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***The Zula Patrol Curriculum Alignment with Ohio Early Learning Content Standards***

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***Legend***

SM = Simple Machines Exploration Mission Module

MSCR = Mixtures, Solutions, and Chemical Reactions Exploration Mission Module

FR = Force Exploration Mission Module

HB = Habitats Exploration Mission Module

MA = Matter Exploration Mission Module

LT = Light Exploration Mission Module

H2O = Water Exploration Mission Module

PALC = Plants, Animals, and Life Cycles Mission Module

All = All current and future Zula activities and lesson plans

FK = Future Mission Exploration Modules

**English Language Arts**

**Acquisition of Vocabulary for Early Childhood**

Contextual Understanding

1. Understand the meaning of new words from context of conversations, the use of pictures that accompany text or the use of concrete objects. (All)

Conceptual Understanding

4. Demonstrate or orally communicate position and directional words (e.g., inside, outside, in front of, behind.) (SM, FR, HB, FK)

Tools and Resources

5. Determine the meaning of unknown words with assistance or cues from an adult (e.g., providing a frame of reference, context or comparison). (All)

## Reading Process: Concepts of Print, Comprehension Strategies and Self-Monitoring Strategies for Early Childhood

### Concepts of Print

1. Understand that print has meaning by demonstrating the functions of print through play activities. (All)
2. Hold books right side up, know that people read pages from front to back, top to bottom and read words from left to right. (All)
3. Begin to distinguish print from pictures. (All)

### Comprehension Strategies

4. Begin to visualize, represent, and sequence an understanding of text through a variety of media and play. (All)
5. Predict what might happen next during reading of text. (All)
6. Connect information or ideas in text to prior knowledge and experience. (All)
7. Answer literal questions to demonstrate comprehension of orally read age-appropriate texts. (All)

### Self-Monitoring

8. Respond to oral reading by commenting or questioning. (All)

## Reading Applications: Informational, Technical and Persuasive Text for Early Childhood

### Reading Applications

1. Use pictures and illustrations to aid comprehension. (All)
2. Retell information from informational text. (All)
3. Tell the topic of a selection that has been read aloud. (All)
4. Gain text information from pictures, photos, simple charts and labels. (All)
5. Follow simple directions. (All)

## Reading Applications: Literary Text for Early Childhood

### Reading Applications

1. Identify characters in favorite books and stories. (All)
2. Retell or re-enact events from a story through a variety of media and play events. (All)
3. Begin to demonstrate an understanding of the differences between fantasy and reality. (All)
4. Participate in shared reading of repetitious or predictable text. (All)

## Writing Applications for Early Childhood

### Writing Applications

1. Dictate stories or produce simple stories using pictures, mock letters or words. (All)
3. Play at writing from top to bottom, horizontal rows as format. (All)
4. Dictate words or produce writing approximations for a variety of purposes. (All)

## Research for Early Childhood

### Research

1. Ask questions about experiences, areas of interest, pictures, letters, words, logos or icons. (All)
2. Use a variety of resources to gather information with assistance. (All)

3. Recall information about a topic dictated or constructed by child. (All)
4. Share findings of information through retelling, media and play. (All)

## **Mathematics**

### **Number, Number Sense and Operations for Early Childhood**

#### Number and Number Sense

1. Count to 10 in the context of daily activities and play. (SM, H2O, MSCR, FK)
2. Touch objects and say the number names when counting in the context of daily activities and play. (SM, H2O, MSCR, FK)
3. Demonstrate one-to-one correspondence when counting objects. (SM, MSCR, FK)
4. Determine “how many” in sets of 5 or fewer objects. (SM, H2O, MSCR, FK)
5. Construct two sets of objects, each containing the same number of objects. (SM, FK)
6. Compare sets of equal, more, and fewer and use the language of comparison. (SM, MSCR, H2O, FK)
7. Group and regroup a given set in the context of daily activities and play. (SM, FK)
9. Write numerical representations or numerals in meaningful context. (ALL)
11. Compare and order whole numbers up to 5. (SM, H2O, MSCR, FK)

#### Meaning of Operations

13. Construct sets with more or fewer objects than a given set. (SM, MSCR, FK)
15. Join two sets of objects to make one large set in the context of daily routines and play. (SM, MSCR, FK)
16. Equally distribute a set of objects into 2 or more smaller sets. (SM, MSCR, FK)

### **Measurement for Early Childhood**

#### Use Measurement Techniques and Tools

4. Begin to use terms to compare the attributes of objects. (ALL)
5. Order a set of objects according to size, weight or length. (SM, HB, MSCR, FK)
6. Measure length and volume using non-standard units of measure. (SM, MSCR, FR, PALC, FK)

### **Geometry and Spatial Sense for Early Childhood**

#### Characteristics and Properties

1. Match identical two- and three-dimensional objects found in the environment in play situations. (SM, FK)
2. Sort and classify similar two- and three-dimensional objects in the environment and play situations. (SM, FK)
3. Identify, name, create and describe common two-dimensional shapes in the environment and play situations. (SM, FK)
4. Identify, name and describe three-dimensional objects using the child’s own vocabulary. (SM, FK)

#### Spatial Relationships

5. Demonstrate and begin to use the language of the relative position of objects in the environment and play situations. (SM, H2O, FR, FK)

## Patterns, Functions and Algebra for Early Childhood

### Use Patterns, Relations and Functions

1. Sort, order and classify objects by one attribute. (SM, H2O, PALC, FK)

## Data Analysis and Probability for Early Childhood

### Data Collection

1. Gather, sort and compare objects by similarities and differences in the context of daily activities and play. (SM, MSCR, H2O, FK)

## Science

### Earth and Space Sciences for Early Childhood

#### The Universe

1. Begin to use terms such as night and day, sun and moon to describe personal observations. (LT, FK)
2. Observe and represent the pattern of day and night through play, art materials or conversation. (LT, FK)

#### Processes that Shape the Earth

3. Observe, explore and compare changes that animals and plants contribute to in their surroundings. (HB, FK)
4. Explore and compare changes in the environment over time. (HB, FK)
5. Explore how their actions may cause changes in the environment that are sometimes reversible and sometimes irreversible. (H2O, HB, PALC, FK)
6. Demonstrate understanding of fast and slow relative to time, motion and phenomena. (SM, FR, FK)
7. Observe and use language or drawings to describe changes in the weather. (FK)

### Life Science for Early Childhood

#### Characteristics and Structure of Life

1. Identify common needs of familiar living things. (HB, LPFL, FK)
2. Begin to differentiate between real and pretend through stories, illustrations, play and other media. (All)

#### Diversity and Interdependence of Life

3. Observe and begin to recognize the ways that environments support life by meeting the unique needs of each organism. (HB, PALC, FK)

### Physical Sciences for Early Childhood

#### Nature of Matter

1. Explore and identify parts and wholes of familiar objects. (SM, FK)
2. Explore and compare materials that provide many different sensory experiences. (All)
3. Sort familiar objects by one or more property. (SM, FK)

#### Forces and Motion

4. Demonstrate understanding of motion related words. (SM, FR, FK)

5. Explore ways of moving objects in different ways. (SM, FK)

#### Nature of Energy

6. Explore musical instruments and objects and manipulate one's own voice to recognize the changes in the quality of sound. (FK)
7. Explore familiar sources of the range of colors and the quality of light in the environment. (LT, FK)

### Science and Technology for Early Childhood

#### Understanding Technology

1. Identify the intended purpose of familiar tools. (All)
2. Explore new uses for familiar materials through play. (All)

#### Abilities to do Technological Design

3. Use familiar objects to accomplish a purpose, complete a task or solve a problem. (All)
4. Demonstrate the safe use of tools, such as scissors, hammers, writing utensils, with adult guidance. (All)

### Scientific Inquiry for Early Childhood

#### Doing Scientific Inquiry

1. Ask questions about objects, organisms and events in their environment during shared stories, conversations and play. (All)
2. Show interest in investigating unfamiliar objects, organisms and phenomena during shared stories, conversations and play. (All)
3. Predict what will happen next based on previous experiences. (All)
4. Investigate natural laws acting upon objects, events and organisms. (All)
5. Use one or more of the senses to observe and learn about objects, organisms and phenomena for a purpose. (All)
6. Explore objects, organisms and events using simple equipment. (All)
7. Begin to make comparisons between objects or organisms based on their characteristics. (All)
8. Record or represent and communicate observations and findings through a variety of methods with assistance. (All)

### Scientific Ways of Knowing for Early Childhood

#### Nature of Science

1. Offer ideas and explanations of objects, organisms and phenomena, which may be correct or incorrect. (All)

#### Science and Society

3. Participate in simple, spontaneous scientific explorations with others. (All)