

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.A.1

Strand: Science Connections

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|--|
| Science Connections | Develop an understanding of the science themes by using the themes to frame questions about science related issues and problems. |

| Performance Indicators | | |
|---|------------|-----------|
| <ol style="list-style-type: none"> 1. Develop an understanding about the main features of evolution by natural selection and use this understanding to frame questions about the diversity of life. 2. Develop an understanding about the main changes in society that lead to the Industrial Revolution and use this understanding to frame questions about the impact of these changes on people’s lives. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.A.2

Strand: Science Connections

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|--|
| Science Connections | Describe limitations of science systems and give reasons why specific science themes are included in or excluded from those systems. |

| Performance Indicator | | |
|---|------------|-----------|
| 1. Describe how thinking about science systems means looking at the relationships of the parts to each other. For example, the output from one part of a system (which can include material, energy, or information) can become the input for another part of a system. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.A.3, 8.A.4, 8.A.5

Strand: Science Connections

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|--|
| Science Connections | Defend explanations and models by collecting organizing evidence that supports them and critique explanations and models by collecting and organizing evidence that conflicts with them. |

| Performance Indicator | | |
|---|------------|-----------|
| 1. Use geometric figures, number sequence, graphs, diagrams, sketches, number line, maps stories, or 3-D objects to physically represent objects, events, processes or conceptions (by their nature, such representations-physical or conceptual-can never be exact in every detail). | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.A.6

Strand: Science Connections

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|---|
| Science Connections | Use models and explanations to predict actions and events in the natural world. |

| Performance Indicator | | |
|---|------------|-----------|
| 1. Use mathematical models to explain/predict natural occurring events. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.A.7

Strand: Science Connections

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|--|
| Science Connections | Design real or thought investigations to test the usefulness and limitations of a model. |

| Performance Indicator | | |
|---|------------|-----------|
| 1. Design investigations to test the limitations or usefulness of a physical or conceptual model. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.A.8

Strand: Science Connections

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|--|
| Science Connections | Use the themes of evolution, equilibrium, and energy to predict future events or changes in the natural world. |

| Performance Indicator | | |
|--|------------|-----------|
| 1. Use physical or conceptual models to show how organisms evolve by natural selection, change in a steady repetitive or irregular ways. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.B.1

Strand: Nature of Science

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|---|
| Nature of Science | Describe how scientific knowledge and concepts have changed over time in the earth and space, life and environment and physical sciences. |

| Performance Indicator |
|---|
| 1. Describe how the on-going process of changes in scientific knowledge can lead to a better understanding of how things work in the world but not to absolute truth. |

| Suggested Activities | Assessment | Resources |
|----------------------|------------|-----------|
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.B.2

Strand: Nature of Science

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|--|
| Nature of Science | Identify and describe major changes that have occurred over in conceptual models and explanations in the earth and space, life and environmental, and physical science and identify the people, cultures, and conditions that led to these developments. |

| Performance Indicator | | |
|---|------------|-----------|
| <ol style="list-style-type: none"> 1. Identify and describe the main changes in society leading to the Industrial Revolution (for example, the importance of tools/inventions; geographic distribution of materials, energy, and resources) 2. Identify and describe the main changes in scientists’ conceptions of evolution by natural selection, the evidence and arguments that support it and its importance in biology. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.B.3

Strand: Nature of Science

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|---|
| Nature of Science | Explain how the general rules of science apply to the development and use of evidence in science investigations, model-making and applications. |

| Performance Indicator |
|---|
| <ol style="list-style-type: none"> 1. Explain that when similar investigations give different results, the scientific challenge is to judge whether the differences are trivial or significant. 2. Explain the importance of variables in development of scientific investigations (for example, if more than one variable change at the same time in an experiment, the outcomes of the experiment may not be clearly attributed to any one variable; it may not be possible to prevent outside variables from influencing the outcomes of an investigation. |

| Suggested Activities | Assessment | Resources |
|----------------------|------------|-----------|
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.C.1

Strand: Science Inquiry

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|---|
| Science Inquiry | Identify a question to investigate using resources and equipment available. |

| Performance Indicator | | |
|---|------------|-----------|
| 1. Apply scientific ideas, concepts, and relationships to formulations of scientific questions. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8C.2, 8.C.7, 8.C.8

Strand: Science Inquiry

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|---|
| Science Inquiry | Use the science content being learned to ask questions, plan investigations, make observations, make predictions, and offer explanations. |

| Performance Indicator | | |
|---|------------|-----------|
| 1. Explain how different scientific disciplines employ different methods, core theories, and standards to advance scientific knowledge and understanding. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.C.3

Strand: Science Inquiry

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|---|
| Science Inquiry | Design and safely conduct investigations that provide reliable quantitative or qualitative data, as appropriate, to answer questions. |

| Performance Indicator |
|---|
| <ol style="list-style-type: none"> 1. Identify the assumptions that influence and guide investigations. 2. State explanations in terms of the relationship between two or more variables. 3. Propose and critique alternative explanations and procedures. |

| Suggested Activities | Assessment | Resources |
|----------------------|------------|-----------|
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science

Strand: Science Inquiry

Grade Range: Eighth Grade

Section/Heading: 8C.4, 8.C.5, 8.C.6, 8.C.9

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|---|
| Science Inquiry | Use accepted scientific knowledge, models, and theories to explain results and to raise further questions about the investigations. |

| Performance Indicator | | |
|--|------------|-----------|
| 1. Make connections between the content of science and the contexts within which scientists develop new knowledge. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.D.1

Strand: Physical Science

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|--|
| Physical Science | Observe, describe, and measure physical and chemical properties of elements and other substances to identify and group them according to properties such as density, melting points, boiling points, conductivity, magnetic attraction, solubility, and reactions to common physical and chemical tests. |

| Performance Indicator | | |
|---|------------|-----------|
| 1. Describe the physical properties of metals, nonmetals and metalloids. 2. Identify and group minerals and rocks based on physical characteristics. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.D.2

Strand: Physical Science

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|--|
| Physical Science | Use the major ideas of atomic theory and molecular theory to describe physical and chemical interactions among substances, including solids, liquids, and gases. |

| Performance Indicator | | |
|--|------------|-----------|
| 1. Explain how the ideas of atomic and molecular theory support chemical and physical interactions of solid, liquids, and gases. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.D.3

Strand: Physical Science

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|--|
| Physical Science | Understand how chemical interactions and behaviors lead to new substances with different properties. |

| Performance Indicator | | |
|---|------------|-----------|
| <ol style="list-style-type: none"> 1. Describe materials before and after chemical changes. 2. Understand and demonstrate that all types of matter are the result of changes in the arrangement, motion and combination of atoms. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.D.4

Strand: Physical Science

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|---|
| Physical Science | While conducting investigations, use the science themes to develop explanations of physical and chemical interactions and energy exchanges. |

| Performance Indicator | | |
|--|------------|-----------|
| 1. Experience and describe how the behavior of gases can be explained. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.D.5

Strand: Physical Science

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|---|
| Physical Science | While conducting investigations, explain the motion of objects by describing the forces acting on them. |

| Performance Indicator | | |
|--|------------|-----------|
| <ol style="list-style-type: none"> 1. Investigate forces in relationship to Newtonian Laws of Motion. 2. Demonstrate, using equations, how simple machines make work easier. 3. Understand and apply the concept of work and power to simple machines. 4. Explain the forces acting upon the earth that cause erosion. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.D.6

Strand: Physical Science

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|---|
| Physical Science | While conducting investigations, explain the motion of objects using concepts of speed, velocity, acceleration, friction, momentum, and changes over time, among others, and apply these concepts and explanations to real-life situations outside the classroom. |

| Performance Indicator | | |
|--|------------|-----------|
| 1. Observe the relationship of how force, mass and acceleration can be represented mathematically. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.D.9

Strand: Physical Science

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|---|
| Physical Science | Explain the behaviors of various forms of energy by using the models of energy transmission, both in the laboratory and in real-life situations in the outside world. |

| Performance Indicator | | |
|--|------------|-----------|
| <ol style="list-style-type: none"> 1. Experience examples of heat transfer by conduction, radiation, and convection. 2. Describe the form of nuclear energy and how this energy is transformed. 3. Discover through experiments that in most chemical and nuclear reactions, energy is transferred into or out of the system. 4. Experience how electrical circuits provide a means of transferring electrical energy, when heat, light, sound, and chemical changes are produced. 5. Discover that energy comes to the earth in the form of electromagnetic radiation. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.E.2

Strand: Earth and Space Science

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|--|
| Earth and Space Science | Describe underlying structures of the earth that cause changes in the earth's surface. |

| Performance Indicator | | |
|--|------------|-----------|
| 1. Describe and construct models of earthquakes and volcanoes. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.E.3

Strand: Earth and Space Science

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|--|
| Earth and Space Science | Using the science themes during the process of investigation, describe climate, weather, ocean currents, soil movements and changes in the forces acting on the earth. |

| Performance Indicator | | |
|--|------------|-----------|
| <ol style="list-style-type: none"> 1. Observe how global patterns of atmospheric movements influence local weather. 2. Relate how oceans affect climate. 3. Observe the interactions of global weather and climate. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.E.5

Strand: Earth and Space Science

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|---|
| Earth and Space Science | Analyze the geologic and life history of the earth, including change over time, using various forms of scientific evidence. |

| Performance Indicator | | |
|--|------------|-----------|
| <ol style="list-style-type: none"> 1. Analyze locations of igneous, sedimentary, metamorphic rocks to explain geologic history of the earth. 2. Illustrate how earth history and climate are influenced by occasional phenomena. 3. Show how glaciers can cause physical changes in landform. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.E.6

Strand: Earth and Space Science

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|--|
| Earth and Space Science | Describe through investigations the use of the earth's resources by humans in both past and current cultures, particularly how changes in the resources used for the past 100 years are the basis for efforts to conserve and recycle renewable and non-renewable resources. |

| Performance Indicator | | |
|---|------------|-----------|
| 1. Describe through investigations how energy resources as renewable and nonrenewable and list ways that resources have changed overtime. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.E.7

Strand: Earth and Space Science

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|---|
| Earth and Space Science | Describe the general structure of the solar system, galaxies, and the universe, explaining the nature of the evidence used to develop current models of the universe. |

| Performance Indicator | | |
|--|------------|-----------|
| 1. Identify the sun as the major source of energy for earth. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.E.8

Strand: Earth and Space Science

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|---|
| Earth and Space Science | Using past and current models of the structure of the solar system, explain the daily, monthly, yearly, and long-term cycles of the earth, citing evidence gained from personal observation as well as evidence used by scientists. |

| Performance Indicator | | |
|---|------------|-----------|
| <ol style="list-style-type: none"> 1. Observe how the seasons result from the variations of the amount of the sun’s energy. 2. Identify natural hazards and the challenges they present. 3. Use historical weather patterns and phenomena to predict future weather. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.F.1

Strand: Life and Environmental Science

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|--|
| Life and Environmental Sciences | Understand the structure and function of cells, organs, tissues, organ systems, and whole organisms. |

| Performance Indicator | | |
|---|------------|-----------|
| 1. Recognize the relationship between cells, tissues, organs, organ systems, and organisms. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.F.2

Strand: Life and Environmental Science

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|---|
| Life and Environmental Sciences | Show how organisms have adapted structures to match their functions, providing means of encouraging individual and group survival within specific environments. |

| Performance Indicator |
|---|
| <ol style="list-style-type: none"> 1. Explain structure and functions of various body systems and how they ensured survival. 2. Discuss how malfunctioning could occur within the body systems resulting in change of lifestyle or jeopardizing chance of survival. |

| Suggested Activities | Assessment | Resources |
|----------------------|------------|-----------|
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.F.3

Strand: Life and Environmental Science

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|--|
| Life and Environmental Sciences | Differentiate between single-celled and multiple-celled organisms (humans) through investigation, comparing the cell functions of specialized cells for each type of organism. |

| Performance Indicator |
|--|
| 1. Explain why different cells have different functions. |

| Suggested Activities | Assessment | Resources |
|----------------------|------------|-----------|
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.F.4

Strand: Life and Environmental Science

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|--|
| Life and Environmental Sciences | Investigate and explain that heredity is comprised of the characteristic traits found in genes within the cell of an organism. |

| Performance Indicator | | |
|--|------------|-----------|
| 1. Understand and observe that characteristics result from inherited traits and environmental factors. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.F.6

Strand: Life and Environmental Science

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|--|
| Life and Environmental Science | Understand that an organism is regulated both internally and externally. |

| Performance Indicator | | |
|---|------------|-----------|
| 1. Explain how various systems work together in the human body. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.F.8

Strand: Life and Environmental Science

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|--|
| Life and Environmental Science | Show through investigations how organisms both depend on and contribute to the balance or imbalance of population and/or ecosystems, which in turn contribute to the total system of life on the planet. |

| Performance Indicator | | |
|--|------------|-----------|
| 1. Observe and recognize the impacts of the cycles of nature have on life forms. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.F.9

Strand: Life and Environmental Science

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|---|
| Life and Environmental Science | Explain how some of the changes on the earth are contributing to changes in the balance of life and affecting the survival or population growth of certain species. |

| Performance Indicator | | |
|---|------------|-----------|
| 1. Describe how diversity results from gradual biological evolution. 2. Explain cyclical changes in the environment. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.F.10

Strand: Life and Environmental Science

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|---|
| Life and Environmental Science | Project how current trends in human resource use and population growth will influence the natural environment, and show how current policies affect those trends. |

| Performance Indicator | | |
|---|------------|-----------|
| <ol style="list-style-type: none"> 1. Examine the influence that humans have on the natural environment. 2. Explain how environmental changes may result in species extinction. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.G.1

Strand: Science Applications

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|--|
| Science Applications | Identify and investigate the skills people need for a career in science or technology and identify the academic courses that a person pursuing such a career would need. |

| Performance Indicator | | |
|--|------------|-----------|
| 1. Identify the skills needed to pursue careers in space industry, computers, or science related fields. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.G.2

Strand: Science Applications

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|--|
| Science Applications | Explain how current scientific and technological discoveries have an influence on the work people do and how some of these discoveries also lead to new careers. |

| Performance Indicator | | |
|--|------------|-----------|
| 1. Recognize and relate the importance of new technologies in careers connected with chemistry or physics. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.G.3

Strand: Science Applications

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|--|
| Science Applications | Illustrate the impact that science and technology have had both good and bad, on careers, systems, society, environment and quality of life. |

| Performance Indicator |
|---|
| 1. Describe the impacts of other technologies on new theories toward exploration of space and the complexity of the universe. |

| Suggested Activities | Assessment | Resources |
|----------------------|------------|-----------|
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.G.4

Strand: Science Applications

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|---|
| Science Applications | Propose design (or re-design) of an applied science model or a machine that will have an impact in the community or elsewhere in the world and show how the design (or re-design) might work, including potential side-effects. |

| Performance Indicator | | |
|--|------------|-----------|
| 1. Demonstrate the interrelationship of science and technology by creating or designing a project or experiment related to the curriculum. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.G.5

Strand: Science Applications

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|--|
| Science Applications | Investigate a specific local problem to which there has been a scientific or technological solution, including proposals for alternative courses of action, the choices that were made, reasons for the choices, any new problems created and subsequent community satisfaction. |

| Performance Indicator | | |
|--|------------|-----------|
| 1. Investigate, demonstrate and report on a local problem or technology that will enable newer technologies or broaden the field of science. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.G.7

Strand: Science Applications

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|---|
| Science Applications | Show evidence of how science and technology are interdependent, using some examples drawn from personally conducted investigations. |

| Performance Indicator | | |
|--|------------|-----------|
| 1. Utilize and experiment with new technologies to allow observations otherwise limited due to quantity, distance, location, size and speed. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.H.1

Strand: Social And Personal Perspectives

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|---|
| Social and Personal Perspectives | Evaluate the scientific evidence used in various media (for example, television, radio, Internet, popular press, and scientific journals) to address a social issue, using criteria of accuracy, logic, bias, relevance of data and credibility of sources. |

| Performance Indicator | | |
|---|------------|-----------|
| 1. Evaluate the risk analysis of various hazards, such as radiation, or chemical contaminations and estimate the number of people that may be exposed and the number likely to suffer consequences. | | |
| Suggested Activities | Assessment | Resources |
| | | |

Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.H.2

Strand: Social And Personal Perspectives

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|---|
| Social and Personal Perspectives | Present a scientific solution to a problem involving the earth and space, life and environmental or physical sciences and participate in a consensus-building discussion to arrive at a group decision. |

| Performance Indicator |
|---|
| 1. Research and present solutions for societal challenges that include both positives and negatives in the area of physics and chemistry. |

| Suggested Activities | Assessment | Resources |
|----------------------|------------|-----------|
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Diocese of Jefferson City Curriculum Guide

Content Area: Science
 Grade Range: Eighth Grade
 Section/Heading: 8.H.3

Strand: Social And Personal Perspectives

| Diocesan Standard Terra Nova Objective | Benchmark Statement |
|---|--|
| Social and Personal Perspectives | Understand the consequences of decisions affecting personal health and safety. |

| Performance Indicator | | |
|---|------------|-----------|
| 1. Explain the need for environmental impact statements and for all people to get involved in the process using local issues of land management, mining or the use of erosion controls. | | |
| Suggested Activities | Assessment | Resources |
| | | |