Grade 2 Expectations in Science and Technology/Engineering

Learning standard are taken from both the 1999 and May 2001 **MA Science and Technology/ Engineering Curriculum Framework.** The numbers correspond to the numbers in the May 2001 document. All students are expected to master all grade level expectations.

INQUIRY AND EXPERIMENTATION

Scientific inquiry and experimentation should not be taught or tested as separate, stand-alone skills. Rather, opportunities for inquiry and experimentation should arise within a well-planned curriculum in the domains of science. They should be assessed through examples drawn from the life, physical, and earth and space science standards so that it is clear to students that in science, *what* is known does not stand separate from *how* it is known.

In Grade 2 scientific investigations can center on student questions, observations, and communication about what they observe.

Curriculum Framework Learning Standard	Resources
Ask questions about objects, organisms, and events in the environment.	
Tell about why and what would happen if?	
Make predictions based on observed patterns**.**	
Name and use simple equipment and tools (e.g., rulers, meter sticks, thermometers, hand lenses, and balances) to gather data and extend the senses.	
Record observations and data with pictures, numbers, or written statements.	
Discuss observations with others.	

Strand 1: DOMAINS OF SCIENCE
EARTH AND SPACE SCIENCE

Second grade does not address this standard

Strand 2: DOMAINS OF SCIENCE
LIFE SCIENCE (Biology)

Curriculum Framework Learning Standard	Resources
Characteristics of Living Things	
1. Recognize that animals (including humans) and plants are living things that grow, reproduce, and need food, air and water.	**Tadpoles** **District Developed**
3. Recognize that plants and **animals** have life cycles, and that Life cycles vary for different living things.	**Tadpoles** District Developed
4. Describe ways in which many plants and **animals** closely resemble their parents in observed appearance.	**Tadpoles** District Developed
8. Identify the ways in which an organism's habitat provides for its basic needs (plants require air, water, and light: **animals** require food, water, air, and shelter).	**Tadpoles** District Developed
****These standards are review at this grade level**	
. 2. Differentiate between living and nonliving things. Group both living and nonliving things according to the characteristics that they share.	**Tadpoles** District Developed
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7. Recognize changes in appearance that animals and plants go through as the season's change.	**Tadpoles** District Developed

Strand 3: DOMAINS OF SCIENCE
THE PHYSICAL SCIENCES (Chemistry and Physics)

Curriculum Framework Learning Standard	Resources
States of Matter	
2. Identify objects and materials as solids, liquids, or gas. Recognize that solids have a definite shape and that liquids and gases take the shape of their container.	**Changes** **STC** • Lessons 1,2,3
Position and Motion of Objects	
4. Demonstrate that the way to change the motion of an object is to apply a force (give it a push or pull). The greater force, the greater the change in the motion of the object.	**Lifting Heavy Things** **Insights** • Learning Experiences 2,3,4,5,6,7,8 • Challenges 1,2,3
This standard is review at this grade level	
5. Recognize that under some conditions, objects can be balanced.	**Lifting Heavy Things** **Insights** • Learning Experiences 1,2,3

Strand 4: TECHNOLOGY/ENGINEERING

Curriculum Framework Learning Standard	Resources
Nature of Technology	
1. Describe the purpose and function of a variety of human-made objects.	**Lifting Heavy Things** Insights
Engineering: Design and Produce	
2. Invent and build simple objects (e.g., castle, hamster house), appropriately using common tools and materials (e.g., wood, glue, scissors, rulers, pencils, sandpaper, hammer, screwdriver, etc.)	**Lifting Heavy Things** Insights
3. Draw the object (that the student is building) at various stages of production.	**Lifting Heavy Things** Insights