

GRADE 2
Overview of the Science Standards

I. PHYSICAL SCIENCE

- *The motion of objects can be observed and measured.*
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II. LIFE SCIENCES

- *Plants and animals have predictable life cycles.*
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III. EARTH SCIENCES

- *Earth is made of materials that have distinct properties and provide resources for human activities.*
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IV. INVESTIGATION AND EXPERIMENTATION

- *Scientific progress is made by asking meaningful questions and conducting careful investigations.*
-

Aligning the Instructional Program with the Grade Level Standards and Benchmarks

In order to align the instructional program with the prescribed content standards for the grade, it is critical that the standards and their affiliated benchmarks are reviewed regularly so as to become very familiar with them. At the outset of each quarter/trimester an initial decision must be made as to which standards and benchmark proficiencies will be included in the instructional program. At the end of each quarter/trimester the teacher should fill out the **response section next to each benchmark**. This activity will serve as a checkpoint and will help gauge what still needs to be taught or what should be re-taught.

Complete the Response Section

ST/B = Standard and Benchmark **P**: Priority benchmark **Q**: Quarter 1 or 2 or 3 or 4

At the start of the quarter/trimester, select the benchmarks you consider to be your “priority benchmarks.” Mark the box under the “P” code.

At the end of each quarter/trimester complete the response section **of the standard/benchmark listings, indicating to what extent students have mastered the benchmark.**

A: More than 75% of the students are proficient **B: About half of the students are proficient** **C: fewer than 25% of the students are proficient**

Sample Recording of the Response Form GRADE 2

I. PHYSICAL SCIENCE

The motion of objects can be observed and measured. As a basis for understanding this concept, students in the SECOND GRADE will ...

ST/B	P	ST/B: Standard/Benchmark P: Priority Benchmark Degree of Mastery: % of students at end of each Q: Quarter A= 75% or more B=about half C=fewer than 25%	Q 1	Q 2	Q 3	Q 4
ST1.A	P	<i>know</i> that the position of an object can be described by locating it in relation to another object or to the background.	A	B	B	C
ST1.B		<i>know</i> that an object's motion can be described by recording the change in position of the object over time.	A	A	B	B

GRADE 2
Science Standards and Benchmark Proficiencies

II. PHYSICAL SCIENCE

The motion of objects can be observed and measured. As a basis for understanding this concept, students in the SECOND GRADE will ...

ST/B	P	ST/B: Standard/Benchmark P: Priority Benchmark Degree of Mastery: % of students at end of each Q: Quarter A= 75% or more B=about half C=fewer than 25%	Q 1	Q 2	Q 2	Q 4
ST1.A		<i>know</i> that the position of an object can be described by locating it in relation to another object or to the background.				
ST1.B		<i>know</i> that an object's motion can be described by recording the change in position of the object over time.				
ST1.C		<i>know</i> that the way to change how something is moving is by giving it a push or a pull. The size of the change is related to the strength, or the amount of force of the push or pull.				
ST1.D		<i>know</i> that tools and machines are used to apply pushes and pulls (forces) to make things move.				
ST1.E		<i>know</i> that magnets can be used to make some objects move without being touched.				
ST1.F		<i>know</i> that sound is made by vibrating objects and can be described by its pitch and volume.				

III. LIFE SCIENCES

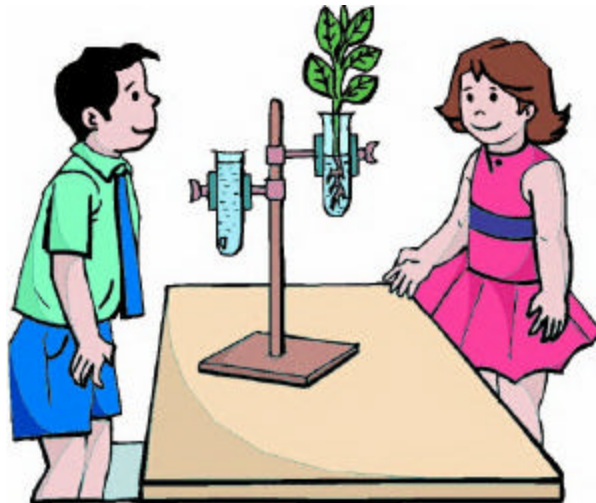
Plants and animals have predictable life cycles. As a basis for understanding this concept, students in the SECOND GRADE will ...

ST/B.	P	ST/B: Standard/Benchmark P: Priority Benchmark Degree of Mastery: % of students at end of each Q: Quarter A= 75% or more B=about half C=fewer than 25%	Q 1	Q 2	Q 3	Q 4
ST2.A		<i>know</i> that organisms reproduce offspring of their own kind and that the offspring resemble their parents and one another.				
ST2.B		<i>know</i> the sequential stages of life cycles are different for different animals, such as butterflies, frogs, and mice.				
ST2.C		<i>know</i> many characteristics of an organism are inherited from the parents. Some characteristics are caused or influenced by the environment.				
ST2.D		<i>know</i> that there is variation among individuals of one kind within a population.				
ST2.E		<i>know</i> that light, gravity, touch, or environmental stress can affect the germination, growth, and development of plants.				
ST2.F		<i>know</i> that flowers and fruits are associated with reproduction in plants.				

III. EARTH SCIENCES

Earth is made of materials that have distinct properties and provide resources for human activities. As a basis for understanding this concept, students in the SECOND GRADE will ...

ST/B	P	ST/B: Standard/Benchmark P: Priority Benchmark Degree of Mastery: % of students at end of each Q: Quarter A= 75% or more B=about half C=fewer than 25%	Q 1	Q 2	Q 2	Q 4
ST3.A		<i>know</i> how to compare the physical properties of different kinds of rocks and know that rock is composed of different combinations of minerals.				
ST3.B		<i>know</i> that smaller rocks come from the breakage and weathering of larger rocks.				
ST3.C		<i>know</i> that soil is made partly from weathered rock and partly from organic materials and that soils differ in their color, texture, capacity to retain water, and ability to support the growth of many kinds of plants.				
ST3.D		<i>know</i> that fossils provide evidence about the plants and animals that lived long ago and that scientists learn about the past history of Earth by studying fossils.				
ST3.E		<i>know</i> that rock, water, plants, and soil provide many resources, including food, fuel, and building materials, that humans use.				



INVESTIGATION AND EXPERIMENTATION

Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. In the SECOND GRADE, students will ...

ST/B.	P	ST/B: Standard/Benchmark P: Priority Benchmark Degree of Mastery: % of students at end of each Q: Quarter A= 75% or more B=about half C=fewer than 25%	Q 1	Q 2	Q 2	Q 4
ST4.A		<i>make</i> predictions based on observed patterns and not random guessing.				
ST4.B		<i>measure</i> length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units.				
ST4.C		<i>compare</i> and <i>sort</i> common objects according to two or more physical attributes (e. g., color, shape, texture, size, weight).				
ST4.D		<i>write or draw</i> descriptions of a sequence of steps, events, and observations.				
ST4.E		<i>construct</i> bar graphs to record data, using appropriately labeled axes.				
ST4.F		<i>use</i> magnifiers or microscopes to observe and draw descriptions of small objects or small features of objects.				



GRADE TWO
Standards based vocabulary for Science

Physical Sciences

attract	force	friction	gravity	magnetic
pitch	repel	vibration	volume	

Life Sciences

antenna	chrysalis	germination
insect	invertebrate	larva
metamorphosis	proboscis	pupa
reproduce	thorax	vertebrates
variation		

Earth Sciences

cast	fossil	geology
igneous	metamorphic	mold
paleontology	sedimentary rock	silt
trace fossil	weathering	