



Simple Machines Curriculum and *Launch Pad for Learning* Sampler Kit Alignment with Pennsylvania Learning Standards for Early Childhood

LPFL = Launch Pad for Learning Sampler activity kit (with 15 level 1-PreK and 15 level 2-K-2 sun, clouds, moon, stars, and sensory discovery activities)—currently available

SM = Simple Machines Exploration Mission curriculum (with 3 lesson plans focusing on wheel/axle/screw, lever and pulley, and wedge and inclined plane)—currently available

All = All current and future Zula activities and lesson plans

FK = Future Mission Exploration Kit (curriculum programs)

PRESCHOOL

Alignment with Guiding Principles

- #2 Zula curriculum embeds high expectations that are developmentally appropriate.
- #3 Activities and lesson plans provide the opportunity for children to construct knowledge through meaningful play, active exploration of the environment, experimentation, inquiry, and thoughtfully planned activities.
- #4 Including Zula math and science content in stations, discovery areas, and classrooms provides for an environment that is engaging and promotes natural curiosity about the world around them.
- #5 Language and early literacy development are seamlessly incorporated in all Zula activities and lesson plans. Use of journaling throughout the science inquiry process is an integral part of learning, reflection, expression, and communication. Each activity and lesson also includes a detailed list of recommended readings (titles easily found at public libraries).
- #6 Zula workshops train teachers (and parents and afterschool organizations) in early science literacy, media literacy, 21st century thinking skills, critical thinking/problem solving—and there is opportunity for ongoing professional development. Sessions also show how science can be taught seamlessly in tandem with literacy/language arts—and with math, creative arts—and even social and emotional development.
- #7 Learning experiences support different intelligences, address different learning styles, and include content that covers different learning domains.
- #8 The Exploration Mission and Launch Pad for Learning curriculum programs include content that is cross-curricular (with emphasis on science, language arts, math, and critical thinking). All preschool activities and lesson plans align with National Association for the Education of Young Children Curriculum Criteria, Head

Start Child Outcome Frameworks, and PA Learning Standards for Early Childhood. Kindergarten through second grade activities and lessons align with National Science Education Standards and PA Learning Standards for Early Childhood.

- #9 Each lesson and activity includes guidelines for assessment: including informal (portfolio, performance, observational) and formal (assessment worksheets designed to gauge level of conceptual understanding), and ongoing journaling in which educators should see growth in children’s capacities and conceptual understanding.
- #10 One of Zula’s key goals is to draw parents and families into the learning process. Each activity includes a Home Mission designed for parents to collaborate with children on different science experiences—*very simply and inexpensively*. Lesson plans include letters that are duplicated and sent home to parents, explaining the learning that took place in the class—and how they can easily support it at home.

Approaches to Learning

Standard AL 1: Demonstrate Initiative and Curiosity

- Indicator AL 1 A Choosing to participate in an increasing variety of experiences. (All)
- Indicator AL 1 B Making independent choices related to various science “mission” experiences (All)
- Indicator AL 1 C Demonstrate growing eagerness and delight to learn about and discuss a growing range of topics, ideas, and tasks (All)
- Indicator AL 1 D Use multiple strategies and all available senses to explore and learn from the environment (All)

Standard AL 2: Demonstrate Engagement and Persistence

- Indicator AL 2 A Show persistence in ability to complete a wide variety of tasks, activities, projects, and experiences (All)
- Indicator AL 2 B Demonstrate increasing ability to set goals and develop follow through on plans (SM, FK)
- Indicator AL 2 C Demonstrate capacity to maintain concentration over time on a task, question, set of directions or interactions (All)

Standard AL 3: Demonstrate Reasoning and Problem Solving Skills

- Indicator AL 3 A Demonstrate a growing ability to predict possible outcomes related to cause and effect (SM, LPFL, FK)
- Indicator AL 3 B Find more than one solution to a question, task or problem (SM, LPFL, FK)
- Indicator AL 3 D Recognize and solve problems through observation, active exploration, trial and error, and interactions and discussions with peers and adults. (SM, LPFL, FK)
- Indicator AL 3 E Classify, compare and contrast objects, events and experiences (SM, LPFL, FK)

Standard AL 4: Demonstrate Flexibility, Risk Taking and Responsibility

- Indicator AL 4 A Accept responsibility for learning through active participation (All)

Standard AL 5: Demonstrate Imagination, Creativity and Invention

- Indicator AL 5 A Approach tasks and experiences with increased flexibility, imagination and inventiveness (All)
- Indicator AL 5 B Use or combine materials/strategies in novel ways to explore and solve problems (SM, LPFL, FK)

Science

Scientific Inquiry

Standard SC 3.2: Demonstrate Understanding Of The Process Of Scientific Inquiry

- SC 3.2A Show curiosity by asking questions and seeking information (All)
- SC 3.2B Collect, describe and record information (All)
- SC 3.2C Use tools and equipment to explore objects (All)
- SC 3.2D Make and verify predictions (All)
- SC 3.2E Compare, contrast and classify objects and data (SM, LPFL, FK)
- SC 3.2F Use language that shows understanding of scientific principles (All)
- SC 3.2 G Participate in scientific investigations (SM, LPFL, FK)

Characteristics of Living Things

Standard SC 3.3: Acquire Knowledge About The Characteristics Of Living Things

- SC 3.3A Recognize the difference between living and nonliving things (FK)
- SC 3.3B Notice similarities and differences and categories of plants and animals (FK)
- SC 3.3C Understand that plants and animals have life cycles (FK)

Physical Properties of Objects

Standard SC 3.4: Acquire Knowledge About The Physical Properties Of Objects

- SC 3.4A Describe, compare, and categorize objects based on their properties (SM, LPFL, FK)
- SC 3.4B Explore simple machines (SM)
- SC 3.4C Explore, identify and describe changes that occur over time (LPFL, FK)
- SC 3.4D Use five senses to explore world (LPFL, FK)
- SC 3.4E Experiment with the effect of their own actions on objects (SM, FK)
- SC 3.4F Understand that tools perform specific functions (SM, FK)

Earth and Space

Standard SC 3.5: Acquire Knowledge About The Earth And Space

- SC 3.5A Understand changes in the environment, including weather and seasonal changes (FK)
- SC 3.5B Investigate properties of rocks, soil and water (FK)
- SC 3.5C Explore the characteristics of the sun, moon, stars and clouds (LPFL, FK)
- SC 3.5E Show beginning understanding of how human activities may change the environment (FK)

Logical Mathematics

Numbers

Standard LM 2.1: Learn About Numbers, Numerical Representation, & Simple Numerical Operations

- LM 2.1A Use counting and numbers as part of play and as a means for determining quantity (SM, FK)
- LM 2.1B Count up to ten objects in meaningful context with emerging one-to-one correspondence (SM, FK)

- LM 2.1C Understand number concepts, vocabulary, quantities and written numerals in meaningful ways (SM, FK)
- LM 2.1 D Begin to use language to compare numbers of objects with terms such as more, less, greater than, fewer, equal to. (SM, FK)
- LM 2.1E Develop increased abilities to combine, separate and name “how many” concrete objects (SM, FK)
- LM 2.1G Begin to solve problems using numbers (SM, FK)

Patterns

Standard LM 2.8: Understand Patterns, Relations And Functions

- LM 2.8A Recognize how things are alike and identify objects that belong together (SM, LPFL, FK)
- LM 2.8B Sort, categorize, classify and order objects by one attribute (SM, LPFL, FK)
- LM 2.8D Order objects by properties (SM, LPFL, FK)
- LM 2.8 E Explain why and how objects are organized (SM, LPFL, FK)

Space and Shape

Standard LM 2.9: Develop Concepts of Space and Shape

- LM 2.9E Understand directionality, order, and positions of objects, using words such as up, down, over, under, top, bottom, inside, outside, in front of, behind (SM, FK)

Measurement

Standard LM 2.3: Develop And Use Measurement Concepts

- LM 2.3A Demonstrate awareness of measurement attributes (SM, LPFL, FK)
- LM 2.3C Use standard and non-standard measures in everyday situations (SM, LPFL, FK)

Data

Standard LM: 2.6: Represent And Represent Data

- LM 2.6A Gather information about themselves and their surroundings (SM, LPFL, FK)
- LM 2.6B Contribute data for simple graphs (LPFL, FK)
- LM 2.6C Organize and display data on graphs using objects and pictures (LPFL, FK)
- LM 2.6D “Read” and interpret displays of data using words to compare (LPFL, FK)

Problem-Solving

Standard LM 2.5: Reason, Predict And Problem Solve

- LM 2.5A Make predications based on observations and information (SM, LPFL, FK)
- LM 2.5B Use simple strategies to problem solve (SM, LPFL, FK)
- LM 2.5C Tell others how to solve a problem (SM, FK)
- LM 2.5D Understand that there is more than one way to solve a problem (SM, FK)
- LM 2.5F Use the language of mathematics to express mathematical ideas (SM, FK)

Language and Literacy

Receptive Language

Standard RL 1.6: Develop And Expand Listening And Understanding Skills

- Indicator RL 1.6 A Listen responsively to directions, stories and conversations (All)
- Indicator RL 1.6 B Follow simple and multiple-step directions (All)
- Indicator RL 1.6 C Demonstrate increasing understanding of new vocabulary introduced in conversations, activities, stories or books (All)
- Indicator RL 1.6 F Responds to questions (All)
- Indicator RL 1.6 G Demonstrate with increasing understanding that technology can be used to gain information (All)

Expressive Language

Standard EL 1.6: Communicate Ideas, Experiences And Feeling For A Variety Of Purposes

- Indicator EL 1.6 H Speak clearly enough to be understood by a variety of listeners (All)
- Indicator EL 1.6 I Recite rhymes, songs, and familiar text (SM, LPFL, FK)
- Indicator EL 1.6 J Use an increasingly complex and varied spoken vocabulary (All)
- Indicator EL 1.6 K Ask and answer relevant questions and share experiences individually and in groups (All)
- Indicator EL 1.6 L Initiate and responds appropriately in conversation and discussions with adults and children (All)
- Indicator EL 1.6 M Use verbal and nonverbal language to communicate for a variety of purposes (All)

Comprehension

Standard C1.3: Comprehend Information From Written And Oral Stories And Texts

- Indicator C1.3 C Draw connections between story events, personal experiences and other books (All)
- Indicator C1.3 E Identify facts in a selection (All)
- Indicator C1.3 F Differentiate between real and make-believe (All)
- Indicator C1.3 G Make predictions from what is read, heard or seen in illustrations (SM, LPFL, FK)

Literacy

Standard L 1.1: Develop An Understanding Of The Sounds Of Language

- Indicator L 1.1H Demonstrate understanding that speech sounds are represented in print by letter sounds (All)

Standard L 1.1: Develop And Expand Awareness Of Concepts Of Print

- Indicator L 1.1 I Demonstrate an understanding that symbols represent objects, events, or people (All)
- Indicator L 1.1 L Demonstrate an understanding that illustrations and print convey meaning (All)
- Indicator L 1.1 O Demonstrate awareness that print moves from top to bottom and from left to right (All)

Standard L 1.2: Develop Book Knowledge and Appreciation

- Indicator L 1.2 A Demonstrate interest in books and stories read aloud (All)

- Indicator L 1.2 B Showing growing interest in reading related activities (All)
- Indicator L 1.2 C Respond and make connections to story events and characters by relating personal experience (All)

Standard L 1.5: Use Different Forms of Writing Such As Drawing, Letter-Like Forms, Invented Spelling And Conventional Forms

- Indicator L 1.5 A Use scribbles to communicate in writing (All)
- Indicator L 1.5 B Use recognizable drawings to express thoughts, feelings and ideas (All)
- Indicator L 1.5 C Use letter-like forms, letters or random letter strings to express thoughts, feelings and ideas (All)

Standard L 1.5: Understand That Writing Is A Way Of Communicating For A Variety Of Purposes

- Indicator L 1.5 F Represent stories and experiences through pictures, scribbles, letter-like forms, dictation and play (All)
- Indicator L 1.5 G Understand that writing serves a variety of purposes (All)
- Indicator L 1.5 H Approximate writing to communicate effectively for different audiences and purposes (All)

Creative Arts

Standard CA 9.1: Use A Variety Of Visual Art Forms For Creative Expression And Representation

- Indicator 9.1A Show curiosity and explore visual materials and activities (All)
- Indicator 9.1B Demonstrate the ability to represent experiences, thoughts and ideas through the use of visual art forms (All)
- Indicator 9.1 C Select different media to express ideas (All)

Standard CA 9.2: Express Self Through Movement And Music

- Indicator CA 9.2 A Express self through movement (LPFL, FK)

Standard CA [9.3]: Participate In A Variety Of Dramatic Play Experiences

- Indicator CA 9.3 A Represent fantasy and real-life experiences through pretend play (SM, LPFL, FK)
- Indicator CA 9.3 B Show imagination and creativity in play (SM, LPFL, FK)
- Indicator CA 9.3 C Participate in teacher-guided dramatic activities (SM, LPFL, FK)
- Indicator CA 9.3 D Express own ideas through dramatic play activities (SM, LPFL, FK)
- Indicator CA 9.3 E Engage in cooperative pretend play with another child (SM, LPFL, FK)

Personal-Social

Self Concept

Standard PS 3.1: Develop Self Concept

- Indicator PS 3.1D Attempt new experiences with confidence and independence (All)

Self Regulation

Standard PS 3.2: Develop Self Regulation

- Indicator PS 3.2F Pay attention as required by the task (All)

Self Care and Reliance

Standard PS 3.4: Develop Self-Care And Self Reliance

- Indicator PS 3.4A Choose materials and activities independently (SM, FK)

Social Interactions

Standard PS 3.3: Develop Social Interactions

- Indicator PS 3.3G Cooperate in small and large group activities (SM, LPFL, FK)
- Indicator PS 3.4H Play cooperatively with 2-3 peers for a sustained time (SM, LPFL, FK)

Physical-Health

Fine Motor

Standard PH 10.5: Develop Fine Motor Control

- Indicator PH 10.5A Demonstrate control, strength and dexterity to manipulate objects (SM, LPFL, FK)
- Indicator PH 10.5D Demonstrate increasing control with writing and drawing implements (All)

Program Partnerships

Development and Learning

Standard PP 1: Quality ECE Programs Must Work Closely With Parents...

- Indicator PP 1E Programs must provide parents with opportunities to enhance their parenting skills, their knowledge and understanding of the developmental needs and activities of their children, their child observation skills, and their ability to provide nurturing/supportive environments and relationships (All)

Governance

Standard PP 4: Quality ECE Programs Must Work With Parents To Participate In Governance Of The Program

- Indicator PP 4C Provide information about the program philosophy, curriculum... (All)

KINDERGARTEN

Approaches to Learning

Standard AL 1: Demonstrate Initiative and Curiosity

- CFK AL 1.1 Participate in various experiences (All)
- CFK AL 1.2 Express choices/preferences during concrete, immediate and familiar activities(All)
- CFK AL 1.3 Demonstrate growing eagerness and satisfaction to discover and discuss a growing range of topics, ideas, and tasks (All)
- CFK AL 1.4 Use multiple strategies and all available senses to explore and learn from the environment (All)
- CFK AL 1.5 Comment on events or aspects of the environment (LPFL, FK)
- CFK AL 1.6 Ask questions and seek meaningful information (All)

Standard AL 2: Demonstrate Engagement and Persistence

- CFK AL 2.1 Show persistence in ability to complete a wide variety of tasks, activities, projects, and experiences (All)
- CFK AL 2.2 Demonstrate increasing ability to set goals and develop follow through on plans (SM, FK)
- CFK AL 2.3 Demonstrate ability to maintain focus on a task, question, set of directions or interactions... (All)
- CFK AL 2.5 Acquire the skills necessary for participating in a group or independently (All)

Standard AL 3: Demonstrate Reasoning and Problem Solving Skills

- CFK AL 3.2 Discover more than one solution to a question, task or problem (SM, LPFL, FK)
- CFK AL 3.4 Recognize and solve problems through observation, active exploration, trial and error, and interactions and discussions with peers and adults. (SM, LPFL, FK)
- CFK AL 3.7 Accept assistance and/or cooperate to accomplish a joint task (SM, LPFL, FK)
- CFK AL 3.8 Classify, compare and contrast objects, events and experiences (SM, LPFL, FK)

Standard AL 4: Demonstrate Flexibility, Risk Taking and Responsibility

- CFK AL 4.3 Accept responsibility for learning through active participation verbally or nonverbally (All)

Standard AL 5: Demonstrate Imagination, Creativity and Invention

- CFK AL 5.1 Approach tasks and experiences with increased flexibility, imagination and ingenuity (All)
- CFK AL 5.2 Use and connect materials/strategies in uncommon ways to investigate and solve problems (SM, LPFL, FK)

Science

Science and Technology Standard

Standard 3.1: Unifying Themes

- CFK A Identify and describe what parts make up a whole (SM, LPFL, FK)
- CFK B Identify how a part relates to the whole in both natural and human-made objects (SM, LPFL, FK)
- CFK C Explore realistic models (LPFL, FK)
- CFK D Explore patterns that regularly occur in nature (LPFL, FK)
- CFK E Identify observable patterns (LPFL, FK)
- CFK F Develop beginning understanding of natural patterns (LPFL, FK)
- CFK J Recognize change (LPFL, FK)
- CFK K Examine and explain change through simple observation and recording (LPFL, FK)
- CFK L Develop simple understanding about motion (SM, LPFL, FK)
- CFK M Describe change to objects caused by heat, cold, light or chemicals (LPFL, FK)

Standard 3.2: Inquiry and Design

- CFK A Build on introductory vocabulary of scientific terms (All)
- CFK B Form clear explanations based on observation and participation in common experiments (SM, LPFL, FK)
- CFK C Connect known ideas with new knowledge to build understanding or refine concepts (All)
- CFK E Use the five senses as tools with which to: observe, collect information, classify, and describe (LPFL, FK)
- CFK F Use observation to develop a descriptive vocabulary based on sensory experiences (All)
- CFK G Demonstrate willingness to modify explanations based on experience or observations (SM, FK)
- CFK H Demonstrate understanding of the process of scientific inquiry by participating in scientific investigations, asking relevant questions, and making predictions based on experience or observation (SM, LPFL, FK)
- CFK I Identify and explain basic problems (questions) (All)
- CFK J Identify possible solutions (SM, LPFL, FK)
- CFK K Test out solutions (SM, LPFL, FK)
- CFK L Record steps taken (All)
- CFK M Record results (All)

Standard 3.3: Biological Sciences

- CFK A Identify the similarities and differences of living things (FK)
- CFK B Identify the processes of living things (FK)
- CFK C Sort organisms according to their shared characteristics (FK)
- CFK D Demonstrate a basic understanding of similarities and differences that relate to environmental habitat (FK)
- CFK E Describe basic needs of plants and animals (FK)
- CFK F Know that some organisms have similar external characteristics (FK)
- CFK G Understand that living things are made of parts that have specific functions (FK)
- CFK H Explore characteristics that can be inherited (FK)
- CFK I Identify characteristics for animal and plant survival identified with seasonal changes (FK)

- CFK J Describe changes in living things over time (FK)
- CFK K Record changes in life processes (FK)
- CFK L Describe basic needs of plants and animals (FK)
- CFK M Know that some organisms have similar external characteristics (FK)

Standard 3.4: Physical Science, Chemistry and Physics

- CFK A Understand the meaning of what matter is (FK)
- CFK B Describe the properties of matter (FK)
- CFK C Recognize that matter can change from one state to another (FK)
- CFK D Demonstrate an understanding that combining two or more substances can make new materials with different properties (FK)
- CFK E Develop a working vocabulary that manages concepts of material characteristics (FK)
- CFK F Explore basic energy types and sources (FK)
- CFK G Explore variations of sound (FK)
- CFK H Identify directed air as a source of movement (FK)

Standard 3.5: Earth Sciences

- CFK A Identify flat land, hills and mountains (FK)
- CFK B Distinguish between three types of earth: soil, rock, and sand (FK)
- CFK C Build a vocabulary of weather related terms (LPFL, FK)
- CFK D Distinguish between different types of precipitation (FK)
- CFK F Explore thermometers as tools for measuring temperature (FK)
- CFK G Identify how weather affects daily circumstances (LPFL, FK)
- CFK H Explain how the different seasons affect plants, animals and daily human life (FK)
- CFK K Identify examples of water in solid and liquid states (LPFL, FK)
- CFK L Identify a variety of uses for water (FK)

Standard 3.6: Technology Education

- CFK A Identify (or use) different examples of technology and how these impact various aspects of daily life (All)
- CFK F Develop understanding of the nature of a project as having several components that need to be coordinated (SM, LPFL, FK)
- CFK G Experiment with simple machines (SM)

Standard 3.7: Technological Devices

- CFK A Sort tools by their function (FK)
- CFK B Select appropriate tools and materials to solve simple problems (SM, LPFL, FK)
- CFK C Develop simple skills to measure, record, cut, and fasten (SM, LPFL, FK)
- CFK D Identify different instruments for measuring weight (SM, FK)
- CFK E Select appropriate instruments for magnifying images to study detail including magnifying glasses and microscopes (FK)
- CFK G Use computer in a variety of applications (ZulaWorld)
- CFK H Access information via a web browser with teacher support (ZulaWorld)

Environmental and Ecology

Standard 4.3: Environmental Health

- CFK A. Know that all living things need air and water to survive (FK)

Standard 4.6: Ecosystems and Their Interactions

- CFK A. Identify and categorize living and nonliving things (FK)
- CFK B. Begin to understand the concept of cycles (FK)

Standard 4.7: Threatened, Endangered and Extinct Species

- CFK A. Identify differences in plants and animals (FK)
- CFK B. Explain how specific adaptations can help a living organism to survive (FK)

Standard 4.8: Humans and the Environment

- CFK B. Identify human activities that affect the environment (FK)

Mathematics

Standard 2.1: Numbers, Number Systems and Relationships

- CFK A. Count using whole numbers (SM, LPFL)
- CFK B. Use concrete objects to represent quantities up to and including 20 (SM, LPFL)
- CFK C. Represent equivalent forms of the same number through the use of concrete objects and drawings (SM, FK)
- CFK D. Use concrete objects to demonstrate understanding of one-to-one correspondence (SM, FK)
- CFK G. Count, read, and write whole numbers (SM, LPFL, FK)

Standard 2.3: Measurement and Estimation

- CFK A. Understand the spatial concepts of over, under, beside, in, out, around, on and between, above, top, bottom (SM, LPFL, FK)
- CFK B. Compare two objects using direct comparison (SM, FK)
- CFK C. Estimate and measure using nonstandard units (SM, LPFL, FK)
- CFK E. Describe the instruments used for measuring time, length, weight, volume, and temperature (SM, FK)

Standard 2.5: Mathematical Problem Solving and Communication

- CFK A. Identify a problem and analyze possible solutions to determine which is most appropriate (SM, LPFL, FK)
- CFK B. Identify what information is needed to solve a problem (SM, LPFL, FK)
- CFK C. Demonstrate various strategies to solve a problem (SM, LPFL, FK)

Standard 2.6: Statistics and Data Analysis

- CFK A. Gather, organize and display data on a bar graph and/or pictograph (LPFL, FK)
- CFK D. Use data from graphs to answer questions and form opinions (LPFL, FK)

Standard 2.9: Geometry

- CFK Identify common two and three-dimensional geometric shapes (SM, LPFL, FK)

Reading, Writing, Speaking, and Listening

Standard 1.1: Learning to Read Independently

- CFK K. Name and describe new concepts (All)
- CFK L. Acquire a reading vocabulary consisting of common words (All)
- CFK M. Listen to new vocabulary in multiple contexts in order to understand new words and concepts (All)
- CFK N. Discuss unknown words and word meanings (All)
- CFK O. Use an increasingly complex and varied spoken vocabulary (All)
- CFK P. Demonstrate an increasing understanding of new vocabulary introduced in conversations, activities, stories or books (All)

Standard 1.2: Reading Critically in all Content Areas

- CFK A. Determine important ideas and messages in informational texts (All)

Standard 1.3: Reading, Analyzing, and Interpreting Literature

- CFK A. Understand and respond to a variety of literary selections that are read, listened to, or viewed (All)

Standard 1.4: Types of Writing

- CFK D. Draw or write informational sentences using illustrations when relevant (All)

Standard 1.5: Quality of Writing

- CFK C. Retell about specific experiences, people, objects, events, or stories with a focused topic (All)
- CFK F. Use a variety of pictures or words to express a thought (All)

Standard 1.6: Speaking and Listening

- CFK A. Listen responsively to directions, stories, and conversations (All)
- CFK B. Recite rhymes, songs and familiar text (SM, LPFL, FK)
- CFK E. Ask and answer relevant questions and share experiences individually and in groups (All)
- CFK F. Initiate and respond appropriately to conversations and discussions (All)

Standard 1.7: Research

- CFK B. Demonstrate increasing understanding that technology can be used to gain information

Personal-Social

Standard 3.1: Develop Self Concept

- CFK D. Attempt new experiences with confidence and independence.

Standard 3.2: Develop Self Regulation

- CFK F. Pay attention as required by the task (All)

Standard 3.2: Develop Social Interactions

- CFK E. Enjoy playing or working with a variety of children in a number of activities (All)
- CFK I. Cooperate in small and large group activities (All)

Standard 3.4: Develop Care and Self Reliance

- CFK A. Choose materials and activities independently (All)

FIRST GRADE

Approaches to Learning

Standard AL 1: Demonstrate Initiative and Curiosity

- CFFG AL 1.1 Participate in various experiences (All)
- CFFG AL 1.2 Express choices/preferences during concrete, immediate and familiar activities (All)
- CFFG AL 1.3 Demonstrate growing eagerness and satisfaction to discover and discuss a growing range of topics, ideas, and tasks (All)
- CFFG AL 1.4 Use multiple strategies and all available senses to explore and learn from the environment (All)
- CFFG AL 1.5 Comment, predict and connect on events or aspects of the environment (LPFL, FK)
- CFFG AL 1.6 Ask questions and seek meaningful information (All)

Standard AL 2: Demonstrate Engagement and Persistence

- CFFG AL 2.1 Show persistence in ability to complete a wide variety of tasks, activities, projects, and experiences (All)
- CFFG AL 2.2 Demonstrate increasing ability to set goals and develop follow through on plans (SM, FK)
- CFFG AL 2.3 Demonstrate ability to maintain focus on a task, question, set of directions or interactions... (All)
- CFFG AL 2.5 Acquire the skills necessary for participating in a group or independently (All)

Standard AL 3: Demonstrate Reasoning and Problem Solving Skills

- CFFG AL 3.2 Discover more than one solution to a question, task or problem (SM, LPFL, FK)
- CFFG AL 3.4 Recognize and solve problems through observation, active exploration, trial and error, and interactions and discussions with peers and adults. (SM, LPFL, FK)
- CFFG AL 3.6 Accept assistance and/or cooperate to accomplish a joint task (SM, LPFL, FK)
- CFFG AL 3.7 Classify, compare and contrast objects, events and experiences (SM, LPFL, FK)

Standard AL 4: Demonstrate Flexibility, Risk Taking and Responsibility

- CFFG AL 4.3 Demonstrate growing eagerness and satisfaction to discover and discuss a growing range of topics, ideas, and tasks (All)
- CFFG AL 4.4 Use multiple strategies and all available senses to explore and learn from the environment (All)
- CFFG AL 4.5 Comment, predict and connect on events or aspects of the environment (LPFL, FK)
- CFFG AL 4.6 Ask questions and seek meaningful information (All)

Standard AL 5: Demonstrate Imagination, Creativity and Invention

- CFFG AL 5.2 Use and connect materials/strategies in uncommon ways to investigate and solve problems (SM, LPFL, FK)

Science

Science and Technology Standard

Standard 3.1: Unifying Themes

- CFFG A Know that natural and human-made objects are made up of parts (SM, FK)
- CFFG B Know models as simple simplifications of objects or processes (FK)
- CFFG C Illustrate patterns that regularly occur and reoccur in nature (LPFL, FK)
- CFFG D Know that a scale is an important attribute of natural and human-made objects, events, and phenomena (SM, FK)
- CFFG E Recognize change in natural and physical systems (LPFL, FK)

Standard 3.2: Inquiry and Design

- CFFG A Identify and use the nature of scientific and technological knowledge (All)
- CFFG B Describe objects in the world using the five senses (LPFL, FK)
- CFFG C Recognize and use the elements of scientific inquiry to solve problems (SM, LPFL, FK)
- CFFG D Recognize and use the technological design process to solve problems (SM, LPFL, FK)

Standard 3.3: Biological Sciences

- CFFG A Know the similarities and differences of living things (FK)
- CFFG B Know that living things are made up of parts that have specific functions (FK)
- CFFG C Know that characteristics are inherited and, thus, offspring closely resemble their parents (FK)
- CFFG D Identify changes in living things over time (FK)

Standard 3.4: Physical Science, Chemistry and Physics

- CFFG A Recognize basic concepts about the structure and properties of matter (FK)
- CFFG B Know basic energy types and sources (FK)
- CFFG C Observe and describe different types of force and motion (FK)
- CFFG H Identify directed air as a source of movement (FK)

Standard 3.5: Earth Sciences

- CFFG A Know basic landforms and earth history (FK)
- CFFG B Know types and uses of earth materials (FK)
- CFFG C Know basic weather elements (LPFL, FK)
- CFFG D Recognize the earth's different water resources (FK)

Standard 3.7: Technological Devices

- CFFG A Explore the use of basic tools, simple materials and techniques to safely solve problems (SM, FK)
- CFFG B Select appropriate instruments to study materials (SM, FK)
- CFFG C Identify basic computer operations and concepts (ZulaWorld)

Environmental and Ecology

Standard 4.3: Environmental Health

- CFFG A. Know that plants, animals and humans are dependent on air and water (FK)
- CFFG C. Understand that the elements of natural systems are interdependent (FK)

Standard 4.6: Ecosystems and Their Interactions

- CFFG A. Understand that living things are dependent on non-living things in the environment for survival (FK)

Standard 4.7: Threatened, Endangered and Extinct Species

- CFFG A. Identify differences in living things (FK)

Logical Mathematics

Standard 2.3: Measurement and Estimation

- CFFG A. Compare two objects using direct comparison (SM, FK)
- CFFG B. Estimate, measure and compare the lengths of objects using non-standard units (SM, LPF, FK)
- CFFG D. Determine and compare lengths of time (FK)

Standard 2.5: Mathematical Problem Solving and Communication

- CFFG A. Use appropriate problem-solving strategies (SM, LPFL, FK)
- CFFG C. Select and use an appropriate method, materials and strategy to solve problems, including mental mathematics, paper, pencil and concrete objects (SM, LPFL, FK)

Standard 2.6: Statistics and Data Analysis

- CFFG A. Formulate and answer questions that can be proven with data (LPFL, FK)
- CFFG B. Collect, organize and display relevant data to answer questions (LPFL, FK)

Standard 2.7: Probability and Predictions

- CFFG C. Discuss the results of an experiment (SM, LPFL, FK)

Reading, Writing, Speaking, and Listening

Standard 1.1: Learning to Read Independently

- CFFG E. Demonstrate a rich listening and speaking VOCABULARY, the ability to understand and use words to acquire and convey meaning (All)

Standard 1.2: Reading Critically in all Content Areas

- CFFG A. Identify, analyze and apply knowledge of the elements of a variety of informational texts to demonstrate an understanding of the information presented (All)
- CFFG B. Identify a variety of media to gain information (All)

SECOND GRADE

Approaches to Learning

Standard AL 1: Demonstrate Initiative and Curiosity

- CFSG AL 1.1 Participate willingly in various experiences (All)
- CFSG AL 1.2 Express choices/preferences during concrete, immediate and familiar activities (All)
- CFSG AL 1.3 Demonstrate growing eagerness and satisfaction to discover and discuss a growing range of topics, ideas, and tasks (All)
- CFSG AL 1.4 Use multiple strategies and all available senses to explore and learn from the environment (All)
- CFSG AL 1.5 Comment, predict and connect on events or aspects of the environment (LPFL, FK)
- CFSG AL 1.6 Ask questions and seek meaningful information (All)

Standard AL 2: Demonstrate Engagement and Persistence

- CFSG AL 2.1 Demonstrate ability to complete a wide variety of tasks, activities, projects, and experiences (All)
- CFSG AL 2.2 Demonstrate ability to set goals and develop follow through on plans (SM, FK)
- CFSG AL 2.3 Demonstrate ability to maintain focus on a task, question, set of directions or interactions... (All)
- CFSG AL 2.5 Demonstrate the skills necessary for participating in a group or independently (All)

Standard AL 3: Demonstrate Reasoning and Problem Solving Skills

- CFSG AL 3.1 Predict possible outcomes related to cause and effect (SM, FK)
- CFSG AL 3.2 Discover and try more than one solution to a question, task or problem (SM, LPFL, FK)
- CFSG AL 3.4 Recognize and solve problems through observation, active exploration, trial and error, and interactions and discussions with peers and adults. (SM, LPFL, FK)
- CFSG AL 3.6 Cooperate with others to accomplish a joint task (SM, LPFL, FK)
- CFSG AL 3.7 Classify, compare and contrast objects, events and experiences (SM, LPFL, FK)

Standard AL 4: Demonstrate Flexibility, Risk Taking and Responsibility

- CFSG AL 4.2 Participate in a variety of familiar and unfamiliar (All)
- CFSG AL 4.3 Accept responsibility for learning through active participation verbally and nonverbally (All)

Standard AL 5: Demonstrate Imagination, Creativity and Invention

- CFSG AL 5.2 Use and connect materials/strategies in uncommon ways to investigate and solve problems (SM, LPFL, FK)

Science

Science and Technology Standard

Standard 3.1: Unifying Themes

- CFSG A Know that natural and human-made objects are made up of parts (SM, FK)
- CFSG B Know models as simple simplifications of objects or processes (FK)
- CFSG C Illustrate patterns that regularly occur and reoccur in nature (LPFL, FK)
- CFSG D Know that a scale is an important attribute of natural and human-made objects, events, and phenomena (SM, FK)
- CFSG E Recognize change in natural and physical systems (LPFL, FK)

Standard 3.2: Inquiry and Design

- CFSG A Identify and use the nature of scientific and technological knowledge (All)
- CFSG B Describe objects in the world using the five senses (LPFL, FK)
- CFSG C Recognize and use the elements of scientific inquiry to solve problems (SM, LPFL, FK)
- CFSG D Recognize and use the technological design process to solve problems (SM, LPFL, FK)

Standard 3.3: Biological Sciences

- CFSG A Know the similarities and differences of living things (FK)
- CFSG B Know that living things are made up of parts that have specific functions (FK)
- CFSG C Know that characteristics are inherited and, thus, offspring closely resemble their parents (FK)
- CFSG D Identify changes in living things over time (FK)

Standard 3.4: Physical Science, Chemistry and Physics

- CFSG A Recognize basic concepts about the structure and properties of matter (FK)
- CFSG B Know basic energy types and sources (FK)
- CFSG C Observe and describe different types of force and motion (FK)

Standard 3.5: Earth Sciences

- CFSG A Know basic landforms and earth history(FK)
- CFSG B Know types and uses of earth materials (FK)
- CFSG C Know basic weather elements (LPFL, FK)
- CFSG D Recognize the earth's different water resources (FK)

Standard 3.7: Technological Devices

- CFSG A Explore the use of basic tools, simple materials and techniques to safely solve problems (SM, FK)
- CFSG B Select appropriate instruments to study materials (SM, FK)
- CFSG C Identify basic computer operations and concepts (ZulaWorld)

Environmental and Ecology

Standard 4.3: Environmental Health

- CFSG A. Know that plants, animals and humans are dependent on air and water (FK)
- CFSG C. Understand that the elements of natural systems are interdependent (FK)

Standard 4.6: Ecosystems and Their Interactions

- CFSG A. Understand that living things are dependent on non-living things in the environment for survival (FK)

Standard 4.7: Threatened, Endangered and Extinct Species

- CFSG A. Identify differences in living things (FK)

Logical Mathematics**Standard 2.3: Measurement and Estimation**

- CFSG A. Compare measurable characteristics of different objects on the same dimensions (SM, FK)
- CFSG B. Determine the measurement of objects with non-standard and standard units (SM, LPF, FK)

Standard 2.5: Mathematical Problem Solving and Communication

- CFSG A. Use appropriate problem-solving strategies (SM, LPFL, FK)
- CFSG C. Select and use an appropriate method, materials and strategy to solve problems, including mental mathematics, paper, pencil and concrete objects (SM, LPFL, FK)

Standard 2.6: Statistics and Data Analysis

- CFSG A. Formulate and answer questions that can be proven with data (LPFL, FK)
- CFSG B. Collect, organize and display relevant data to answer questions (LPFL, FK)
- CFSG C. Form and justify an opinion on whether a given statement is reasonable based on a comparison to data (LPFL, FK)

Standard 2.7: Probability and Predictions

- CFSG C. Record and analyze the results of an experiment (SM, LPFL, FK)

Reading, Writing, Speaking, and Listening**Standard 1.1: Learning to Read Independently**

- CFSG D. Demonstrate a rich listening and speaking VOCABULARY, the ability to understand and use words to acquire and convey meaning (All)

Standard 1.2: Reading Critically in all Content Areas

- CFSG A. Identify, analyze and apply knowledge of the elements of a variety of informational texts to demonstrate an understanding of the information presented (All)
- CFSG B. Identify a variety of media to gain information (All)