



St. Mel's Catholic School

## SCIENCE STANDARDS

### First Grade

#### Physical Science

**1.0 Materials that God created come in different forms (states) including solid liquids and gases, and these forms have different attributes -**

- 1.1 solids, liquids, and gases have different properties.
- 1.2 the properties of substances can change when they are mixed, cooled or heated.
- 1.3 solids can either sink or float.

#### Life Science

**1.0 God created all things – living and non-living. Students will understand differences and similarities between nonliving and living things -**

- 1.1 know that living things need air, water, and food to survive.
- 1.2 know that living things are made and cared for by a loving God.
- 1.3 know that living things move, grow, and change.
- 1.4 know that nonliving things do not need air, water or food.
- 1.5 know that nonliving things do not move, grow, and change.
- 1.6 be able to tell living and nonliving things apart.

**2.0 All living things are made and cared for by God, however, plants and animals meet their needs in different ways -**

2.1 different plants and animals inhabit different kinds of environments and have features that help them thrive in their environment.

- 2.2 animals eat plants and other animals for food.
- 2.3 animals may use plants or even other animals for shelter or nesting.
- 2.4 how to infer what animals eat from the shapes of their teeth.
- 2.5 green leaves are from making food from the sunlight.

**3.0. Be able to put animals in categories by size, shape, movement, color -**

- 3.1 know that animals have fur, feather, skin, scales, or shells.
- 3.2 know that animals move in different ways (swim, fly, etc.)
- 3.3 know that animals have different sizes.
- 3.4 know that animals have different shapes.
- 3.5 know that animals help people.
- 3.6 know that animals change (life cycle, metamorphosis).

**4.0 Be able to use knowledge of plants -**

- 4.1 know the parts of a plant.
- 4.2 know that seeds produce plants.
- 4.3 sort plants into categories by what they have in common.

#### Earth Science

**1.0 God the Creator made the earth, sun, and moon. Students should:**

- 1.1 know about the Earth, sun, and the moon.



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- 1.2 know the Earth rotates every 24 hours.
- 1.3 know the difference between day and night.
- 1.4 know the Earth revolves around the sun.
- 1.5 know the moon revolves around the Earth.
- 1.6 know the earth is made up of land and water.
- 1.7 know the types of land surfaces (soil, sand, rock, clay).
- 1.8 know how to take care of, and respect the Earth.

### **2.0 The Sun Supplies Heat and Light energy to the Earth**

- 2.1 the sun warms the land, air, and water.
- 2.2 light energy is reflected or absorbed when it strikes surfaces.

### **3.0. Weather can be observed, measured and described -**

- 3.1 how to record changes in the weather from day to day and over the season.
- 3.2 the weather changes from day to day, but trends in temperature or rain and snow tend to be predictable during a season.

## **Investigation & 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 in the other three strands, students should develop their own questions, and perform investigations. Students will:**

- 1.1 draw pictures that portray some features of the thing being described.
- 1.2 record observations and data with pictures, numbers, and/or written standards.
- 1.3 record observations on a bar graph.
- 1.4 describe the relative position of objects using two references (above and next to, below and left of).
- 1.5 make new observations when discrepancies exist between two descriptions of the same object or phenomena.
- 1.6 think clearly and solve problems about science (classify, decide estimate, solve, compare).
- 1.7 talk and write clearly about science (present, persuade, collaborate, explain, recommend).
- 1.8 make careful plans and use them (brainstorm, envision, research, plan, organize, persist).
- 1.9 use the quality process.

### **2.0 Be able to apply science knowledge and skills to a variety of purposes -**

- 2.1 be able to solve problems using the scientific method (research, hypothesis, test, results, conclusion).
- 2.2 be able to conduct research.
- 2.3 be able to use scientific equipment appropriately.
- 2.4 know how to preserve the earth.
- 2.5 possess technical skills: listen/ read/ dictate/ write/ present: instructions, chart, report,



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proposal, and summary.

2.6 technology: word processing, Internet, AV production.

**3.0 Be able to use some scientific instruments -**

3.1 be able to take care of magnets, magnifying glasses, and thermometers.

3.2 know the types of magnets.

3.3 know that the magnetic field is stronger at the poles.

3.4. know what a magnifying glass is and its uses.

3.5 know what a thermometer is and its uses.

3.6 be able to read a Celsius and Fahrenheit thermometer.

3.7 be able to measure rain.