# Grade 5 – Science Curriculum

| Earth and Space Science GLE | Student Friendly Language |
|---|---|
| ESS1:5-6:1.1<br>Describe and make predictions about local and regional weather conditions using observation and data collection methods. | I will make weather predictions for the local and regional areas. |
| ESS1:5-6:1.2<br>Identify weather patterns by tracking weather related events, such as hurricanes. | I will use a weather map and longitude/latitude coordinates to track hurricanes. |
| ESS1:5-6:1.3<br>Explain the composition and structure of the Earth's atmosphere. | I can describe the layers of the Earth's atmosphere. |
| ESS1:5-6:1.4<br>Describe weather in terms of temperature, wind speed and direction, precipitation, and cloud cover. | I can describe the current weather in temperature, wind speed/direction, cloud cover and precipitation. |
| ESS1:5-6:1.5<br>Describe how clouds affect weather and climate, including precipitation, reflecting light from the Sun, and retaining heat energy emitted from the Earth's surface. | I can explain how clouds produce precipitation. I can also explain how clouds reflect light back to the Earth and act as insulation. |
| ESS1:5-6:4.2<br>Explain that satellites can be used to view and track storms and Earth events, such as hurricanes and wild fires. | Using satellite images from the Internet, I can watch and track hurricanes. |
| ESS1:5-6:7.1<br>Explain the properties that make water an essential component of the Earth's system, including solvency, and its ability to maintain a liquid state at most temperatures. | I understand that water is essential to the Earth. |
| ESS2:5-6:1.1<br>Recognize and describe how the regular and predictable motions of the Earth and Moon explain certain Earth phenomena, such as day and night, the seasons, the year, shadows and the tides. | I can demonstrate the patterns of the Earth such as day and night, seasons, and the year. I can demonstrate solar and lunar eclipses and follow tide patterns. |
| ESS2:5-6:2.1<br>Recognize how the tilt of the Earth's axis and the Earth's revolution around the Sun affect seasons and weather patterns. | I can demonstrate how the Earth tilts on its axis to produce seasonal weather patterns. |

*Adopted by the Candia School Board: May 3, 2007*
*Adopted by the Auburn School Board: May 8, 2007*
*Adopted by the Hooksett School Board: May 15, 2007*

# Grade 5 – Science Curriculum

| | |
|---|---|
| ESS2:5-6:2.2<br>Identify and describe seasonal, daylight and weather patterns as they relate to energy. | Using solar energy, I will describe daylight and season patterns and their connection to weather. |
| ESS4:5-6:1.1<br>Understand that technology is used to design tools that improve our ability to measure and observe the world. | I understand how changes in technology improve the development in weather instruments. |
| ESS4:5-6:2.1<br>Recognize that satellites and Doppler radar can be used to observe or predict the weather. | I know that weather data is generated from satellites and Doppler radar. |
| ESS4:5-6:2.2<br>Employ knowledge of basic weather symbols to read and interpret weather and topographic maps. | I can apply weather symbols to weather and topographic maps. |
| ESS4:5-6:2.3<br>Read and interpret data from barometers, sling psychrometers, and anemometers. | I am able to read and understand information from a barometer, psychrometer, and an anemometer. |
| ESS4:5-6:4.1<br>Understand that some form of science is used in most jobs/careers and that most jobs/careers specifically require knowledge of Earth science. | I can identify science in many careers or jobs. |

*Adopted by the Candia School Board: May 3, 2007*
*Adopted by the Auburn School Board: May 8, 2007*
*Adopted by the Hooksett School Board: May 15, 2007*

# Grade 5 – Science Curriculum

| Life Science GLE | Student Friendly Language |
|---|---|
| LS1:5-6:1.1<br>Identify ways in which living things can be grouped and organized, such as taxonomic groups of plants, animals and fungi. | I can use taxonomy groups to organize living things, based on their shared characteristics. |
| LS1:5-6:1.2<br>Categorize organisms into kingdoms that are currently recognized according to their shared characteristics. Differentiate between living and nonliving things, and categorize objects in each group, using the significant observable characteristics they share, such as color, shape and size. (INACCURATE: Organisms are categorized based on shared DNA characteristics, regardless of color, shape or size.) | I can classify living and nonliving things. |
| LS1:5-6:2.1<br>Recognize that all living things are composed of cells, and explain that while many organisms are single celled, such as yeast, others, including humans, are multicellular. | I can group organisms into single cell or multicellular groups. |
| LS1:5-6:2.2<br>Explain that the way in which cells function is similar in all organisms. | I am able to explain the cells function in all living things. |
| LS1:5-6:2.3<br>Recognize that cells use energy, obtained from food, to conduct the functions necessary to sustain life, such as cell growth. | I will explain how cells use food to get energy to complete its functions. |
| LS1:5-6:2.4<br>Recognize and describe the hierarchical organization of living systems, including cells, tissues, organs, organ systems, whole organisms, and ecosystems. | I can organize systems of living things. |
| LS1:5-6:2.5<br>Explain that multicellular organisms have specialized cells, tissues, organs and organ systems that perform certain necessary functions, including digestion, respiration, reproduction, circulation, excretion, movement, control and coordination and protection from disease. | I can examine relationships between all tissues, organs, and systems. |

*Adopted by the Candia School Board: May 3, 2007*
*Adopted by the Auburn School Board: May 8, 2007*
*Adopted by the Hooksett School Board: May 15, 2007*

# Grade 5 – Science Curriculum

| | |
|---|---|
| LS1:5-6:2.6<br>Recognize that the human cells found in tissues and organs are similar to those of other animals, but somewhat different from cells found in plants. | I can compare plant and animal cells and name the similarities and differences. |
| LS1:5-6:3.1<br>Explain that cells repeatedly divide to make more cells for growth and repair. | I am able to explain cell division. |
| LS1:5-6:3.2<br>Explain that the same genetic information is copied in each cell of a new organism. | The same genetic information is copied in each new cell. |
| LS1:5-6:3.3<br>Explain that all living things reproduce in order to continue their species. | In order to continue their species, I recognize that living things reproduce. |
| LS2:5-6:1.2<br>Explain that most microorganisms do not cause disease and that many are beneficial to the environment. | I can compile ways in which microorganisms are beneficial to the environment. |
| LS3:5-6:2.1<br>Describe the fundamental concepts related to biological evolution, such as biological adaptations and the diversity of species. | I can trace a species biological evolution. |
| LS3:5-6:3.1<br>Recognize that there are genetic variations among individuals in groups of organisms and provide examples of ways these variations affect the survival of an organism. | I can identify genetic variations made by organisms to insure their survival. |
| LS3:5-6:3.2<br>Recognize that only organisms that are able to reproduce can pass on their genetic information to the next generation. | In order to create future generations, a species must reproduce. |
| LS5:5-6.2.1<br>Demonstrate the appropriate use of tools, such as thermometers, probes, microscopes and computers to gather, analyze and interpret | I am able to use a variety of tools to gather, analyze, and interpret information. |

| | |
|---|---|
| scientific and medical data.<br>LS5:5-6:3.4<br>Identify and describe some of the processes and systems used to grow food in New Hampshire, including irrigation, pest control, and harvesting. | I can identify systems and processes used to grow food in New Hampshire. |
| LS5:5-6:4.1<br>Understand that some form of science is used in most jobs/careers, and that some jobs/careers specifically require knowledge of Life science. | I can identify the use of science in many careers and jobs. |

# Grade 5 – Science Curriculum

| Physical Science GLE | Student Friendly Language |
|---|---|
| PS2:5-6:3.1<br>Explain that the pitch of a sound depends on the frequency of the vibration producing it. | I can demonstrate the pitch of a sound by using vibrations. |
| PS2:5-6:3.2<br>Explain that sound vibrations move at different speeds, have different wavelengths and establish wave-like disturbances that spread out from the source. | I can show that sound moves at different speeds and has different wavelengths.<br>I can show that sound can spread out from its source. |
| ESS1:5-6:5.3<br>Recognize that vibrations in materials set up wavelike disturbances that spread away from the source, as with earthquakes. | I can demonstrate that vibrations move in waves away from sources. |
| PS2:5-6:3.3<br>Recognize that energy, in the form of heat, is usually a byproduct when one form of energy is converted to another, such as when machines convert stored energy to motion. | I can demonstrate that heat is produced when energy is used. |
| PS2:5-6:3.4<br>Describe heat energy as flowing from warmer materials or regions to cooler ones through convection, conduction, and radiation. | Through air masses, I can identify heat energy and the path it follows. |
| PS3:5-6:1.2<br>Explain that when a force is applied to an object, the object speeds up, slows down, or goes in a different direction. | I can demonstrate the effects of force on an object. |
| PS3:5-6.1.3<br>Describe the relationship between the strength of a force and its effect on the object, such as the greater the force, the greater the change in motion. | I am able to show how the strength of a force affects an object. |
| PS3:5-6:2.1<br>Explain how balanced and unbalanced forces are related to an object's motion. | I can demonstrate balanced and unbalanced forces. |

*Adopted by the Candia School Board: May 3, 2007*
*Adopted by the Auburn School Board: May 8, 2007*
*Adopted by the Hooksett School Board: May 15, 2007*

# Grade 5 – Science Curriculum

| | |
|---|---|
| PS3:5-6:2.2<br>Explain that an object's motion can be tracked and measured over time and that the data can be used to describe its position. | I am able to collect data on an object's motion over time. |
| PS4:5-6:4.1<br>Understand that some form of science is used in most jobs/careers and that most jobs/careers specifically require knowledge of Physical Science. | I can identify science in may career and jobs. |
| PS4:5-6:1.1<br>Understand that scientific principles are used in the design of technology. | I know that science principles are used to design technology. |
| PS4:5-6:2.1<br>Recognize that manufacturing processes use a variety of tools and machines to separate, form, combine and condition natural and synthetic materials. | I can explain how manufacturing uses a variety of tools and machines. |

*Adopted by the Candia School Board: May 3, 2007*
*Adopted by the Auburn School Board: May 8, 2007*
*Adopted by the Hooksett School Board: May 15, 2007*