

Jackson Area Catholic Schools
Science Academic Standards
for
Fifth Grade

Scientific Inquiry

- SI.05.01** The student will generate scientific questions based on observations, investigations, and research.
- SI.05.02** The student will design and conduct scientific investigations
- SI.05.03** The student will use tools and equipment (spring scales, stop watches, meter sticks and tapes, models, hand lenses) appropriate to scientific investigations.
- SI.05.04** The student will use metric measurement devices in an investigation.
- SI.05.05** The student will construct charts and graphs from data and observations.
- SI.05.06** The student will identify patterns in data.
- SI.05.07** The student will analyze information from data tables and graphs to answer scientific questions.
- SI.05.08** The student will evaluate data, claims, and personal knowledge through collaborative science discourse.
- SI.05.09** The student will communicate and defend findings of observations and investigations using evidence.
- SI.05.10** The student will draw conclusions from sets of data from multiple trials of a scientific investigation.
- SI.05.11** The student will use multiple sources of information to evaluate strengths and weaknesses of claims, arguments, or data.
- SI.05.12** The student will evaluate the strengths and weaknesses of claims, arguments, and data.
- SI.05.13** The student will describe limitations in personal and scientific knowledge.
- SI.05.14** The student will identify the need for evidence in making scientific decisions.
- SI.05.15** The student will demonstrate scientific concepts through various illustrations, performances, models, exhibits, and activities.
- SI.05.16** The student will design solutions to problems through the use of technology.
- SI.05.17** The student will describe the effects humans and other organisms have on the balance in the natural world.
- SI.05.18** The student will describe how science and technology have advanced because of the contributions of many people throughout history and across cultures.

Life Science

- LS.05.01** The student will describe the adaptations of living things.
- LS.05.02** The student will describe how fossils provide evidence about how living things and environmental conditions have changed.
- LS.05.03** The student will analyze the relationship of environmental change and catastrophic events to species extinction.
- LS.05.04** The student will relate the degree of similarity of anatomical features to the classification of contemporary organisms.
- LS.05.05** The student will compare contrast and draw conclusions about the stages in the life cycles of plants and animals.
- LS.05.06** The student will explain that the traits of an individual are influenced by both the environment and the genetics of the individual.
- LS.05.07** The student will distinguish between inherited and acquired traits.
- LS.05.08** The student will determine and show the interrelationships and functions of the muscular and skeletal systems of vertebrates.
- LS.05.09** The student will identify parts of plant and animal cells and their functions.
- LS.05.10** The student will differentiate between plant and animal cells based on structure and function.

Earth Science

- ES.05.01** The student will describe the factors that affect weather and climate.
- ES.05.02** The student will identify the natural features of the earth's surface (plateau, river, mountain, mesa, etc.).
- ES.05.03** The student will identify rock formations and distinguish between rocks and minerals.
- ES.05.04** The student will describe the process of soil formation.
- ES.05.05** The student will identify the parts of the solar system.
- ES.05.06** The student will describe the motion of planets and moons in terms of rotation and orbits due to gravity.
- ES.05.07** The student will explain the phases of the moon.
- ES.05.08** The student will recognize that nighttime objects and the sun appear to move because the Earth rotates on its axis and orbits the sun.

Earth Science (cont.)

ES.05.09 The student will explain lunar and solar eclipses based on the relative position of the Earth, moon, and sun, and the orbit of the moon.

ES.05.10 The student will explain the tides of the oceans as they relate to the gravitational pull and orbit of the moon.

Physical Science

PS.05.01 The student will demonstrate the ability to apply laws of motion.

PS.05.02 The student will distinguish between contact forces and non-contact forces.

PS.05.03 The student will demonstrate contact and non-contact forces to change the motion of an object.

PS.05.04 The student will describe the functions of compound machines.

PS.05.05 The student will demonstrate the ability to measure matter (mass, weight, temperature, area, volume and density).

PS.05.06 The student will investigate how various forms of energy affect objects and identify common uses of heat, light, sounds, and electrical energy.

PS.05.07 The student will investigate, define, and identify properties of mixtures and compounds.

PS.05.08 The student will identify chemical and physical changes in matter.