



## **Zula Exploration Mission Modules Alignment with Louisiana Pre-K Standards**

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

H<sub>2</sub>O = 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

### **SCIENCE**

#### **Science as Inquiry**

##### **The Abilities Necessary to Do Scientific Inquiry**

1. Ask questions about objects and events in the environment (e.g., plants, rocks, storms) (PK-CS-I1) (SI-E-A1) **ALL**
2. Pose questions that can be answered by using students' own observations and scientific knowledge (PK-CS-I1) (SI-E-A1) **ALL**
3. Use the five senses to describe observations (PK-CS-P3) (SI-E-A3) **ALL**
4. Select and use developmentally appropriate equipment and tools and units of measurement to observe and collect data (PK-CS-I4) (SI-E-A4) **ALL**
5. Express data in a variety of ways by constructing illustrations, graphs, charts, tables, concept maps, and oral and written explanations as appropriate (PK-CS-I5) (SI-E-A5) (SI-E-B4) **ALL**
6. Use a variety of appropriate formats to describe procedures and to express ideas about demonstrations or experiments (e.g., drawings, journals, reports, presentations, exhibitions, portfolios) (PK-CS-I5) (SI-E-A6) **ALL**

7. Identify and use appropriate safety procedures and equipment when conducting investigations (e.g., gloves, goggles, hair ties) (PK-CS-I4) (SI-E-A7) **ALL**

### **Understanding Scientific Inquiry**

8. Recognize that a variety of tools can be used to examine objects at different degrees of magnification (e.g., hand lens, microscope) (PK-CS-I4) (SI-E-B3) **ALL**

### **Physical Science**

#### **Properties of Objects and Materials**

9. Sort objects using one characteristic (PK-CS-P2) (PS-E-A1) **SM, HB, MSCR, FK**
10. Determine whether objects float or sink through investigations (PK-CS-P1) (PS-E-A1) **H2O**
11. Describe properties of materials by using observations made with the aid of equipment such as magnets, magnifying glasses, pan balances, and mirrors (PK-CS-P4) (PS-E-A2) **ALL**
12. Determine whether one object weighs more or less than another by using a pan balance (PK-CS-I4) (PS-E-A2) **SM, FK**
13. Compare the properties of different solids and liquids through observation (PK-CS-P1) (PS-E-A4) **MSCR, H2O, FK**
14. Identify components of simple mixtures (e.g., salt/water, rice/beans, iron filings/sand) (PK-CS-P1) (PS-E-A5) **MSCR, FK**

#### **Position and Motion of Objects**

15. Demonstrate motion by using students' own bodies (PK-CS-P3) (PS-E-B3) **SM, FR, FK**
16. Explore the motion of objects by using balls, toy cars, or spinning tops (PK-CS-I2) (PS-E-B3) **SM, FR, FK**

#### **Forms of Energy**

17. Identify different sounds as *soft* or *loud* (PK-CS-P3) (PS-E-C1) **FK**
18. Identify selected substances as *hot* or *cold* (PK-CS-P2) (PS-E-C3) **MA, FK**

### **Life Science**

#### **Characteristics of Organisms**

20. Give examples of different kinds of plants and different kinds of animals (PK-CS-L1) (LS-E-A4) **PALC, HB, FK**

#### **Life Cycles of Organisms**

22. Learn about animals and plants through nonfiction literature (PK-CS-L1) (LS-E-B1) **PALC, HB, FK**
23. Observe and care for pets and plants (PK-CS-L1) (LS-E-B1) **PALC, HB, FK**

#### **Organisms and Their Environments**

24. Describe plants and animals in the schoolyard or home environments (PK-CS-L1) (LS-E-C1) **PALC, HB, FK**

### **Earth and Space Science**

#### **Properties of Earth Materials**

25. Explore and describe various properties of rocks, minerals, and soils (PK-CS-L2) (ESS-E-A1) **FK**
26. Describe the weather and its daily changes (PK-CS-ES2) (ESS-E-A4) **FK**

27. Describe different types of weather students have experienced and give examples of how daily activities and appropriate attire are affected by weather conditions (PK-CS-ES2) (ESS-E-A4) **FK**

### **Objects in the Sky**

28. Learn about objects in the sky through nonfiction literature (PK-CS-ES3) (ESS-E-B1) **FK**

## **MATHEMATICS**

### **Number and Number Relations**

1. Count by ones to 10 (PK-CM-N3) (N-1-E) (N-3-E) **SM, H2O, MSCR, FK**
2. Count a set of 5 or fewer objects by establishing a 1-to-1 correspondence between number names and objects (PK-CM-N2) (N-1-E) **SM, H2O, MSCR, FK**
3. Identify an object's position as first or last (PK-CM-G3) (N-1-E) **SM, FK**
5. Compare sets of objects using the words *same/different* and *more/less/fewer* (PK-CM-N1) (N-3-E) (N-7-E) **SM, HB, PALC, MSCR, FK**

### **Measurement**

6. Use comparative vocabulary in measurement settings (e.g., *long/longer, short/shorter, more/less, hotter/colder, heavier/lighter, bigger/smaller*) (PK-CM-M3) (M-1-E) (M-2-E) (M-3-E) **ALL**
7. Use words such as *day, week, month, schedule, morning, noon, night* (PK-CM-M1) (M-2-E) **FK**

### **Geometry**

8. Identify rectangles, squares, circles, and triangles using concrete models (G-2-E) **SM, FK**
9. Sort concrete objects by an attribute (e.g., shape, size, color) (PK-CM-D1) (G-2-E) (D-1-E) **SM, HB, MSCR, FK**
10. Use words that indicate direction and position of an object (e.g., up, down, over, under, above, below, beside, in, out, behind) (PK-CM-G3) (G-3-E) **SM, FK**
11. Recognize and manipulate an object's position in space (e.g., blocks, assembling puzzles) (PK-CM-G3) (G-3-E) (G-4-E) **SM, FK**

### **Data Analysis, Probability, and Discrete Math**

12. Arrange objects or pictures of objects to make an object or picture graph (PK-CM-D2) (D-4-E) **FK**

### **Patterns, Relations, and Functions**

13. Recognize and copy repeated patterns (e.g., concrete objects, songs, rhymes, and body movements) (PK-CM-P1) (PK-CM-P2) (P-1-E) (P-3-E) **FK**

## **ENGLISH LANGUAGE ARTS**

### **Reading and Responding**

#### ***Standard 1:***

4. Orally respond to questions using new vocabulary introduced in conversations, activities, stories, or books (PK-LL-L4) (ELA-1-E1) **ALL**
5. Demonstrate understanding of book and print concepts by doing the following:

- recognizing that a book has a cover and identifying the cover and title of a book
  - holding a book right side up
  - differentiating between an illustration and printed text
  - recognizing that print is read left-to-right and top-to-bottom (PK-LL-R3) (ELA-1-E2) **ALL**
6. Relate pictures to characters (PK-LL-R4) (ELA-1-E4) **ALL**
  8. Listen to a story and state orally what the story is about (PK-LL-R1) (PK-LL-R2) (PK-LL-L1) (ELA-1-E5) **ALL**
  9. Answer simple questions about a story read aloud (PK-LL-S3) (PK-LL-R4) (ELA-1-E5) **ALL**
  10. Share related life experiences after stories are read aloud (PK-LL-L1) (PK-LL-S1) (ELA-1-E6) **ALL**
  11. Orally express thoughts about characters or events in a story (PK-LL-S1) (PK-LL-S2) (PKS-LL-R2) (ELA-1-E6) **ALL**

**Standard 7:**

12. Demonstrate understanding of texts read aloud using a variety of strategies, including:
  - sequencing two or three pictures to illustrate events in a story
  - participating in a group discussion to predict what a book will be about
  - determining whether the prediction was accurate (PK-LL-R2) (ELA-7-E1) **ALL**
13. Identify problems and solutions in stories that are read aloud (PK-LL-R2) (ELA-7-E2) **ALL**
14. Use simple reasoning skills, including:
  - identifying reality and fantasy in texts read aloud (PF-LL-R1) **ALL**
  - determining why something happens in a story read aloud (PK-LL-R2) **ALL**
  - asking simple questions about a story read aloud (e.g., who, where) (PK-LL-S3) (ELA-7-E4) **ALL**

**Writing**

**Standard 2:**

15. Use scribble writing, letter-like forms, dictation, or drawing to represent a word or concept (PK-LL-W1) (PK-LL-W2) (PK-LL-W3) (ELA-2-E1) **ALL**
16. Orally generate words, ideas, and lists for group writing activities (PK-LL-W3) (ELA-2-E3) **ALL**
17. Write informal notes, lists, and letters using scribble writing and/or pictures (PK-LL-W2) (PK-LL-W3) (PK-LL-W4) (ELA-2-E4) **ALL**
18. Participate in group-shared writing activities that include rhyming and descriptive words (PK-LL-W3) (PK-LL-W4) (PK-LL-L3) (ELA-2-E5) **ALL**
19. Scribble write or draw a picture of a life experience or response to a text read aloud (PK-LL-W2) (PK-LL-W4) (ELA-2-E6) **ALL**

**Speaking and Listening**

**Standard 4:**

21. Use words, phrases, and/or sentences to express feelings, ideas, needs, and wants (PK-LL-S1) (PK-LL-S2) (ELA-4-E1) **ALL**
22. Carry on a conversation about a topic, thought, or idea from the classroom, home, or community (PK-LL-S1) (PK-LL-S3) (ELA-4-E1) **ALL**

23. Repeat an instruction given orally (PK-LL-S1) (ELA-4-E2) **ALL**
24. Follow one- and two-step verbal and nonverbal directions (PK-LL-L2) (ELA-4-E2) **ALL**
25. Retell part of a favorite story (PK-LL-R2) (ELA-4-E3) **ALL**
26. Speak about life experiences or topics of interest (PK-LL-S3) (ELA-4-E4) **ALL**
27. Actively participate in role-playing, creative dramatics, finger plays, nursery rhymes and choral speaking (PK-LL-R1) (PK-LL-S2) (PK-LL-L3) (PK-LL-L4) (ELA-4-E5) **FK**
28. Listen and orally respond to questions about media, including music and videos (PK-LL-L5) (ELA-4-E6) **ALL**
29. Recognize and follow agreed-upon rules for discussing, such as raising one's hand, waiting one's turn, and speaking one at a time (PK-LL-S1) (PK-SE-C1) (ELA-4-E7) **ALL**

### **Information Resources**

#### ***Standard 5:***

30. Identify a computer mouse and its purpose (i.e., to navigate the screen) (PK-LL-L5) (ELA-5-E1) **ALL**
31. Identify and use information that is formatted in a chart or graph, such as a daily schedule (PK-LL-S1) (ELA-5-E6) **ALL**