



St. Mel's Catholic School

SCIENCE STANDARDS

Third Grade

Physical Science

1.0 God created energy and matter in their multiple forms. They can be changed from one form to another. As a basis for understanding this concept, students know:

- 1.1 energy comes from the sun to the earth in the form of light.
- 1.2 sources of stored energy take many forms: such as food, fuel and batteries.
- 1.3 machines and living things convert stored energy to motion and heat.
- 1.4 energy can be carried from one place to another by waves, such as water waves and sound, by electric current and by moving objects.
- 1.5 matter has three forms: solid, liquid, and gas.
- 1.6 evaporation and melting are changes that occur when the objects are heated.
- 1.7 when two or more substances are combined a new substance may be formed that can have properties that are different from those of the original materials.
- 1.8 all matter is made of small particles called atoms, too small to see with our eyes.
- 1.9 people once thought that earth, wind, fire, and water were the basic elements that made up all matter. Science experiments show that there are over 100 atoms, which are displayed on the Periodic Table of the Elements.

2.0 Jesus is the light of the world. Light has a source and travels in a direction. As a basis for understanding this concept, students know:

- 2.1 sunlight can be blocked to create shadows.
- 2.2 light is reflected from mirrors and other surfaces.
- 2.3 the color of light striking an object affects how our eyes see it.
- 2.4 we see objects when light traveling from an object enters our eye.

Life Sciences

1.0 God created plants and animals to have adaptations in their physical structure or behavior to improve an organism's chance for survival. As a basis for this understanding this concept, students know:

- 1.1 plants and animals have structures that serve different functions in growth, survival, and reproduction.
- 1.2 plants are either seed or non-seed.
- 1.3 plants make their own food.
- 1.4 examples of diverse life forms in different environments, such as oceans, deserts, tundra, forests, grasslands, and wetlands.
- 1.5 living things cause changes in the environment where they live; some of these changes are detrimental to the organism or other organisms, whereas others are beneficial.



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1.6 when the environment changes, some plants and animals survive and reproduce, and

others die or move to new locations

1.7 some kinds of organisms that once lived on Earth have completely disappeared, although they resembled others that are alive today.

Earth Sciences

1.0 God created our universe with objects in the sky that move in regular and predictable patterns. As a basis for understanding this concept, students know:

1.1 the patterns of stars stay the same, although they appear to move across the sky nightly, and different stars can be seen at different seasons.

1.2 how the moon's appearance changes during the four-week lunar cycle.

1.3 telescopes magnify the appearance of some distant objects in the sky, including the moon and the planets. The number of stars that can be seen through telescopes is dramatically greater than can be seen by the unaided eye.

1.4 the Earth is one of several planets that orbit the sun, and the moon orbits the Earth.

1.5 the position of the sun in the sky changes during the course of the day and from season to season.

Investigation And Experimentation

1.0 Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept, and to address the content the other three strands, students should develop their own questions and perform investigations. Students will:

1.1 repeat observations to improve accuracy, and know that the results of similar scientific investigations seldom turn out exactly the same because of differences in the things being investigated, methods being used, or uncertainty in the observation.

1.2 differentiate evidence from opinion, and know that scientists do not rely on claims or conclusions unless they are backed by observations that can be confirmed.

1.3 use numerical data in describing and comparing objects, events and measurements.

1.4 predict the outcome of a simple investigation, and compare the result to the prediction.

1.5 collect data in an investigation and analyze them to develop a logical conclusion.