects
- Manipulatives
- Kinesthetic activities
- Literature

Assessments:

- Informal (observational) Assessment
- Projects
- Weekly Stoplight Behavior Chart

Grade: Kindergarten | **Course Title: Science/Social Studies** | **Topic/Concept: Veterans, Freedom, & Armed Forces**

Time Allotment: 1 Week | **Unit Sequence: 8**

Major Concepts to be learned:

- What is a veteran?
- What is freedom and is it free?
- Who are the Armed Forces?

Expected Skills/Standards to be demonstrated:

- Identify significant American holidays and their symbols.
- Identify American people related to national holidays.
- Demonstrate an understanding of time order.

PA Standards/Anchors:	Eligible Content:
5.1.K.F 8.3.K.A 8.3.K.C	

Instructional Strategies:	Assessments:
• Small group • Manipulatives • Worksheets • Kinesthetic activities • Creative Projects • Literature	• Informal (observational) Assessment • Projects • Weekly Stoplight Behavior Chart

Grade: Kindergarten **Course Title: Science/Social Studies** **Topic/Concept: Thanksgiving**

Time Allotment: 3 Weeks **Unit Sequence: 9**

Major Concepts to be learned:

- What holiday is always the fourth Thursday of November and is coming up really soon? (Thanksgiving)
- Why do we celebrate it? (we are thankful for our blessings)
- What are some symbols of Thanksgiving? (Turkey, Pilgrims, Native Americans, Football, Macy's Parade, Pumpkin Pie)
- How did Thanksgiving get started?

Expected Skills/Standards to be demonstrated:

- Identify significant American holidays and their symbols.
- Identify a problem and discuss possible solutions.
- Identify how students can work together.
- Identify a choice based on family interest.
- Identify land and water forms.
- Define respect for self and others.
- Identify classroom projects/activities that support leadership and service.
- Identify how scarcity influences choice.
- Identify products produced in the region or state.
- Identify American people related to national holidays
- Identify chronological sequence through days, weeks, months, and years (calendar time).
- With guidance and support, differentiate facts from opinions as related to an event.
- Demonstrate an understanding of time order.
- Explain how cultures celebrate.
- Identify different celebrations of different cultures from around the world.
- Demonstrate an understanding of conflict and cooperation.

PA Standards/Anchors:

5.1.K.F	5.1.K.C	5.2.K.B	5.2.K.C
5.4.K.B	6.1.K.A	6.1.K.D	6.3.K.D
7.2.K.B	8.1.K.A	8.1.K.B	8.3.K.A
8.3.K.C	8.4.K.A	8.4.K.C	8.4.K.D

Eligible Content:

Instructional Strategies:

- Small group
- Worksheets
- Creative Projects
- Manipulatives
- Kinesthetic activities
- Literature

Assessments:

- Informal (observational) Assessment
- Projects
- Weekly Stoplight Behavior Chart

Grade: Kindergarten **Course Title: Science/Social Studies** **Topic/Concept: Coding**

Time Allotment:1 Week **Unit Sequence: 10**

Major Concepts to be learned:

- Coding – technology runs off of a language called coding; learn the basics of block chain

Expected Skills/Standards to be demonstrated:

- Demonstrate essential skills of the engineering design process.
- Analyze how things work.
- Apply design concepts, principles, and processes through play and exploration
- Demonstrate that designs have requirements.
- Develop a plan in order to complete a task
- Illustrate how systems have parts or components that work together to accomplish a goal.
- Demonstrate that creating can be done by anyone.

PA Standards/Anchors:

3.5.K-2.M	3.5.K-2.N
3.5.K-2.S	3.5.K-2.T
3.5.K-2.X	3.5.K-2.Z
3.5.K-2.AA	

Eligible Content:

Instructional Strategies:

- Small group
- Manipulatives
- Worksheets
- Kinesthetic activities
- Creative Projects
- Literature

Assessments:

- Informal (observational) Assessment
- Projects
- Weekly Stoplight Behavior Chart

Grade: Kindergarten **Course Title: Science/Social Studies** **Topic/Concept: Winter Holidays**

Time Allotment: 3 Weeks **Unit Sequence: 11**

Major Concepts to be learned:

- "What is Christmas and why is it celebrated all over the world?"
- "What are some other holidays at the end of December (Hannukah, Kwanzaa, New Years Eve)?"
- "What are some symbols/traditions of Christmas and their history (Santa, presents, candy canes, gingerbread houses, trees, elves)?"
- "What are some songs/carols we sing at the holidays?"

Expected Skills/Standards to be demonstrated:

- Identify significant American holidays and their symbols.
- Demonstrate essential skills of the engineering design process.
- Analyze how things work.
- Apply design concepts, principles, and processes through play and exploration
- Demonstrate that designs have requirements.
- Develop a plan in order to complete a task
- Illustrate how systems have parts or components that work together to accomplish a goal.
- Demonstrate that creating can be done by anyone.

PA Standards/Anchors:

5.1.K.F	3.5.K-2.M	3.5.K-2.N
3.5.K-2.S	3.5.K-2.T	3.5.K-2.X
3.5.K-2.Z	3.5.K-2.AA	

Eligible Content:

Instructional Strategies:

- Small group
- Manipulatives
- Worksheets
- Kinesthetic activities
- Creative Projects
- Literature

Assessments:

- Informal (observational) Assessment
- Projects
- Weekly Stoplight Behavior Chart

Grade: Kindergarten **Course Title: Science/Social Studies** **Topic/Concept: Snow/Winter/Arctic**

Time Allotment: 3 Weeks **Unit Sequence: 12**

Major Concepts to be learned:

- **"**What is winter?"
- "What is snow and why does it snow?"
- "What are some activities and sports played in the winter (usually with snow or ice)?"
- "What adaptations do humans and animals have to help them survive winter?"
- "Which animals call the Arctic their habitat and what adaptations allow them to survive?"
- "When does it happen and why?"
- "Where is winter the harshest and last the longest?"
- "What is another name for the Arctic (North Pole)?"

Expected Skills/Standards to be demonstrated:

- 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.
- Use observations to describe patterns of what plants and animals (including humans) need to survive.
- Make observations to determine the effect of sunlight on Earth's surface.
- Use and share observations of local weather conditions to describe patterns over time.
- Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.
- Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.
- Explain ways that places differ in their physical characteristics, their meaning, and their value and/or importance.
- Investigate the use of technologies in the home and community.
- Explore how technologies are developed to meet individual and societal needs and wants.
- Explain that materials are selected for use because they possess desirable properties and characteristics.
- Compare the natural world and human-made world.
- identify various forms of water through pictures, art projects and classroom discussion.

PA Standards/Anchors:

3.1.1.A	3.1.K.A	3.2.K.C	3.3.K.A
3.3.K.B	3.3.K.C	3.4.K-2.C	3.5.K-2.F
3.5.K-2.L	3.5.K-2.V	3.5.K-2.BB	

Eligible Content:

Instructional Strategies:

- Small group
- Worksheets
- Creative Projects
- Manipulatives
- Kinesthetic activities
- Literature

Assessments:

- Informal (observational) Assessment
- Projects
- Weekly Stoplight Behavior Chart

Grade: Kindergarten **Course Title: Science/Social Studies** **Topic/Concept: Landforms**

Time Allotment: 3 Weeks **Unit Sequence: 13**

Major Concepts to be learned:

- "What is our Earth's surface made of?" (land and water)
- "Does all land look the same?" (no)
- "What are some different types of land?" (mountain, valley, caves, etc.)
- "What do we call the different types of land?" (landforms)
- "What is land made of?" (rocks)
- "Can the land change or does it stay the same?" (changes; some fast - natural disasters, most slow - weathering and erosion)

Expected Skills/Standards to be demonstrated:

- 7.2.K.B Identify land and water forms.
- 7.4.K.A Identify local bodies of water and landforms to gain an understanding of their impact on the local community.

PA Standards/Anchors:	Eligible Content:
7.2.K.B 7.4.K.A	

Instructional Strategies:	Assessments:
• Small group • Manipulatives • Worksheets • Kinesthetic activities • Creative Projects • Literature	• Informal (observational) Assessment • Projects • Weekly Stoplight Behavior Chart

Grade: Kindergarten **Course Title: Science/Social Studies** **Topic/Concept: Wind**

Time Allotment: 1 Week **Unit Sequence: 14**

Major Concepts to be learned:

- **“**What is wind?” (an invisible force)
- “Where does wind come from?” (hot air and cold air mixing)
- “Why and how is some wind stronger than others?” (more extreme temperatures)
- “Sometimes wind can form a funnel which we call a tornado; what are some ways to stay safe in the event a tornado is nearby?” (basement, bathtub, adhere to safety warnings)
- “What are the people called who study the wind and weather?” (meteorologists)

Expected Skills/Standards to be demonstrated:

- Use and share observations of local weather conditions to describe patterns over time.
- Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.
- Explain ways that places differ in their physical characteristics, their meaning, and their value and/or importance.
- Discuss the roles of scientists, engineers, technologists, and others who work with technology.

PA Standards/Anchors:

3.3.K.A	3.3.K.D
3.4.K-2.C	3.5.K-2.CC

Eligible Content:

Instructional Strategies:

- Small group
- Manipulatives
- Worksheets
- Kinesthetic activities
- Creative Projects
- Literature

Assessments:

- Informal (observational) Assessment
- Projects
- Weekly Stoplight Behavior Chart

Grade: Kindergarten **Course Title: Science/Social Studies** **Topic/Concept: Living vs. Non-living**

Time Allotment: 1 Week **Unit Sequence: 15**

Major Concepts to be learned:

- "Is everything alive?" (no)
- "What makes something a living thing?" (1. Grow 2. Nutrients 3. Reproduce)
- "When something dies is it still considered a living thing?" (no, at least from a bio standpoint)
- "Besides animals, what are some other types of living things?" (plants and microbes [bacteria, fungi, but NOT viruses])

Expected Skills/Standards to be demonstrated:

- Use observations to describe patterns of what plants and animals (including humans) need to survive.
- Compare the natural world and human-made world.

PA Standards/Anchors:

3.1.K.A
3.5.K-2.BB

Eligible Content:

Instructional Strategies:

- Small group
- Manipulatives
- Worksheets
- Kinesthetic activities
- Creative Projects
- Literature

Assessments:

- Informal (observational) Assessment
- Projects
- Weekly Stoplight Behavior Chart

Grade: Kindergarten **Course Title: Science/Social Studies** **Topic/Concept: Habitats**

Time Allotment: 3 Weeks **Unit Sequence:16**

Major Concepts to be learned:

- **“**What does habitat mean?”
- “What are different types of habitats?”
- “Why do certain animals and plants live in specific habitats?”
- “What are some animals that can live in multiple habitats?”
- “How have humans adapted to survive in extreme habitats?”
- “How can humans help preserve habitats that may be at risk?”

Expected Skills/Standards to be demonstrated:

- Use observations to describe patterns of what plants and animals (including humans) need to survive.
- Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.
- Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.
- Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.
- Explain ways that places differ in their physical characteristics, their meaning, and their value and/or importance.
- Compare the natural world and human-made world.

PA Standards/Anchors:

3.1.K.A	3.3.K.B	3.3.K.C
3.3.K.E	3.4.K-2.C	3.5.K-2.BB

Eligible Content:

Instructional Strategies:

- Small group
- Manipulatives
- Worksheets
- Kinesthetic activities
- Creative Projects
- Literature

Assessments:

- Informal (observational) Assessment
- Projects
- Weekly Stoplight Behavior Chart