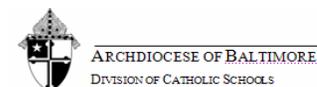


Archdiocese of Baltimore Science Standards				
1.	Nature of Science: Science is a human endeavor. Students engage in scientific investigations, which help them to develop an understanding and appreciation for the skills, methods and knowledge needed to pursue a study of science. By studying historical experimentation, scientists and inventions, students develop an understanding of the relationship between society and science. The foundation of the Catholic/Christian faith helps to relate science innovations to morals and responsibilities faced as stewards of God's world and His people.			
2.	Earth and Space: The study of 1) earth and solar system, 2) properties of earth materials, 3) bodies in space, 4) structure of the earth system, 5) changes in the earth system, 6) atmospheric changes, 7) earth history and 8) earth's place within the solar system.			
3.	Life Science: The study of 1) life, 2) characteristics and life cycles of organisms, 3) structure and function of living systems, 4) reproduction and heredity, 5) regulation and behavior of organisms, 6) diversity and adaptations of organisms within the environments and 7) populations and ecosystems.			
4.	Physical Science: The study of: 1) matter, 2) properties and changes of the properties in matter, 3) position, motion, and forces of matter, 4) energy forms, 5) transfer, interactions and conservation of energy.			
5.	Scientific Inquiry and Methods: Through direct involvement with the process of scientific inquiry, students will develop the skills needed to: 1) identify and form questions which can be answered by scientific investigation; 2) to design and conduct a scientific investigation; 3) to properly use the tools and techniques of experimentation; 4) to gather, interpret and analyze data ; and 5) using critical thinking and logic to form models and relationships between evidence and explanations. Students will use mathematics in all aspects of scientific inquiry.			
6.	Science and Technology: Science as inquiry is parallel to technology as design. Through experience with the use of technology in scientific inquiry, students will develop skills in distinguishing between the natural world and the man-made world and how to choose and use technology properly within the realm of science.			
S.K-2.1 NATURE OF SCIENCE		K	1	2
S.K-2.1.1	Recognizes science as a human endeavor.	I	D	D
S.K-2.1.2	Demonstrates that everyone can do science, observe and invent.		I	D
S.K-2.1.3	Makes observations and creates inventions of their own.		I	D
S.K-2.1.4	Connects how scientific investigation and invention throughout time has helped us to answer scientific questions.			I, D
S.K-2.1.5	Experiences the nature of humans to question and explore.	I	D	D
S.K-2.1.6	Examines historical contributions of men and women of science.		I	D
S.K-2.1.7	Identifies the work of God's hand as we investigate the world that He created.	I	D	D
S.3-5.1 NATURE OF SCIENCE		3	4	5
S.3-5.1.1	Completes the development of primary grade skills.	D	M	M
S.3-5.1.2	Develops additional references to historical contributions from men and women of science of varying ethnic backgrounds.	D	D	D
S.3-5.1.3	Examines the use of science contributions and their development within the world today.	I	D	D,M
S.3-5.1.4	Engages in team and individual activities in science inquiry knowing that this is how the scientific community operates.	D	D	D
S.3-5.1.5	Develops the idea that science is never finished that new insights are constantly being formed.	D	D	D,M

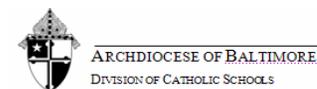
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S.3-5.1.6	Describes how throughout history to the present, science has been a process of thinking and doing in which all persons can participate and contribute.	D	D	D,M
S.3-5.1.7	Identifies opportunities and examples of people who have chosen scientific careers.	I	D	D
S.3-5.1.8	Will discuss how scientific contributions help to serve humanity and the world that God created.	D	D	D,M
S.6-8.1	NATURE OF SCIENCE	6	7	8
S.6-8.1.1	Engages in team and individual activities in science inquiry knowing that this is how the scientific community operates.	D	D	M
S.6-8.1.2	Identifies opportunities and examples of people who have chosen scientific careers. Relate these experiences to career opportunities for the future of the students.	D	D	M
S.6-8.1.3	Integrates the contributions from ancient times, various cultures, and various branches of science throughout the ages with the impact of these discoveries to the modern world.	D	D	M
S.6-8.1.4	Discusses the relationships among mathematics, technology, scientific investigation and invention. Engage students to experience these relationships through team and individual participation in scientific inquiry.	D	D	M
S.6-8.1.5	Emphasizes the responsibility and moral philosophy of seeking answers to scientific questions.	I	D	M
S.6-8.1.6	Will discuss how recent discoveries, theories and scientific investigations affect us as Christians within the modern world.	I,D	D	D,M
S.6-8.1.7	Accepts the challenge that the nature of science provides for continued investigation and discovery.	D	D	M
S.K-2.2	EARTH AND SPACE	K	1	2
S.K-2.2.1	Distinguishes the variety of earth features in our area including streams, hills, slopes, rocks, soils, harbors, and the Chesapeake Bay.	I	D	M
S.K-2.2.2	Shows how magnifiers help people see things they could not see without them.	I	D	D
S.K-2.2.3	Describes how the surface of the earth changes.		I	D
S.K-2.2.4	Recognizes that shapes such as circles, squares, and triangles can be used to describe many things that can be seen.	I	D	M
S.K-2.2.5	Interprets how the energy that earth receives from the sun makes all life on earth possible.		I	D
S.K-2.2.6	Points out that the animals and plants living on Earth have changed over time.			I
S.K-2.2.7	Identifies that some changes are so slow or so fast that they are hard to see.		I	D
S.K-2.2.8	Charts earth materials as solid rocks and soils, water, and the gases of the atmosphere.		I	D
S.K-2.2.9	Recognizes how earth materials provide many of the resources that people use.		I	D
S.K-2.2.10	Illustrates that the speed with which things move differs greatly; some things are so slow that their journey takes a long time.		I	D
S.K-2.2.11	Identifies and classifies a variety of earth surface features that are landforms (i.e., hills, mountains, valleys, continents) and water systems (i.e., rivers and oceans).		I	D
S.K-2.2.12	Recognizes that change (e.g., weathering and erosion) is something that happens to many things.			I

S.K-2.2.13	Describes how chunks of rocks come in many shapes and sizes, from boulders to grains of sand and even smaller.			I
S.K-2.2.14	Examines that soils have the properties of texture and color.			I
S.K-2.2.15	Illustrates how earth materials' properties make them useful as building materials, sources of fuel, or for growing food plants.		I	D
S.K-2.2.16	Observes and describes the properties, locations, and movements of the sun, moon, stars, clouds, birds, and airplanes.	I	D	M
S.K-2.2.17	Diagrams how objects in the sky have patterns of movement.		I	D
S.K-2.2.18	Analyzes how the sun, moon, and stars all appear to move slowly across the sky.		I	D
S.K-2.2.19	Illustrates that earth is a planet in our solar system, with one natural satellite called the moon, and the sun as our nearest star.		I	D
S.K-2.2.20	Recognizes that the sun can be seen only in the daytime, but the moon can be seen sometimes at night and sometimes during the day.		I	D
S.K-2.2.21	Charts how the moon looks a little different each night, but looks the same again in about four weeks.		I	D
S.K-2.2.22	Illustrates that there are more stars in the sky than can easily be counted, they are not scattered evenly, and they are not all the same brightness.		I	D
S.K-2.2.23	Identifies how weather changes from day to day, and over the seasons.	I	D	D
S.K-2.2.24	Summarizes how keeping track of the weather in the Chesapeake Bay area allows us to learn more about the characteristics of the seasons.		I	D
S.K-2.2.25	Shows how our weather is different in each of the four seasons.	I	D	D
S.3-5.2 EARTH AND SPACE		3	4	5
S.3-5.2.1	Illustrates that earth materials have different physical properties and chemical properties.	I	D	M
S.3-5.2.2	Identifies that earth materials (i.e., soil and rocks) change and explains what causes those changes (i.e., weathering and erosion).	I	D	M
S.3-5.2.3	Contrasts how some changes are slow, such as weathering and erosion, and some are rapid, such as landslides, volcanic eruptions and earthquakes.	I	D	M
S.3-5.2.4	Shows how soils can support the growth of many kinds of plants, including food.	I	D	D
S.3-5.2.5	Classifies rocks based on sizes and shapes from boulders to grains of sand and even smaller.	I	D	M
S.3-5.2.6	Shows how soils have the capacity to retain water.	I	D	D
S.3-5.2.7	Charts how fossils provide evidence about the plants and animals that lived long ago.	I	D	D
S.3-5.2.8	Charts how fossils provide evidence about the environment long ago.	I	D	D
S.3-5.2.9	Explains that for any environment, fossils may provide evidence that some plants and animals survive well, some do not survive as well, and some cannot survive at all.	I	D	M
S.3-5.2.10	Analyzes how rock is composed of different combinations of materials.	I	D	D
S.3-5.2.11	Diagrams how smaller rocks come from the breakage and weathering of bedrock and larger rocks.	I	D	M

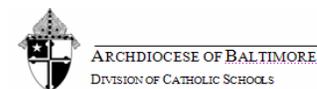
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S.3-5.2.12	Analyzes how soil is made partly from weathered rock, partly from plant remains, and also contains many organisms.	I	D	D
S.3-5.2.13	Illustrates that waves, wind, water, and ice shape and reshape the earth's land surface by eroding rock and soil in some areas and depositing them in other areas, sometimes in seasonal layers.	I	D	D
S.3-5.2.14	Demonstrates that things on or near the earth's surface are pulled toward it by earth's gravity.	I	D	M
S.3-5.2.15	Describes the predictable pattern of changing tides.	I	D	M
S.3-5.2.16	Outlines how the solid earth is layered with a lithosphere; hot, convecting mantle; and dense, metallic core.	I	D	D
S.3-5.2.17	Describes how lithosphere plates on the scales of continents and oceans constantly move at rates of centimeters per year in response to movements in the mantle.	I	D	M
S.3-5.2.18	Will discuss how major geologic events, such as earthquakes, volcanic eruptions, and mountain building result from these plate motions.	I	D	M
S.3-5.2.19	Deduces that the earth processes we see today, including erosion, movement of lithospheric plates, and changes in atmospheric composition are similar to those that occurred in the past.	I	D	M
S.3-5.2.20	Compares how agents of erosion (i.e., water waves, wind, water, and ice) and the deposition of rocks and soil shape and reshape the earth's surface (i.e., erosion of mountains, canyons, spit, sandbars, submarine canyons, glacial valleys).	I	D	M
S.3-5.2.21	Explains how weathering causes breakage of bedrock and larger rocks into smaller rocks.	I	D	M
S.3-5.2.22	Identifies the physical properties of minerals (e.g., color hardness, luster, and streak).	I	D	M
S.3-5.2.23	Explains that earth's surface (aquatic and terrestrial) is the result of a combination of constructive and destructive forces (i.e., crustal deformation, volcanic eruptions, earthquakes, deposition of sediment, weathering, and erosion).	I	D	M
S.3-5.2.24	Diagrams how water circulates through the crust, oceans, and atmosphere in the "water cycle."	I	D	M
S.3-5.2.25	Demonstrates that the earth is approximately spherical in shape, like all planets and stars.	I	D	M
S.3-5.2.26	Diagrams that the earth is one of nine planets that orbit the sun, and the moon orbits the earth.	D	M	M
S.3-5.2.27	Illustrates that the earth is the third planet from the sun in a system that includes the moon, the sun, eight other planets and their satellites, and smaller objects, such as asteroids and comets.	D	M	M
S.3-5.2.28	Shows how the sun, an average star, is the central and largest body in the solar system.	D	M	M
S.3-5.2.29	Identifies the sun as a star, the provider of light and heat necessary to maintain the temperature of the earth.	I	D	M
S.3-5.2.30	Examines how the sun is the major source of energy for phenomena on the earth's surface such as growth of plants, winds, ocean currents, and the water cycle.	D	M	M
S.3-5.2.31	Describes how celestial objects (i.e., sun, moon, stars, and planets) differ (i.e., properties, location, and movement).	I	D	M
S.3-5.2.32	Demonstrates that a large light source at a great distance looks like a small light source that is much closer.	D	M	M
S.3-5.2.33	Explains that the sun is the main source of energy that powers the water cycle and influences winds.	I	D	M
S.3-5.2.34	Identifies, observes, and describes that there are numerous celestial objects (i.e., sun, moon, stars) visible in the sky and that these objects have physical properties, locations, and patterns of movement.	I	D	M

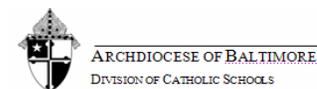
S.3-5.2.35	Charts and explains how the patterns of stars in the sky stay the same, although they appear to move across the sky nightly, and different stars can be seen in different seasons.	I	D	D
S.3-5.2.36	Charts how planets change their positions against the background of stars.	D	M	M
S.3-5.2.37	Shows how the rotation of the earth makes it seem as though the sun, moon, and stars are orbiting around the earth once a day.	D	M	M
S.3-5.2.38	Observes and describes the repeating patterns of some events in nature (e.g., day, night, seasons, and lunar phases).	I	D	M
S.3-5.2.39	Demonstrates and explains how the rotation of the earth on its axis every 24 hours produces the day-night cycle.	D	M	M
S.3-5.2.40	Illustrates that the sun appears to move across the sky in the same way every day, but its path changes slowly over the seasons.	I	D	M
S.3-5.2.41	Employs a telescope to magnify the appearance of some distant objects in the sky, including the moon and the planets.	I	D	D
S.3-5.2.42	Examines how the number of stars that can be seen through a telescope is dramatically greater than can be seen by the naked eye.	I	D	D
S.3-5.2.43	Dramatizes that stars are like the sun, some being smaller and larger, but so far away that they look like points of light.	I	D	M
S.3-5.2.44	Applies age appropriate instruments, and/or resources to quantify, collect, and record Bay weather measurements and Bay water data (i.e., water temperatures, salinity, currents).	I	D	D
S.3-5.2.45	Examines how weather in the Chesapeake Bay area can be described by measurable quantities, such as temperature, wind direction and speed, and precipitation.	I	D	D
S.3-5.2.46	Predicts weather patterns for each season in the Chesapeake Bay area.	I	D	D
S.3-5.2.47	Describes the weather using observations, age appropriate tools (e.g., thermometer), and measurements.	I	D	D
S.3-5.2.48	Applies weather measurements within the Chesapeake Bay area (e.g., temperature, wind direction and speed, and precipitation) to explain that each season has different weather patterns.	I	D	D
S.6-8.2	EARTH AND SPACE	6	7	8
S.6-8.2.1	Contrasts how some changes in earth's surface are abrupt (e.g., earthquake, volcanic eruption) while other changes happen very slowly (e.g., uplift and wearing down of mountains).	D	D	M
S.6-8.2.2	Visualizes that the earth's surface is shaped in part by the motion of water (including ice) and wind over very long times, which act to level mountain ranges.	D	D	M
S.6-8.2.3	Demonstrates that rivers and glacial ice carry off soil and break down rock, eventually depositing the materials in sediments or carrying it in solution to the sea.	D	D	M
S.6-8.2.4	Draws how some changes in the solid earth can be described as the rock cycle.	I	D	M
S.6-8.2.5	Examines that soil consists of weathered rocks and decomposed organic material from dead plants, animals, and bacteria.	D	D	M
S.6-8.2.6	Diagrams the water cycle as a repetitive series of evaporation, condensation, precipitation, and collection.	D	D	M

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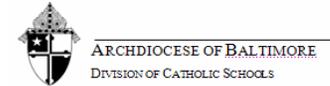
S.6-8.2.7	Experiments how water is a solvent, and throughout the water cycle it dissolves minerals and gases and carries them to the oceans.	I	D	M
S.6-8.2.8	Will discuss that earth's history is affected by occasional catastrophic events such as the impact of an asteroid or comet.	I	D	M
S.6-8.2.9	Charts how fossils provide important evidence of how life and environmental conditions have changed.	D	D	M
S.6-8.2.10	Will discuss that gravity is the force that keeps planets in orbit around the sun and governs the rest of the motion in the solar system.	I	D	M
S.6-8.2.11	Demonstrates how gravity alone holds us to the earth's surface and explains the phenomena of the tides.	D	D	M
S.6-8.2.12	Analyzes the phenomenon of tides as related to the concept of gravity.	D	D	M
S.6-8.2.13	Explains that the sun's gravitational pull holds the earth and other planets in their orbits, just as the planets' gravitational pull keeps their satellites in orbit around them.	I	D	M
S.6-8.2.14	Diagrams how sedimentary rock buried deep enough may be reformed by pressure and heat, perhaps melting and re-crystallizing into different kinds.	I	D	D
S.6-8.2.15	Shows how reformed rock layers may be forced up again to become land surface, and even mountains.	I	D	D
S.6-8.2.16	Analyzes how rock bears evidence of the minerals, temperatures, and forces that created it.	I	D	D
S.6-8.2.17	Illustrates that soils are often found in layers, with each having a different chemical composition and texture.	I	D	D
S.6-8.2.18	Shows how thousands of layers of sedimentary rock confirm the long history of the changing surface of the earth and the changing life forms whose remains are found in successive layers.	I	D	M
S.6-8.2.19	Explains that the youngest layers of sedimentary rock are not always found on top because of folding, breaking, and uplift of layers.	I	D	M
S.6-8.2.20	Illustrates how the earth first formed in a molten state and then the surface cooled into solid rock.	I	D	M
S.6-8.2.21	Interprets how matching coastlines and similarities in rock types and life forms suggest that today's continents are separated parts of what was long ago a single continent.	I	D	M
S.6-8.2.22	Explains that the interior of the earth is hot, and infers how heat flow and movement of material within the earth cause earthquakes and volcanic eruptions, and creates mountains and ocean basins.	I	D	D
S.6-8.2.23	Demonstrates how seasons result from variations in the amount of the sun's energy hitting earth's surface because of the tilt of the earth's axis, earth's orbit around the sun, and the length of the day.	D	D	M
S.6-8.2.24	Explains that some changes in earth's surface are due to slow processes (i.e., erosion, weathering) and some changes are due to rapid processes (i.e., landslides, tornadoes, hurricanes, volcanic eruptions, earthquakes, flooding, and tsunamis).	D	D	M
S.6-8.2.25	Analyzes the arrangement and size of minerals contained within rocks in order to describe the environmental conditions present during formation.	D	D	D
S.6-8.2.26	Describes how temperature, pressure, and dissolved minerals cause the formation of rocks.	D	D	D
S.6-8.2.27	Explains the physical processes that produce renewable and nonrenewable natural resources (e.g., fertile soils, fossil fuels, and timber).	D	D	D
S.6-8.2.28	Explains that fossils and layers of sedimentary rock provide evidence of earth's biologic and geologic history.	D	D	M

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S.6-8.2.29	Explains how earth's crustal plates are influenced by activity in the mantle and core to produce major geologic events (i.e., mountain building, earthquakes, volcanic eruptions, ocean basin formation, seafloor spreading, and subduction).	D	D	D
S.6-8.2.30	Employs a telescope to reveal that there are many more stars in the night sky than are visible to the naked eye, the surface of the moon has many craters and mountains, the sun has dark spots, and Jupiter and some other planets have their own satellites.	D	D	D
S.6-8.2.31	Shows that the sun is a medium-sized star located near the edge of a disc-shaped galaxy of stars, part of which can be seen on a very clear night as a glowing band of light that spans the night sky.	I	D	M
S.6-8.2.32	Demonstrates how predictable motions in the solar system explain such phenomena as the day, the year, phases of the moon, and eclipses.	D	D	M
S.6-8.2.33	Visualizes how nine planets of very different size, composition, and surface features move around the sun in nearly circular orbits.	D	D	M
S.6-8.2.34	Shows that some planets have a variety of satellites and even flat rings of rock and ice particles orbiting around them.	I	D	M
S.6-8.2.35	Diagrams how most objects in the solar system are in regular and predictable motion.	D	D	M
S.6-8.2.36	Demonstrates that the moon's orbit around the earth once in about 28 days changes the portion of the lighted half of the moon that we see from earth and results in us seeing the moon's phases.	D	D	M
S.6-8.2.37	Explains that there are billions of galaxies and each galaxy contains billions of stars that cannot be distinguished by the naked eye because of their great distance from earth.	I	D	M
S.6-8.2.38	Compares and classifies celestial objects (i.e., stars, planets, moons, asteroids, comets, and meteors) according to sizes, compositions, and surface features.	I	D	M
S.6-8.2.39	Explains that the motion of most objects in the solar system is regular and predictable and explains phenomena (i.e., day, year, phases of the moon, tides, and eclipses).	D	D	D
S.6-8.2.40	Diagrams how many chunks of rock orbit the sun, and those that meet the earth glow and disintegrate from friction as they plunge through the atmosphere.	I	D	M
S.6-8.2.41	Illustrates that other chunks of rock mixed with ice have long, off-centered orbits that carry them close to the sun where the sun's radiation boils off frozen material from their surfaces and pushes it into a long, illuminated tail.	I	D	M
S.6-8.2.42	Illustrates that some of the planets and satellites show evidence of geologic activity.	I	D	M
S.6-8.2.43	Shows that the sun is many thousands of times closer to the earth than any other star, and calculates that light from the sun takes about 20 minutes to reach the earth.	I	D	M
S.6-8.2.44	Shows that light from the nearest star other than the sun takes about 4.3 years to arrive at earth. Deduces that a trip to that star by the fastest rocket would take thousands of years.	I	D	M
S.6-8.2.45	Verifies that the universe contains several billion galaxies, each containing several billion stars. Investigate that to the naked eye, even the closest galaxy is no more than a fuzzy spot.	I	D	M
S.6-8.2.46	Will assess that some distant galaxies are so far away that their light takes several billion years to reach the earth. We see them, therefore, as they were that long ago.	I	D	M

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S.6-8.2.47	Charts how the atmosphere is a mixture of nitrogen, oxygen, and trace amounts of other gases, including water vapor.	I	D	M
S.6-8.2.48	Examines how the atmosphere has different properties at different altitudes.	I	D	M
S.6-8.2.49	Relates how clouds, formed by the condensation of water vapor, affect weather and climate in the Chesapeake Bay area.	I	D	M
S.6-8.2.50	Will assess how global patterns of atmospheric movement affect local weather.	I	D	M
S.6-8.2.51	Examines how oceans have a major effect on climate because water in the oceans holds a large amount of heat.	I	D	M
S.6-8.2.52	Explains how climate is affected by ocean currents, earth's surface features, latitude, and the atmosphere (i.e., volcanic eruptions, El Niño, fluctuations in the jet stream).	I	D	D
S.6-8.2.53	Analyzes earth (i.e., land and water) data collected from space-based instruments and relates it to weather patterns.	I	D	D
S.K-2.3	LIFE SCIENCE	K	1	2
S.K-2.3.1	Classifies things as living or non-living.	I	D	D
S.K-2.3.2	Diagrams how organisms have basic needs. For example, animals need air, water, and food; plants require air, water, nutrients, and light.	I	D	D
S.K-2.3.3	Will discuss how organisms can survive only in environments, such as the Chesapeake Bay, in which their needs can be met.		I	D
S.K-2.3.4	Charts how plants and animals have life cycles that include being born, developing into adults, reproducing, and dying.	I	D	D
S.K-2.3.5	Illustrates that life cycle details are different for different organisms.		I	D
S.K-2.3.6	Shows how plants and animals closely resemble their parents.	I	D	D
S.K-2.3.7	Uses magnifying instruments to observe organisms, objects, and details of organisms and objects that could not be seen without them.	I	D	D
S.K-2.3.8	Describes examples that shows that living organisms in the Chesapeake Bay have special parts that allow them to perform certain functions.		I	D
S.K-2.3.9	Describes examples that show that offspring are like one another but not exactly like their parents.	I	D	D
S.K-2.3.10	Explains that all living things can be compared based on similarities and differences of external features.		I	D
S.K-2.3.11	Explains that habitats, such as the Chesapeake Bay, provide basic needs (i.e., food, water, shelter) for the organisms living in them.	I	D	D
S.K-2.3.12	Explains that diseases may be caused by germs and identifies behaviors that prevent the spread of disease.	I	D	D

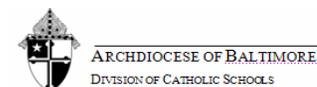
S.3-5.3 LIFE SCIENCE		3	4	5
S.3-5.3.1	Uses magnifying instruments to observe cells, microscopic plants and animals, and details of macroscopic objects.	I	D	D
S.3-5.3.2	Explains that diseases may be caused by germs and identifies behaviors that prevent the spread of disease.	D	D	M
S.3-5.3.3	Will discuss how humans change environments, such as the Chesapeake Bay, in ways that can be either helpful or harmful for themselves and other organisms.	I	D	M
S.3-5.3.4	Shows how humans depend on their natural and constructed environments.	I	D	M
S.3-5.3.5	Illustrates how all organisms cause changes in the environment of the Chesapeake Bay. Some changes are harmful to the organism or other organisms, and others are helpful.	I	D	M
S.3-5.3.6	Recognizes that when the environment changes, some plants and animals survive and reproduce and others die or move to new locations.	I	D	M
S.3-5.3.7	Will assess how an organism's patterns of behavior are related to the nature of that organism's environment, including the kinds and numbers of other organisms present, the availability of food and resources, and the physical characteristics of the environment.	I	D	M
S.3-5.3.8	Describes how all animals depend on plants. Some animals eat plants for food. Other animals eat animals that eat the plants.	I	D	M
S.3-5.3.9	Shows how many characteristics of an organism are inherited from the parents of the organism, but other characteristics result from an individual's interactions with the environment.	I	D	D
S.3-5.3.10	Lists that humans and other organisms have senses that help them detect internal and external stimuli.	I	D	M
S.3-5.3.11	Charts how the behavior of individual organisms is influenced by internal stimuli (such as hunger) and by external stimuli (such as a change in the environment).	I	D	D
S.3-5.3.12	Interprets that each plant or animal, in the Chesapeake Bay area, has different structures that serve different functions in growth, survival, and reproduction.	I	D	D
S.3-5.3.13	Will discuss the world as having many different environments, and distinct environments support the life of different types of organisms.	I	D	M
S.3-5.3.14	Shows that organisms have different structures and systems that serve various functions in growth, survival, and reproduction.	I	D	D
S.3-5.3.15	Explains and illustrates how body structures and mechanisms fight disease (i.e., tears, saliva, blood cells, response to vaccination).	I	D	D
S.3-5.3.16	Explains that reproduction is necessary for the inheritance of characteristics and the continuation of a species.	I	D	D
S.3-5.3.17	Describes examples which show that organisms and groups of organisms that are best suited to an environment survive and reproduce.	I	D	M
S.3-5.3.18	Cites evidence to support the idea that when the environment of the Chesapeake Bay changes some plants and animals survive and reproduce and others die or move to other locations.	I	D	M
S.3-5.3.19	Explains that some source of energy is needed for all organisms to stay active and grow.	I	D	M
S.3-5.3.20	Verifies the importance of food, water, and air in the structure and function of living things.	I	D	M

S.3-5.3.21	Explains that organisms can cause physical and chemical changes to matter.	I	D	D
S.3-5.3.22	Cites evidence that individuals and groups of organisms interact with each other and their environment (i.e., food chain, reproduction, decomposition).	I	D	D
S.3-5.3.23	Shows how organisms change environments, such as the Chesapeake Bay, in ways that can be either helpful or harmful to themselves and other organisms (e.g., food chain, overpopulation, pollination).	I	D	D
S.6-8.3	LIFE SCIENCE	6	7	8
S.6-8.3.1	Discusses that living systems at all levels of organization demonstrate the complementary nature of structure and function.	I	D	M
S.6-8.3.2	Diagrams that levels of organization for structure and function includes cells, organs, tissues, organ systems, whole organisms and ecosystems.	I	D	M
S.6-8.3.3	Cites the history and three parts of the Cell Theory.	I	D	M
S.6-8.3.4	Analyzes how cells carry on the many functions needed to sustain life.	I	D	D
S.6-8.3.5	Illustrates that specialized cells perform specialized functions in multicellular organisms.	I	D	D
S.6-8.3.6	Will discuss disease as a breakdown in structures or functions of an organism.	I	D	D
S.6-8.3.7	Shows how disease is the result of intrinsic failures of the system, or the result of damage by infection by other organisms.	I	D	D
S.6-8.3.8	Explains that reproduction is a characteristic of all organisms and is essential for every species to continue.	I	D	M
S.6-8.3.9	Recognizes that some organisms reproduce asexually and some sexually.	I	D	M
S.6-8.3.10	Uses evidence to support the idea that through reproduction (sexual and asexual) genetic traits are passed from one generation to the next.	I	D	D
S.6-8.3.11	Identifies that females produce eggs and males produce sperm in species that reproduce sexually.	I	D	M
S.6-8.3.12	Diagrams how sexually reproduced offspring receive genetic information from their mother, via the egg, and their father, via the sperm.	I	D	D
S.6-8.3.13	Explains why sexually reproduced offspring are never identical to either of their parents.	I	D	D
S.6-8.3.14	Will discuss that heredity is the passage of genetic instructions from parents to offspring.	I	D	M
S.6-8.3.15	Illustrates that hereditary information is contained in genes, located in the chromosomes of each cell.	I	D	D
S.6-8.3.16	Shows how the characteristics of an organism can be described in terms of a combination of traits, some inherited genetically and some from interactions with the environment.	I	D	M
S.6-8.3.17	Examines how organisms must be able to obtain and use resources, grow, reproduce, and maintain stable internal conditions while living in a changing external environment.	I	D	M
S.6-8.3.18	Diagrams that regulation of an organism's internal environment involves sensing the internal environment and changing physiological activities to keep conditions within the range required to survive.	I	D	D
S.6-8.3.19	Explains that behavior is one kind of response an organism can make to an internal or environmental stimulus.	I	D	M
S.6-8.3.20	Will assess how an organism's behavior evolves through adaptation to its environment.	I	D	D
S.6-8.3.21	Explains that a population in the Chesapeake Bay consists of all individuals of a species that occur together at a given place and time.	I	D	M

S.6-8.3.22	Illustrates how the Chesapeake Bay ecosystem is comprised of all populations living together and the physical factors with which they interact.	I	D	M
S.6-8.3.23	Charts that populations of organisms can be categorized by the functions they serve – producers, consumers, or decomposers.	I	D	D
S.6-8.3.24	Diagrams Chesapeake Bay food webs and identifies the relationships among producers, consumers, and decomposers in an ecosystem.	I	D	M
S.6-8.3.25	Shows how the major source of energy for ecosystems is sunlight.	I	D	M
S.6-8.3.26	Evaluates how the number of organisms that the Chesapeake Bay ecosystem can support depends on the resources available and abiotic factors, such as quantity of light and water, range of temperatures, and soil composition.	I	D	D
S.6-8.3.27	Verifies that millions of species of animals, plants, and microorganisms are alive today.	I	D	M
S.6-8.3.28	Appraises how although different species might look dissimilar, the unity among organisms becomes apparent from an analysis of internal structures, the similarity of their chemical processes, and the evidence of common ancestry.	I	D	D
S.6-8.3.29	Diagrams how biologists classify organisms into six kingdoms using the Linnaean seven-level system based on physical similarities and differences.	I	D	D
S.6-8.3.30	Defends that biological evolution accounts for the diversity of species developed through gradual processes over many generations.	I	D	D
S.6-8.3.31	Cites examples of how the extinction of a species occurs when the environment changes and the adaptive characteristics of a species are insufficient to allow its survival.	I	D	M
S.6-8.3.32	Explains that food, water, and air provide molecules that serve as building materials and supply energy for all organisms.	I	D	D
S.6-8.3.33	Explains that energy entering the ecosystem as sunlight is transferred by producers into chemical energy through photosynthesis.	I	D	D
S.6-8.3.34	Explains how consumers in a Chesapeake Bay food chain depend on the chemical energy provided by producers for survival.	I	D	D
S.6-8.3.35	Analyzes evidence that within the Chesapeake Bay ecosystem organisms have different functions (niches) that enable the ecosystem to survive.	I	D	M
S.6-8.3.36	Analyzes environmental changes in the Chesapeake Bay watershed as beneficial or detrimental to producer/consumer, predator/prey, or parasite/host.	I	D	D
S.6-8.3.37	Cites science fact to explain that human life begins at conception with the human zygote.	I	D	M
S.6-8.3.38	Uses a compound microscope to view and identify monerans, protists, and cells in general.	I	D	D
S.6-8.3.39	Uses a dissecting microscope to view and identify details of macroscopic organisms.	I	D	D

S.K-2.4		PHYSICAL SCIENCE			K	1	2
S.K-2.4.1	Recognizes that objects have many observable properties, including size, weight, shape, color, temperature, and the ability to react with other substances.	I	D	D			
S.K-2.4.2	Measures properties using tools, such as rulers, balances, and thermometers.	I	D	D			
S.K-2.4.3	Examines objects made of one or more materials, such as paper, wood, and metal.	I	D	D			
S.K-2.4.4	Describes objects by the properties of the materials from which they are made.		I	D			
S.K-2.4.5	Separates or sorts a group of objects or materials using their properties.		I	D			
S.K-2.4.6	Distinguishes between solid, liquid, and gas.	I	D	D			
S.K-2.4.7	Shows how a common material, such as water, can be changed from one state to another by heating or cooling.		I	D			
S.K-2.4.8	Illustrates that most things are made of parts.	I	D	D			
S.K-2.4.9	Verifies that magnifiers help people see things they could not see without them.	I	D	D			
S.K-2.4.10	Proposes that people can keep track of some things, seeing where they come from and where they go.		I	D			
S.K-2.4.11	Demonstrates that water left in an open container disappears, but water in a closed container does not disappear.		I	D			
S.K-2.4.12	Shows that heat can be produced in many ways, such as burning, rubbing, or mixing one substance with another.		I	D			
S.K-2.4.13	Gives examples that show that energy can warm a substance (e.g., sun, stove top, etc.).		I	D			
S.K-2.4.14	Explains that the sun warms the land, air, and water.		I	D			
S.K-2.4.15	Identifies materials that people use to produce heat energy (e.g., fuel, wood, etc.)		I	D			
S.K-2.4.16	Identifies sources of electricity and lists common uses of electricity in daily life.		I	D			
S.K-2.4.17	Illustrates that materials can be recycled and used again, sometimes in different forms.	I	D	D			
S.K-2.4.18	Demonstrates that things move in many different ways, such as straight, zig zag, round and round, back and forth, and fast and slow.	I	D	D			
S.K-2.4.19	Demonstrates how to change the motion of an object by giving it a push or a pull.	I	D	D			
S.K-2.4.20	Experiments with simple machines, such as see-saw balancing.		I	D			
S.K-2.4.21	Identifies things that vibrate and make sounds (i.e., musical instruments and voices).		I	D			
S.3-5.4		PHYSICAL SCIENCE			3	4	5
S.3-5.4.1	Charts the position of an object by locating it relative to another object or the background.	I	D	D			
S.3-5.4.2	Describes an object's motion by tracing and measuring its position over time.		I	D			
S.3-5.4.3	Demonstrates that the position and motion of an object can be changed by pushing or pulling.	I	D	D			
S.3-5.4.4	Verifies that the size of the change of position and motion is related to the strength of the push or pull.	I	D	D			
S.3-5.4.5	Will discuss that changes in speed or direction of motion are caused by forces, pushes or pulls.	I	D	D			
S.3-5.4.6	Illustrates that the greater the force is, the greater the change in motion will be.	I	D	D			
S.3-5.4.7	Identifies how fast things move differs greatly.	I	D	M			
S.3-5.4.8	Shows how objects can move differently on different surfaces.	I	D	M			
S.3-5.4.9	Demonstrates different ways that things move.	I	D	M			
S.3-5.4.10	Demonstrates that things fall to the ground unless something holds them up.	I	D	M			

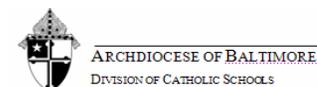
Content of Study: Science



S.3-5.4.11	Defines matter and charts its existence in different states – solid, liquid, or gas.	I	D	D
S.3-5.4.12	Classifies materials according to states of matter such as solids, liquids, and gases.	I	D	D
S.3-5.4.13	Classifies materials based on common properties (e.g., texture, color, hardness).	I	D	M
S.3-5.4.14	Compares how different materials can be made from the same basic materials.	I	D	M
S.3-5.4.15	Identifies when a new material is made by combining two or more materials, it has properties that are different from the original materials.	I	D	D
S.3-5.4.16	Identifies that matter undergoes physical and chemical changes.		I	D
S.3-5.4.17	Identifies processes (e.g., bending, cutting, heating, rusting, dissolving) that can be used to change properties of materials.		I	D
S.3-5.4.18	Summarizes processes done to materials to change some of their properties, but not all materials respond the same way to what is done to them.		I	D
S.3-5.4.19	Verifies that materials may be composed of parts that are too small to be seen without magnification.	I	D	M
S.3-5.4.20	Demonstrates that air is a substance that surrounds us, has weight, and takes up space.	I	D	D
S.3-5.4.21	Shows that if water is turned into ice and then the ice is allowed to melt, the amount of water is the same as it was before freezing.	I	D	M
S.3-5.4.22	Explains and shows when liquid water disappears, it turns into a gas (vapor) in the air and can reappear as a liquid.	I	D	M
S.3-5.4.23	Measures that the weight/mass of the whole object is always the sum of the weights/masses of all its parts.	I	D	M
S.3-5.4.24	Dramatizes how substances may move from place to place, but they never appear out of nowhere and never just disappear.	I	D	D
S.3-5.4.25	Compares how heating and cooling cause changes in the properties of materials.		I	D
S.3-5.4.26	Explains how many kinds of changes occur faster under hotter conditions.		I	D
S.3-5.4.27	Shows how light travels in a straight line until it strikes an object.	I	D	D
S.3-5.4.28	Demonstrates that light can be reflected by a mirror, refracted by a lens, or absorbed by an object.	I	D	D
S.3-5.4.29	Identifies materials that light passes through and materials that block light.	I	D	M
S.3-5.4.30	Identifies things (e.g., prisms, soap bubbles, oil films) that produce colors from white light.	I	D	D
S.3-5.4.31	Investigates and explains that energy is needed to make things go, run, or happen (e.g., battery in a toy, pedaling a bicycle).	I	D	M
S.3-5.4.32	Describes the observable effects of energy (i.e., heating and cooling) on the properties of materials.	I	D	D
S.3-5.4.33	Cites examples of stored energy (e.g., ball held above floor) and energy in motion (e.g., ball rolling).		I	D
S.3-5.4.34	Describes ways in which heat energy can be produced (e.g., by burning, mixing two things together, or using electric currents).		I	D
S.3-5.4.35	Demonstrates and explains that a warmer object can warm a cooler object by contact or at a distance.		I	D
S.3-5.4.36	Gives examples of materials that conduct heat energy better than others.		I	D
S.3-5.4.37	Compares conductors and insulators of electricity.		I	D
S.3-5.4.38	Creates electrical circuits that produce light, heat, sound, and magnetic effects.		I	D
S.3-5.4.39	Shows how magnets attract and repel each other and certain kinds of other materials.	I	D	M
S.3-5.4.40	Explains that energy is needed to make objects vibrate.	I	D	D

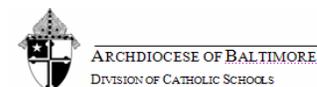
S.3-5.4.41	Explains that sound vibrations are needed for "hearing" to occur.	I	D	M
S.3-5.4.42	Shows how the pitch of the sound can be changed by changing the rate of vibration.	I	D	M
S.6-8.4	PHYSICAL SCIENCE	6	7	8
S.6-8.4.1	Will discuss how atoms of any element are alike but different from atoms of other elements.	I	D	M
S.6-8.4.2	Restates that all matter is made up of atoms, which are far too small to see directly through a microscope.	I	D	M
S.6-8.4.3	Indicates that there are groups of elements that have similar properties.	I	D	M
S.6-8.4.4	Charts how about 100 different elements have been identified, out of which everything is made.	I	D	M
S.6-8.4.5	Identifies different arrangements of atoms that compose all substances.	I	D	D
S.6-8.4.6	Diagrams how atoms may stick together in well-defined molecules, or may be packed together in large arrays.	I	D	D
S.6-8.4.7	Demonstrates that equal volumes of different substances usually have different weights.	I	D	M
S.6-8.4.8	Will discuss that while substances within a closed system interact, the total mass of the system remains the same.	I	D	D
S.6-8.4.9	Points out the idea of atoms explains the conservation of matter: If the number of atoms stays the same no matter how the same atoms are rearranged, then their total mass stays the same.	I	D	D
S.6-8.4.10	Recognizes that energy appears in different forms.	I	D	M
S.6-8.4.11	Defines thermal energy as the disorderly motion of molecules.	I	D	M
S.6-8.4.12	Explains how atoms and molecules are perpetually in motion.	I	D	M
S.6-8.4.13	Formulates how increased temperature means greater average energy of motion, so most substances expand when heated.		I	D
S.6-8.4.14	Explains that atoms and molecules are in constant motion and that an increase in temperature will increase that motion.		I	D
S.6-8.4.15	Records that most substances can exist as a solid, liquid, or gas depending on temperature.		I	D
S.6-8.4.16	Illustrates that a substance has characteristic properties, such as density, a boiling point, and solubility, all of which are independent of the amount of the substance.		I	D
S.6-8.4.17	Distinguishes between chemical and physical changes based on observable properties.	I	D	M
S.6-8.4.18	Relates how a mixture of substances often can be separated into the original substances using one or more of the characteristic properties.	I	D	D
S.6-8.4.19	Recognizes substances react chemically in characteristic ways with other substances to form new substances (compounds) with different characteristic properties.		I	D
S.6-8.4.20	Demonstrates that the total mass is conserved in chemical reactions.		I	D
S.6-8.4.21	Illustrates that substances are placed in categories or groups if they react in similar ways.		I	D
S.6-8.4.22	Distinguishes one substance from another based on observable and measurable properties (i.e., density, boiling point, melting point).		I	D
S.6-8.4.23	Verifies that chemical elements do not break down during normal laboratory reactions involving heating, exposure to electric current, or reaction with acids.		I	D
S.6-8.4.24	Uses groupings (i.e., simple periodic table, metals/nonmetals, reactive/non-reactive) of matter to predict reactions.		I	D

Content of Study: Science



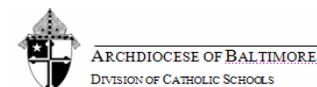
S.6-8.4.25	Demonstrates when substances interact to form new substances, the elements composing them combine in new ways.		I	D
S.6-8.4.26	Describes that elements combine in whole number ratios to form other substances called compounds (e.g., H ₂ O, CO ₂ , CO).		I	D
S.6-8.4.27	Interprets how the properties of the new combinations may be very different from those of the original substances.		I	D
S.6-8.4.28	Explains how and why arrangements of atoms have chemical energy.		I	D
S.6-8.4.29	Shows how many substances dissolve in water, which may greatly facilitate reactions between them.		I	D
S.6-8.4.30	Describes how the temperature and acidity of a solution influence reaction rates.		I	D
S.6-8.4.31	Explains the conservation of mass and energy.		I	D
S.6-8.4.32	Distinguishes between mass and weight.	I	D	M
S.6-8.4.33	Lists that the motion of an object can be described by its position, direction of motion, and speed.	I	D	M
S.6-8.4.34	Illustrates that motion can be measured and represented on a graph.	I	D	M
S.6-8.4.35	Shows how an object not subjected to a net force will remain at rest, or will continue to move at a constant speed and in a straight line.	I	D	D
S.6-8.4.36	Diagrams that if more than one force acts on an object along a straight line, then the forces will reinforce or cancel one another depending on their direction and magnitude.	I	D	D
S.6-8.4.37	Shows how the motion of an object is always judged with respect to some other object or point.	I	D	M
S.6-8.4.38	Assess that if a force acts towards a single center, the object's path may curve into an orbit around the center.		I	D
S.6-8.4.39	Analyzes how an unbalanced force acting on an object changes its speed or direction of motion, or both.		I	D
S.6-8.4.40	Applies Newton's Laws of Motion to everyday situations.		I	D
S.6-8.4.41	Explains that every object exerts gravitational force on every other object.	I	D	M
S.6-8.4.42	Recognizes that light from the sun is made up of a mixture of many different colors of light, even though to the eye the light looks almost white.	I	D	M
S.6-8.4.43	Explains how the interaction of white light with an object produces the perceived color of the object.	I	D	M
S.6-8.4.44	Charts that something can be seen when light waves emitted or reflected by it enter the eye, just as something can be heard when sound waves from it enter the ear.	I	D	M
S.6-8.4.45	Explains that human eyes respond to only a narrow range of wavelengths of electromagnetic waves – visible light.	I	D	M
S.6-8.4.46	Shows how differences of wavelength within visible light are perceived as different colors.	I	D	M
S.6-8.4.47	Analyzes that light acts like a wave in many ways, and waves can explain how light behaves in most ways		I	D
S.6-8.4.48	Demonstrates that vibrations in materials set up wavelike disturbances that spread away from the source. Sound and earthquake waves are examples.		I	D
S.6-8.4.49	Explains how and why waves move at different speeds in different materials.		I	D
S.6-8.4.50	Diagrams that wave behavior can be described in terms of velocity, wavelength, frequency, and amplitude.		I	D
S.6-8.4.51	Illustrates that energy is a property of many substances and is associated with heat, light, electricity, mechanical motion, sound, nuclei, and the nature of a chemical.	I	D	M
S.6-8.4.52	Charts how energy is transferred in many ways.	I	D	M

Content of Study: Science



S.6-8.4.53	Shows how heat always flows from a warmer object in direct contact with a cooler object until both reach a final temperature between the two original temperatures.		I	D	
S.6-8.4.54	Explains how heat can be transferred by conduction, convection, and radiation by citing everyday examples.		I	D	
S.6-8.4.55	Explains that heat is a product of energy transformations (i.e., a runner, friction in simple and complex machines, chemical reactions, etc.).		I	D	
S.6-8.4.56	Demonstrates that light interacts with matter by transmission (including refraction), absorption, or scattering (including reflection).	I	D	D	
S.6-8.4.57	Identifies and describes how electrical circuits provide a means of transferring electrical energy when mechanical energy, heat, light, sound, and chemical changes are produced.	I	D	D	
S.6-8.4.58	Explains the operation of a motor and a generator.	I	D	D	
S.6-8.4.59	Will discuss that in most chemical and nuclear reactions, energy is transferred into or out of a system. Heat, light, mechanical motion, or electricity might all be involved in such transfers.		I	D	
S.6-8.4.60	Explains that the sun is a major source of energy for changes on the earth's surface. The sun loses energy by emitting light, a tiny fraction of which reaches the earth, transferring energy from the sun to the earth.	I	D	M	
S.K-2.5	SCIENCE INQUIRY AND METHODS		K	1	2
S.K-2.5.1	Forms questions, such as, "What if...?" or "How do you know...?"	I	D	D	
S.K-2.5.2	Uses various kinds of investigation to collect data needed to answer the question.		I	D	
S.K-2.5.3	Uses appropriate instruments for investigation.	I	D	D	
S.K-2.5.4	Organizes and displays data.		I	D	
S.K-2.5.5	Develops explanations using observations and scientific knowledge.				
S.K-2.5.6	Makes conclusions combining data with what scientists already know.				
S.K-2.5.7	Shares and discusses the results with others.			I	
S.K-2.5.8	Expands the investigation to generate additional questions.				
S.K-2.5.9	Designs new experiments to test the additional questions.				
S.K-2.5.10	Finds and processes information from readings, investigations and other forms of communications.				
S.K-2.5.11	Forms questions and finds answers to the questions about immediate surroundings.	I	D	D	
S.K-2.5.12	Uses observations and science information when forming predictions.		I	D	
S.K-2.5.13	Performs simple investigations.	I	D	D	
S.K-2.5.14	Follows safety rules during investigations.	I	D	D	
S.K-2.5.15	Uses numbers and units when counting or measuring objects and recording data.	I	D	D	
S.K-2.5.16	Collects and records data.		I	D	
S.K-2.5.17	Compares data and forms conclusions.			I	
S.K-2.5.18	Reports data and conclusions.			I	
S.K-2.5.19	Provides supporting evidence for conclusions.				
S.K-2.5.20	Applies scientific concepts to a new situation.				
S.K-2.5.21	Uses thermometers to measure temperature.		I	D	

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S.K-2.5.22	Uses rulers as a measuring tool.		I	D
S.K-2.5.23	Uses bar graphs and pictographs to display information.			I
S.K-2.5.24	Classifies and sorts objects.	I	D	D
S.K-2.5.25	Identifies similarities and differences.	I	D	D
S.K-2.5.26	Begins to make analyses.			I
S.K-2.5.27	Uses measuring cups and spoons to accurately measure materials.		I	D
S.K-2.5.28	Arranges events in sequence.	I	D	D
S.3-5.5	SCIENCE INQUIRY AND METHODS	3	4	5
S.3-5.5.1	Forms questions, such as, "What if...?" or "How do you know...?"	D	D	M
S.3-5.5.2	Uses various kinds of investigation to collect data needed to answer the question.	I	D	D
S.3-5.5.3	Uses appropriate instruments for investigation.	D	D	D
S.3-5.5.4	Organizes and displays data.	I	D	D
S.3-5.5.5	Develops explanations using observations and scientific knowledge.	I	D	D
S.3-5.5.6	Makes conclusions combining data with what scientists already know.	I	D	D
S.3-5.5.7	Shares and discusses the results with others.	I,D	D	D
S.3-5.5.8	Expands the investigation to generate additional questions.	I	D	D
S.3-5.5.9	Designs new experiments to test the additional questions.	I	D	D
S.3-5.5.10	Finds and processes information from readings, investigations and other forms of communications.	I	D	D
S.3-5.5.11	Forms questions and find answers to the questions about immediate surroundings.	D	D	D
S.3-5.5.12	Uses observations and science information when forming predictions.	D	D	D
S.3-5.5.13	Performs simple investigations.	D	D	D
S.3-5.5.14	Follows safety rules during investigations at each grade level.	D,M	M	M
S.3-5.5.15	Uses numbers and units when counting or measuring objects and recording data.	D	D	D,M
S.3-5.5.16	Collects and records data.	D	D	D
S.3-5.5.17	Compares data and forms conclusions.	I,D	D	D
S.3-5.5.18	Reports data and conclusions.	D	D	D
S.3-5.5.19	Provides supporting evidence for conclusions.	I	D	D
S.3-5.5.20	Applies scientific concepts to a new situation.	I	D	D
S.3-5.5.21	Uses thermometers to measure temperature (Celsius, Farenheit).	D	D	M
S.3-5.5.22	Uses rulers as a measuring tool (standard and metric).	D	D	D
S.3-5.5.23	Uses bar graphs and pictographs to display information.	D	D	D,M
S.3-5.5.24	Classifies and sorts objects.	D	D	M
S.3-5.5.25	Identifies similarities and differences.	D	D	M
S.3-5.5.26	Begins to make analyses.	D	D	D
S.3-5.5.27	Uses measuring cups and spoons to accurately measure materials.	M	M	M
S.3-5.5.28	Arranges events in sequence.	D	D	D,M

S.3-5.5.29	Properly uses the following instruments: pan balance scale, and hand lens.	I	D	D
S.3-5.5.30	Properly uses the following instruments: spring scale, microscopes and microviewer.			I,D
S.6-8.5	SCIENCE INQUIRY AND METHODS	6	7	8
S.6-8.5.1	Forms questions, such as, "What if...?" or "How do you know...?"	M	M	M
S.6-8.5.2	Uses various kinds of investigation to collect data needed to answer the question.	D	D	D
S.6-8.5.3	Uses appropriate instruments for investigation.	D	M	M
S.6-8.5.4	Organizes and displays data.	D	M	M
S.6-8.5.5	Develops explanations using observations and scientific knowledge.	D	D	D
S.6-8.5.6	Makes conclusions combining data with what scientists already know.	D	D	D,M
S.6-8.5.7	Shares and discusses the results with others.	D,M	M	M
S.6-8.5.8	Expands the investigation to generate additional questions.	D	D	D
S.6-8.5.9	Designs new experiments to test the additional questions.	D	D	D
S.6-8.5.10	Finds and processes information from readings, investigations and other forms of communications.	D	D	D
S.6-8.5.11	Forms questions and finds answers to the questions about immediate surroundings.	D	D	D
S.6-8.5.12	Uses observations and science information when forming predictions.	D	D	D
S.6-8.5.13	Performs simple investigations.	D	D	D,M
S.6-8.5.14	Follows safety rules during investigation(at each grade level).	D,M	D,M	D,M
S.6-8.5.15	Uses numbers and units when counting or measuring objects and recording data.	M	M	M
S.6-8.5.16	Collects and records data.	D	D	D
S.6-8.5.17	Compares data and forms conclusions.	D	D	D
S.6-8.5.18	Reports data and conclusions.	D	D	D
S.6-8.5.19	Provides supporting evidence for conclusions.	D	D	D
S.6-8.5.20	Applies scientific concepts to a new situation.	M	M	M
S.6-8.5.21	Uses thermometers to measure temperature.	D,M	M	M
S.6-8.5.22	Uses rulers as a measuring tool.	D,M	M	M
S.6-8.5.23	Uses bar graphs and pictographs to display information.	M	M	M
S.6-8.5.24	Classifies and sorts objects.	M	M	M
S.6-8.5.25	Identifies similarities and differences.	M	M	M
S.6-8.5.26	Begins to make analyses.	D	D	D
S.6-8.5.27	Uses measuring cups and spoons to accurately measure materials.	M	M	M
S.6-8.5.28	Arranges events in sequence.	M	M	M
S.6-8.5.29	Properly uses microscopes, microviewers and slides.	I	D	D
S.6-8.5.30	Properly prepares wet mounts, dry mounts and stained mounted slides.		I,D	D
S.6-8.5.31	Properly uses pan balance, spring scales, triple beam balances.	I,D	D,M	M

S.K-2.6		SCIENCE AND TECHNOLOGY			K	1	2
S.K-2.6.1	Identifies a simple problem.	I	I	D			
S.K-2.6.2	Proposes a solution.			I			
S.K-2.6.3	Implements proposed solution.			I			
S.K-2.6.4	Evaluates a product or design.			I			
S.K-2.6.5	Explores science's role in answering questions and explaining the natural world that God created.		I	I,D			
S.K-2.6.6	Relates how scientists and engineers work in teams.		I	D			
S.K-2.6.7	Shares contributions of women and men of all ages, backgrounds and groups.		I	I			
S.K-2.6.8	Demonstrates the use of tools and techniques for solving problems.	I	D	D			
S.3-5.6		SCIENCE AND TECHNOLOGY			3	4	5
S.3-5.6.1	Identifies a simple problem and proposes a solution.	D	D	D			
S.3-5.6.2	Implements proposed solutions or design.	D	D	D			
S.3-5.6.3	Evaluates a product or design.	D	D	D,M			
S.3-5.6.4	Evaluates completed technological designs or products.			I			
S.3-5.6.5	Explores science's role in answering questions and explaining the natural world that God created.	D	D	D			
S.3-5.6.6	Compares and contrasts the work of scientists and engineers.	I,D	D	D			
S.3-5.6.7	Shares contributions of women and men of all ages, backgrounds, groups and cultures to science and technology.	D	D	D			
S.3-5.6.8	Chooses and uses appropriate tools and techniques to solve a problem.	D	D	D			
S.3-5.6.9	Recognizes that tools help scientists make better observations, measurements and investigations.	I	D	D			
S.3-5.6.10	Practices the importance of safety in reducing risks.	I	D	D			
S.6-8.6		SCIENCE AND TECHNOLOGY			6	7	8
S.6-8.6.1	Identifies problems to which we can apply technology as a solution.	I,D	D	D			
S.6-8.6.2	Designs and implements a solution or product involving technology.	I	D	D			
S.6-8.6.3	Evaluates the effectiveness of a completed product or solution.	I,D	D	D			
S.6-8.6.4	Suggests improvements for their own products or solutions and try proposed modifications.	I	D	D			
S.6-8.6.5	Distinguishes between the contributions of scientists and those of engineers.	I,D	D	D			
S.6-8.6.6	Develops a sense of responsibility as a Catholic Christian for the benefits and consequences of technological development.	I,D	D	D			
S.6-8.6.7	Recognizes the contributions to science and technology by many diverse people and cultures.	D	D	D			
S.6-8.6.8	Recognizes that science and technology are reciprocal.	I	D	D			
S.6-8.6.9	Continues practicing the importance of safety in reducing risks.	D	D	D			