Science
GRADE 1

Life Science	Physical Science	Earth and Space Science
Human Body and Growth You Grow and Change: • Changes in weight, height, bones, teeth You, Inside and Out: • Bones, muscles, skin, heart, lungs, digestive system **Nutrition** Balanced Diet Food Pyramid	**Matter** Looking at Matter • Using senses, describing properties of matter, measurements (can be incorporated into rock study) Comparing Matter • Solids, liquids, gases, physical changes	**Plants** Characteristics of Trees Plant characteristics Plant Products **Rocks** Properties of Rocks Classifying Rocks Rocks Can Change

> ## STANDARD 1
> **The student *understands and uses scientific concepts and principles.***

To meet this standard, the student will:

Benchmark 1.1.1:   **Use properties to identify, describe, and categorize substances, materials, and objects**

Indicators:
Physical

1.1.1.1 Identify materials by using properties
1.1.1.2 Describe and sort objects using sensory terms and properties including shape, size, color, texture, weight, and length
1.1.1.3 List the different states of matter
1.1.1.4 Describe the phases of matter associated with a substance at particular temperatures by using properties
1.1.1.4 Classify solids according to their size, shape, color, texture, hardness, ability to change shape, magnetic attraction, whether they sink or float, and use

Earth

1.1.1.5 Identify characteristics of plants and trees through observation and collection
1.1.1.6 Describe rocks by color, weight, and texture to classify
1.1.1.7 Identify properties of rocks

Benchmark 1.1.2:   **Identify, describe, and categorize living things based on their characteristics**

Indicators:
Life

1.1.2.1 Distinguish between living and non-living things by using characteristics
1.1.2.2 Sort/classify organs, tissues, and organ systems
1.1.2.3 Describe the function of bones, muscles, skin, heart, lungs, and digestive system

Earth

1.1.2.4 Distinguish between renewable and nonrenewable resources

Key: 1. Grade 1.1 Standard   1.1.1 Benchmark   1.1.1.1 Indicator

SCS Curriculum, Science, Grade 1, Approved January, 2007, Revised June, 2010

Benchmark 1.1.3: **Measure properties and characteristics**

Indicators:
      1.1.3.1 Measure time, temperature, and length with instruments
      1.1.3.2 Use basic time scales (hours, days, weeks, months, and years in real life situations

Benchmark 1.1.4: **Recognize the components, structure, and organization of systems and the interconnections within and among them**
Indicators:
Physical
      1.1.4.1 Observe objects with a magnifying glass
Earth
      1.1.4.2 Explain that, as humans, we need food (nutrition), water, and air to survive
      1.1.4.3 Identify the components of simple systems, such as the digestive system

Benchmark 1.1.5: **Understand that interactions within and among systems cause changes in matter and energy**
Indicators:
Physical
      1.1.5.1 Record observations of matter changing from one physical state to another
      1.1.5.2 Investigate and describe the results of mixing different substances such as salt and pepper, water and sand, water and oil, and water and salt
Earth
      1.1.5.3 Record observations of cyclic events
      1.1.5.4 Describe how rocks and water can change rocks
      1.1.5.5 Identify rocks as sedimentary, igneous, or metamorphic
      1.1.5.6 Explain the different ways rocks originate
Life
      1.1.5.7 State the ways that living things (including humans) can affect the environment in positive and negative ways
      1.1.5.8 Identify healthy actions that effect weight, height, bones, and teeth

Benchmark 1.1.6: **Construct and use models to predict, test, and understand scientific phenomena**

Indicators:
Earth
      1.1.6.1 Construct a physical model
Life
      1.1.6.2 Construct drawings of living systems or components of living systems

Science

GRADE 1

STANDARD 2

The student *conducts scientific investigations to expand understanding*
of the natural world.

To meet this standard, the student will:

Benchmark 1.2.1: **Plan and implement scientific investigations**

Indicators:

    1.2.1.1 Make accurate observations
    1.2.1.2 Ask questions in response to observations
    1.2.1.3 Predict possible results based on prior knowledge
    1.2.1.4 Use appropriate tools to collect and sort data
    1.2.1.5 Individually and collaboratively conduct a safe, controlled experiment
    1.2.1.6 Appropriately record data and results
    1.2.1.7 Follow proper safety procedures

Benchmark 1.2.2: **Think logically, analytically, and creatively**

Indicators:

    1.2.2.1 Verify a conclusion by examining evidence
    1.2.2.2 Collect and organize scientific information

Benchmark 1.2.3: **Practice the principles of scientific inquiry**

Indicators:

    1.2.3.1 Explain how science is one way of looking at the world
    1.2.3.2 Show examples of how data sometimes contradicts predictions
    1.2.3.3 Give proper credit for a discovery to the discoverer

Benchmark 1.2.4: **Understand the relationship between evidence and scientific explanation**

Indicator:

    1.2.4.1 Compare and share information based on evidence

Science
GRADE 1

STANDARD 3
The student *applies science knowledge and skills to solve problems and meet challenges.*

To meet this standard, the student will:

Benchmark 1.3.1: **Identify problems and challenges in which science knowledge and skills can be applied**

Indicators:
    1.3.1.1   Generate and list ideas to investigate a problem
    1.3.1.2   Use resources to develop ideas
    1.3.1.3   Identify a problem which science or technology might be used to solve
    1.3.1.4   Make predictions based on prior knowledge
    1.3.1.5   Develop a hypothesis

Benchmark 1.3.2: **Research, design, and test a variety of ways to address problems and/or challenges**

Indicators:
    1.3.2.1   Develop a plan to test a hypothesis
    1.3.2.2   Identify and gather necessary equipment and materials
    1.3.2.3   Work collaboratively to test the hypothesis
Life
    1.3.2.4   Categorize food according to the food pyramid

Benchmark 1.3.3: **Evaluate solutions and consequences**

Indicators:
    1.3.3.1   Discuss solutions and possible outcomes
    1.3.3.2   Organize and transfer data into narrative, pictorial, and/or graphic format

Science
GRADE 1

STANDARD 4
The student *uses effective communication skills and tools to build and demonstrate understanding of science.*

To meet this standard, the student will:

Benchmark 1.4.1:   **Use listening, observing, and reading skills to obtain scientific information**

Indicators:
    1.4.1.1   Listen to someone describe his/her own observations
    1.4.1.2   Share opinions about others' observations
    1.4.1.3   Use age-appropriate science informational text to accomplish a goal
    1.4.1.4   Read science trade books and other resource materials

Benchmark 1.4.2:   **Use drawing, writing and speaking skills to organize and express science ideas**

Indicators:
    1.4.2.1   Draw or write to summarize and share data
    1.4.2.2   Present information orally to an audience

Benchmark 1.4.3:   **Use effective communication strategies and tools to prepare and present science information**
Indicators:
    1.4.3.1   Present information through drawings, models, role plays, lists, data tables, verbal explanations,
        and other media
    1.4.3.2   State conclusions based on information presented

Science
GRADE 1

<div style="border:1px solid">

STANDARD 5
The student *understands how science knowledge and skills are connected to other subject areas and real-life situations.*

</div>

To meet this standard, the student will:

Benchmark 1.5.1:   Use mathematics to enhance scientific understanding

Indicators:
    1.5.1.1   Describe patterns in science and state their usefulness
    1.5.1.2   Make predictions using estimation skills
    1.5.1.3   Share data using symbols, graphs, and numbers
    1.5.1.4   Analyze and apply data from graphs and charts to make predictions, solve problems, and draw conclusions

Benchmark 1.5.2:   Understand the relationship between science and technology

Indicators:
    1.5.2.1   Record appropriate measurements for the collection and comparison of data
    1.5.2.2   Access information using technology (i.e., computer, video, and internet)
    1.5.2.3   Present information through age appropriate software

Benchmark 1.5.3:   Examine the relationship between science and history

Indicator:
    1.5.3.1   Listen to stories about significant contributions made by individuals from the past

Benchmark 1.5.4:   Examine the relationship among science, society, and the workplace

Indicators:
    1.5.4.1   Identify and describe examples of how science and technology influence everyday life
    1.5.4.2   State how natural resources are used by people, and give examples of how people can impact the environment
    1.5.4.3   Explain how scientific and technological information can influence personal decisions
    1.5.4.4   Discuss how science and mathematics skills are used in familiar workplace occupations

Science
GRADE 1

STANDARD 6
The student *understands how science knowledge carries with it responsibility for its application.*

To meet this standard, the student will:

Benchmark 1.6.1:   **Understand how science contributes to the treatment of diseases in the maintenance of a healthy lifestyle (Personal and Community Health)**
Indicator:
    1.6.1.1   Discuss effects of science on our health

Benchmark 1.6.2:   **Understands how the use of resources affects population growth and the global environment (Population)**
Indicators:
    1.6.2.1   Brainstorm a list of resources that affect the environment
    1.6.2.2   State the cause and effects of how resources affect the population
    1.6.2.3   As a group, predict possible solutions for maintaining natural resources

Benchmark 1.6.3:   **Understand the importance of maintaining resources and environmental quality. (Environmental Quality/Resources)**
Indicators:
    1.6.3.1   Talk about the importance of protecting the Earth's natural resources even as we use products of plants
    1.6.3.2   Describe various ways that students can play their part to conserve resources such as trees

Science
GRADE 1

STANDARD 7
The student *applies a Christian perspective to scientific concepts*
and principles.

To meet this standard, the student will:

Benchmark 1.7.1: **Understand that the Bible and the findings of science do not conflict**

Indicators:
Earth
    1.7.1.1 Identify that the Bible tells us that God is the creator of our earth, including plants and rocks
Life
    1.7.1.2 Use words and drawings to explain that God created our bodies

Benchmark 1.7.2: **Understand that the Bible teaches us that God is the creator of everything**

Indicators:
Earth
    1.7.2.1 Identify God as the creator of different kinds of plants and rocks
Life
    1.7.2.2 State that God created our complex bodies so that we can enjoy and care for his world

Benchmark 1.7.3: **Understand that God preserves and controls His creation, the world we study in science, so that it continues to function as He planned**
Indicators:
    1.7.3.1 Explain that the consistent pattern of plants, animals, and human interdependence show God's control and plan
Physical
    1.7.3.2 Explain how the cycles of the states of matter show God's control and orderliness
Life
    1.7.3.3 Use words and drawings to explain that God created our bodies in an orderly fashion
    1.7.3.4 Identify ways that God wants us to take care of our bodies so we can stay healthy, such as by eating a balanced diet

Benchmark 1.7.4: **Understand that God created for His own purpose, and creation is meant to praise and glorify God**
Indicators:
Physical
    1.7.4.1 Identify that God created objects with different characteristics for us to use to honor Him
Earth
    1.7.4.2 Develop and implement a list of ways in which we can care for our Earth
Life
    1.7.4.3 Identify ways in which we can use our bodies to praise God

Benchmark 1.7.5: **Understand that God uses His creation to teach people eternal truth through the study of science**
Indicators:
    1.7.5.1 Credit God with the wonder of life and the world around us
    1.7.5.2 Identify examples of patterns and order in science that point to God as the creator

Key: 1. Grade 1.1 Standard 1.1.1 Benchmark 1.1.1.1 Indicator