



CHILDREN'S MUSEUM OF SOUTH CAROLINA EDUCATIONAL PROGRAMS CORRELATION TO THE SOUTH CAROLINA SCIENCE AND MATH CURRICULUM STANDARDS BY GRADE

PROGRAMS for CHILD DEVELOPMENT

Shaping Up!

Standards Addressed:

Data Analysis and Probability

I. Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.

Expectation

A. Pose questions and gather data about themselves and their surroundings.

1. Collect data related to familiar experiences by counting.

B. Sort and classify objects according to their attributes and organize data about the objects.

1. Sort and classify by a single attribute (color, shape, size).

Geometry

I. Analyze characteristics and properties of two-and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships.

Expectation

A. Recognize, name, build, draw, compare, and sort two-and three dimensional shapes.

1. Identify, name, model and draw two-dimensional geometric shapes (circle, square, triangle, rectangle).

3. Sort two-dimensional shapes according to attributes.

D. Recognize geometric shapes and structures in the environment and specify their location.

1. Locate geometric shapes in the environment.

Shoes for S.A.M.

Standards Addressed:

Measurement

I. Understand measurable attributes of objects and the units, systems, and processes of measurement.

Expectation

B. Compare and order objects according to their attributes.

1. Use basic comparison words (e.g., "His truck is bigger than mine").

C. Understand how to measure using nonstandard and standard units.

1. Use nonstandard units of measure to explore everyday objects.

Bubbles Away!

Standards Addressed:

Science

Students will be predicting, observing, organizing an experiment and comparing mixtures.

Geometry

II. Specify locations and describe spatial relationships using coordinate geometry and other representational systems

Expectation

A. Describe, name, and interpret relative positions in space and apply ideas about relative position.

1. Use positional words to describe the location of objects (up, down, on off, over, under).

Measurement

I. Understand measurable attributes of objects and the units, systems, and processes of measurement.

Expectation

B. Compare and order objects according to their attributes.

1. Use basic comparison words (e.g. "His truck is bigger than mine")

PROGRAMS for KINDERGARTEN

Reach Out and Touch!

Standards Addressed:

Scientific Inquiry

Standard K-1: The student will demonstrate an understanding of scientific inquiry, including the processes, skills, and mathematical thinking necessary to conduct a simple scientific investigation.

Indicators

K-1.1 Identify observed objects or events by using the senses.

K-1.3 Predict and explain information or events based on observation or previous experience.

My Body

Standard K-3: The student will demonstrate an understanding of the distinct structures of human body and the different functions they serve. (Life Science)

Indicators

K-3.1 Identify the distinct structures in the human body that for walking, holding, touching, seeing, smelling, hearing, talking, and tasting.

K-3.2 Identify the functions of the sensory organs (including the eyes, nose, ears, tongue, and skin).

Exploring Matter

Standard K-5: The student will demonstrate the understanding that objects can be described by their observable properties. (Physical Science)

Indicators

K-5.1 Classify objects by observable properties (including size, color, shape, magnetic attraction, heaviness, texture, and the ability to float in water).

K-5.2 Compare the properties of different types of materials (including wood, plastic, metal, cloth, and paper) from which objects are made.

I Sense Popcorn!

Standards Addressed:

Scientific Inquiry

Standard K-1: The student will demonstrate an understanding of scientific inquiry, including the processes, skills, and mathematical thinking necessary to conduct a simple scientific investigation.

Indicators

K-1.1 Identify observed objects or events by using the senses.

K-1.3 Predict and explain information or events based on observation or previous experience.

My Body

Standard K-3: The student will demonstrate an understanding of the distinct structures of human body and the different functions they serve. (Life Science)

Indicators

K-3.1 Identify the distinct structures in the human body that for walking, holding, touching, seeing, smelling, hearing, talking, and tasting.

K-3.2 Identify the functions of the sensory organs (including the eyes, nose, ears, tongue, and skin).

Exploring Matter

Standard K-5: The student will demonstrate the understanding that objects can be described by their observable properties. (Physical Science)

Indicators

K-5.1 Classify objects by observable properties (including size, color, shape, magnetic attraction, heaviness, texture, and the ability to float in water).

K-5.2 Compare the properties of different types of materials (including wood, plastic, metal, cloth, and paper) from which objects are made.

Floaters and Sinkers

Standards Addressed:

Scientific Inquiry

Standard K-1: The student will demonstrate an understanding of scientific inquiry, including the processes, skills, and mathematical thinking necessary to conduct a simple scientific investigation.

Indicators

K-1.1 Identify observed objects or events by using the senses.

K-1.3 Predict and explain information or events based on observation or previous experience.

Exploring Matter

Standard K-5: The student will demonstrate the understanding that objects can be described by their observable properties. (Physical Science)

Indicators

K-5.1 Classify objects by observable properties (including size, color, shape, magnetic attraction, heaviness, texture, and the ability to float in water).

K-5.2 Compare the properties of different types of materials (including wood, plastic, metal, cloth, and paper) from which objects are made.

Attract Me, Attract Me Not

Standards Addressed:

Scientific Inquiry

Standard K-1: The student will demonstrate an understanding of scientific inquiry, including the processes, skills, and mathematical thinking necessary to conduct a simple scientific investigation.

Indicators

K-1.1 Identify observed objects or events by using the senses.

K-1.3 Predict and explain information or events based on observation or previous experience.

K-1.5 Use appropriate safety procedures when conducting investigations.

Exploring Matter

Standard K-5: The student will demonstrate the understanding that objects can be described by their observable properties. (Physical Science)

Indicators

K-5.1 Classify objects by observable properties (including size, color, shape, magnetic attraction, heaviness, texture, and the ability to float in water).

K-5.2 Compare the properties of different types of materials (including wood, plastic, metal, cloth, and paper) from which objects are made.

Air, Air Everywhere!

Standards Addressed:

Scientific Inquiry

Standard K-1: The student will demonstrate an understanding of scientific inquiry, including the processes, skills, and mathematical thinking necessary to conduct a simple scientific investigation.

Indicators

K-1.1 Identify observed objects or events by using the senses.

K-1.3 Predict and explain information or events based on observation or previous experience.

K-1.5 Use appropriate safety procedures when conducting investigations.

Characteristics of Organisms

Standard K-2: The student will demonstrate an understanding of the characteristics of organisms. (Life Science)

Indicators:

K-2.1 Recognize what organisms need to stay alive (including air, water, food, and shelter).

PROGRAMS for FIRST GRADE

The Mighty Penny

Standards Addressed:

Scientific Inquiry

Standard 1-1: The student will demonstrate an understanding of scientific inquiry, including the processes, skills, and mathematical thinking necessary to conduct a simple scientific investigation.

Indicators

1-1.1 Compare, classify, and sequence objects by number, shape, texture, size, color, and motion, using standard English units of measurement where appropriate.

1-1.2 Use tools (including rulers) safely, accurately, and appropriately when gathering specific data.

1-3.1 Carry out simple scientific investigations when given clear directions.

1-4.1 Use appropriate safety procedures when conducting investigations.

Data Analysis and Probability

Standard I: Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.

Expectation

A. Pose questions and gather data about themselves and their surroundings.

1. Pose and answer questions about charts and graphs relating to familiar experiences (e.g., recording daily temperature, the lunch count, class attendance, and favorite flavors of ice cream).

C. Represent data using concrete objects, pictures, and graphs.

1. Use organized data to construct picture, object, and bar graphs.

Measurement

Standard II: Apply appropriate techniques, tools, and formulas to determine measurements.

Expectation

D. Develop common referents for measures to make comparisons and estimates.

1. Compare and contrast estimates of measurements to actual findings.

The Tiny Seed

Standards Addressed:

Scientific Inquiry

Standard 1-1: The student will demonstrate an understanding of scientific inquiry, including the processes, skills, and mathematical thinking necessary to conduct a simple scientific investigation.

Indicators

1-1.1 Compare, classify, and sequence objects by number, shape, texture, size, color, and motion, using standard English units of measurement where appropriate.

1-1.2 Use tools (including rulers) safely, accurately, and appropriately when gathering specific data.

1-3.1 Carry out simple scientific investigations when given clear directions.

1-4.1 Use appropriate safety procedures when conducting investigations.

Plants

Standard 1-2: The student will demonstrate an understanding of the special characteristics and needs of plants that allow them to survive in their own distinct environments. (Life Science)

Indicators

1-2.1 Recall the basic needs of plants (including air, water, nutrients, space, and light) for energy and growth.

1-2.2 Illustrate the major structures of plants (including stems, roots, leaves, flowers, fruits, and seeds).

1-2.4 Summarize the life cycle of plants (including germination, growth and the production of flowers and seeds).

1-2.6 Identify characteristics of plants (including types of stems, roots, leaves, flowers, and seeds)

that help them survive in their own distinct environments.

What Do You Hear?

Standards Addressed:

Scientific Inquiry

Standard 1-1: The student will demonstrate an understanding of scientific inquiry, including the processes, skills, and mathematical thinking necessary to conduct a simple scientific investigation.

Indicators

- 1-1.1 Compare, classify, and sequence objects by number, shape, texture, size, color, and motion, using standard English units of measurement where appropriate.
- 1-3.1 Carry out simple scientific investigations when given clear directions.
- 1-4.1 Use appropriate safety procedures when conducting investigations.

Exploring Motion

Standard 1-5: The student will demonstrate an understanding of the positions and motions of objects. (Physical Science)

Indicators

- 1-5.2 Explain the importance of pushing and pulling to the motion of an object.
- 1-5.3 Illustrate the fact that sound is produced by vibrating objects.

PROGRAMS for SECOND GRADE

Solids & Liquids: Soliquid!

Standards Addressed:

Scientific Inquiry

Standard 2-1: The student will demonstrate an understanding of scientific inquiry, including the processes, skills, and mathematical thinking necessary to conduct a simple scientific investigation.

Indicators

- 2-1.1 Carry out simple scientific investigations to answer questions about familiar objects and events.
- 2-1.3 Represent and communicate simple data and explanations through drawings, tables, pictographs, bar graphs, and oral and written language.

Properties and Changes in Matter

Standard 2-4: The student will demonstrate an understanding of the properties of matter and the changes that matter undergoes. (Physical Science)

Indicators

- 2-4.1 Recall the properties of solids and liquids.
- 2-4.3 Explain how matter can be changed in ways such as heating or cooling, cutting or tearing, bending or stretching.

Solids & Liquids: More Soliquid!

Standards Addressed:

Scientific Inquiry

Standard 2-1: The student will demonstrate an understanding of scientific inquiry, including the processes, skills, and mathematical thinking necessary to conduct a simple scientific investigation.

Indicators

- 2-1.1 Carry out simple scientific investigations to answer questions about familiar objects and events.
- 2-1.3 Represent and communicate simple data and explanations through drawings, tables, pictographs, bar graphs, and oral and written language.

Properties and Changes in Matter

Standard 2-4: The student will demonstrate an understanding of the properties of matter and the changes that matter undergoes. (Physical Science)

Indicators

- 2-4.2 Recall the properties of solids and liquids.
- 2-4.4 Recognize that different materials can be mixed together and then separated again.

Magnetism: Magnet Force Be With You!

Standards Addressed:

Scientific Inquiry

Standard 2-1: The student will demonstrate an understanding of scientific inquiry, including the processes, skills, and mathematical thinking necessary to conduct a simple scientific investigation.

Indicators

- 2-1.1 Carry out simple scientific investigations to answer questions about familiar objects and events.
- 2-1.3 Represent and communicate simple data and explanations through drawings, tables, pictographs, bar graphs, and oral and written language.

Standard 2-5: The student will demonstrate an understanding of force and motion by applying the properties of magnetism. (Physical Science)

Indicators

- 2-5.1 Use magnets to make an object move without being touched.
- 2-5.2 Explain how the poles of magnets affect each other (that is, they attract and repel one another).

2-5.3 Compare the effect of magnets on various materials.

2-5.4 Identify everyday uses of magnets.

Measurement: Measuring With Grow Creatures!

Science Standards Addressed:

Scientific Inquiry

Standard 2-1: The student will demonstrate an understanding of scientific inquiry, including the processes, skills, and mathematical thinking necessary to conduct a simple scientific investigation.

Indicators

2-1.1 Carry out simple scientific investigations to answer questions about familiar objects and events.

2-1.2 Use tools (including thermometers, rain gauges, balances, and measuring cups) safely, accurately, and appropriately when gathering specific data in US customary (English) and metric units of measurement.

2-1.3 Represent and communicate simple data and explanations through drawings, tables, pictographs, bar graphs, and oral and written language.

Mathematics Standards Addressed:

Grades PreK–2: Measurement

Standard

I. Understand measurable attributes of objects and the units, systems, and processes of measurement.

Expectations

A. Recognize the attributes of length, volume, weight, area, and time.

1. Discriminate among the functions of length, capacity, weight (mass), perimeter, area, time, and temperature.

C. Understand how to measure using nonstandard and standard units.

1. Use nonstandard and standard (U.S. customary or English and metric) systems of measurement:

a. use actual measuring devices to measure length, volume, and mass; and use actual measuring devices to compare metric and U.S. customary units (cups, pints, quarts, gallons, and liters) for measuring liquid volume, using the concepts of more, less, and equivalent.

2. Measure the length of an object in inches and/or half inches.

PROGRAMS for THIRD GRADE

Earth Materials: What's In My Rock?

Standards Addressed:

Scientific Inquiry

Standard 3-1: The student will demonstrate an understanding of scientific inquiry, including the processes, skills, and mathematical thinking necessary to conduct a simple scientific investigation.

Indicators

- 3-1.1 Classify objects by two of their properties (attributes).
- 3-1.5 Use tools (including beakers, meter tapes and sticks, forceps/tweezers, tuning forks, graduated cylinders, and graduated syringes) safely, accurately, and appropriately when gathering specific data.
- 3-1.6 Infer meaning from data communicated in graphs, tables, and diagrams.
- 3-1.8 Use appropriate safety procedures when conducting investigations.

Earth's Materials and Changes

Standard 3-3: The student will demonstrate an understanding of Earth's composition and the changes that occur to the features of Earth's surface. (Earth Science)

Indicators

- 3-3.1 Classify rocks (including sedimentary, igneous, and metamorphic) and soils (including humus, clay, sand, and silt) on the basis of their properties.
- 3-3.2 Identify common minerals on the basis of their properties by using a minerals identification key.

Sound: Do You Hear Something?

Standards Addressed:

Scientific Inquiry

Standard 3-1: The student will demonstrate an understanding of scientific inquiry, including the processes, skills, and mathematical thinking necessary to conduct a simple scientific investigation.

Indicators

- 3-1.1 Classify objects by two of their properties (attributes).
- 3-1.4 Predict the outcome of a simple investigation and compare the result with the prediction.
- 3-1.5 Use tools (including beakers, meter tapes and sticks, forceps/tweezers, tuning forks, graduated cylinders, and graduated syringes) safely, accurately, and appropriately when gathering specific data.

Standard 3-5: The student will demonstrate an understanding of how motion and sound are affected by a push or pull on an object and the vibration of an object. (Physical Science)

Indicators

- 3-5.5 Recall that vibrating objects produce sound and that vibrations can be transferred from one material to another.
- 3-5.6 Compare the pitch and volume of different sounds.
- 3-5.8 Explain how the vibration of an object affects pitch.

PROGRAMS for FOURTH GRADE

Weather: Weather Watchers

Standards Addressed:

Scientific Inquiry

Standard 4-1: The student will demonstrate an understanding of scientific inquiry, including the processes, skills, and mathematical thinking necessary to conduct a simple scientific investigation.

Indicators

4-1.3 Summarize the characteristics of a simple scientific investigation that represent a fair test (including a question that identifies the problem, a prediction that indicates a possible outcome, a process that test one manipulated variable at a time, and results that are communicated and explained).

4-1.6 Construct and interpret diagrams, tables, and graphs made from recorded measurements and observations.

4-1.7 Use appropriate safety procedures when conducting investigations.

Standard 4-4: The student will demonstrate an understanding of weather patterns and phenomena.(Earth Science)

Indicators

4-4.3 Compare daily and seasonal changes in weather conditions (including wind speed and direction, precipitation, and temperature) and patterns.

4-4.4 Summarize the conditions and effects of severe weather phenomena (including thunderstorms, hurricanes, and tornadoes) and related safety concerns.

4-4.5 Carry out the procedures for data collecting and measuring weather conditions (including wind speed and direction, precipitation, and temperature) by using appropriate tools and instruments.

4-4.7 Predict weather from data collected through observation and measurements.

PROGRAMS for FIFTH GRADE

Mixtures & Solutions: All Mixed Up

Standards Addressed:

Scientific Inquiry

Standard 5-1: The student will demonstrate an understanding of scientific inquiry, including the foundations of technological design and the processes, skills, and mathematical thinking necessary to conduct a controlled scientific investigation.

Indicators

5-1.3 Plan and conduct controlled scientific investigations, manipulating one variable at a time.

5-1.4 Use appropriate tools and instruments (including a timing device and a 10x magnifier) safely and accurately when conducting a controlled scientific investigation.

5-1.6 Evaluate results of an investigation to formulate a valid conclusion based on evidence and communicate the findings of the evaluation in oral or written form.

5-1.8 Use appropriate safety procedures when conducting investigations.

Standard 5-4: The student will demonstrate an understanding of properties of matter. (Physical Science)

Indicators

5-4.3 Summarize the characteristics of a mixture, recognizing a solution as a kind of mixture.

5-4.4 Use the processes of filtration, sifting, magnetic attraction, evaporation, chromatography, and flotation to separate mixtures.

5-4.7 Illustrate the fact that when some substances are mixed together, they chemically combine to form a new substance that cannot be easily separated.

Mixtures & Solutions: Solute vs. Solvent

Standards Addressed:

Scientific Inquiry

Standard 5-1: The student will demonstrate an understanding of scientific inquiry, including the foundations of technological design and the processes, skills, and mathematical thinking necessary to conduct a controlled scientific investigation.

Indicators

5-1.4 Use appropriate tools and instruments (including a timing device and a 10x magnifier) safely and accurately when conducting a controlled scientific investigation.

5-1.6 Evaluate results of an investigation to formulate a valid conclusion based on evidence and communicate the findings of the evaluation in oral or written form.

5-1.8 Use appropriate safety procedures when conducting investigations.

Standard 5-4: The student will demonstrate an understanding of properties of matter. (Physical Science)

Indicators

5-4.3 Summarize the characteristics of a mixture, recognizing a solution as a kind of mixture.

5-4.5 Explain how the solute and the solvent in a solution determine the concentration.

5-4.6 Explain how temperature change, particle size, and stirring affect the rate of dissolving.

Mixtures & Solutions: Enough is Enough

Standards Addressed:

Scientific Inquiry

Standard 5-1: The student will demonstrate an understanding of scientific inquiry, including the foundations of technological design and the processes, skills, and mathematical thinking necessary to conduct a controlled scientific investigation.

Indicators

5-1.3 Plan and conduct controlled scientific investigations, manipulating one variable at a time.

5-1.4 Use appropriate tools and instruments (including a timing device and a 10x magnifier) safely and accurately when conducting a controlled scientific investigation.

5-1.6 Evaluate results of an investigation to formulate a valid conclusion based on evidence and communicate the findings of the evaluation in oral or written form.

5-1.8 Use appropriate safety procedures when conducting investigations.

Standard 5-4: The student will demonstrate an understanding of properties of matter. (Physical Science)

Indicators

5-4.3 Summarize the characteristics of a mixture, recognizing a solution as a kind of mixture.

5-4.5 Explain how the solute and the solvent in a solution determine the concentration.

5-4.6 Explain how temperature change, particle size, and stirring affect the rate of dissolving.

Variables: Flipping Out

Standards Addressed:

Scientific Inquiry

Standard 5-1: The student will demonstrate an understanding of scientific inquiry, including the foundations of technological design and the processes, skills, and mathematical thinking necessary to conduct a controlled scientific investigation.

Indicators

5-1.1 Identify questions suitable for generating a hypothesis.

5-1.2 Identify independent (manipulated), dependent (responding), and controlled variables in an experiment.

5-1.3 Plan and conduct controlled scientific investigations, manipulating one variable at a time.

5-1.5 Construct a line graph from recorded data with correct placement of independent (manipulated) and dependent (responding) variables.

5-1.6 Evaluate results of an investigation to formulate a valid conclusion based on evidence and communicate the findings of the evaluation in oral or written form.

5-1.8 Use appropriate safety procedures when conducting investigations.

Variables: Float My Boat

Standards Addressed:

Scientific Inquiry

Standard 5-1: The student will demonstrate an understanding of scientific inquiry, including the foundations of technological design and the processes, skills, and mathematical thinking necessary to conduct a controlled scientific investigation.

Indicators

5-1.1 Identify questions suitable for generating a hypothesis.

5-1.2 Identify independent (manipulated), dependent (responding), and controlled variables in an experiment.

5-1.3 Plan and conduct controlled scientific investigations, manipulating one variable at a time.

5-1.5 Construct a line graph from recorded data with correct placement of independent (manipulated) and dependent (responding) variables.

5-1.6 Evaluate results of an investigation to formulate a valid conclusion based on evidence and communicate the findings of the evaluation in oral or written form.

5-1.8 Use appropriate safety procedures when conducting investigations.

Variables: The Swinging Pendulum

Standards Addressed:

Scientific Inquiry

Standard 5-1: The student will demonstrate an understanding of scientific inquiry, including the foundations of technological design and the processes, skills, and mathematical thinking necessary to conduct a controlled scientific investigation.

Indicators

- 5-1.1 Identify questions suitable for generating a hypothesis.
- 5-1.2 Identify independent (manipulated), dependent (responding), and controlled variables in an experiment.
- 5-1.3 Plan and conduct controlled scientific investigations, manipulating one variable at a time.
- 5-1.5 Construct a line graph from recorded data with correct placement of independent (manipulated) and dependent (responding) variables.
- 5-1.6 Evaluate results of an investigation to formulate a valid conclusion based on evidence and communicate the findings of the evaluation in oral or written form.
- 5-1.8 Use appropriate safety procedures when conducting investigations.

Variables: Plane Sense

Standards Addressed:

Scientific Inquiry

Standard 5-1: The student will demonstrate an understanding of scientific inquiry, including the foundations of technological design and the processes, skills, and mathematical thinking necessary to conduct a controlled scientific investigation.

Indicators

- 5-1.1 Identify questions suitable for generating a hypothesis.
- 5-1.2 Identify independent (manipulated), dependent (responding), and controlled variables in an experiment.
- 5-1.3 Plan and conduct controlled scientific investigations, manipulating one variable at a time.
- 5-1.5 Construct a line graph from recorded data with correct placement of independent (manipulated) and dependent (responding) variables.
- 5-1.6 Evaluate results of an investigation to formulate a valid conclusion based on evidence and communicate the findings of the evaluation in oral or written form.
- 5-1.8 Use appropriate safety procedures when conducting investigations.