

**GLENCOE CORRELATION**  
**BSCS BIOLOGY**  
**MARYLAND**  
**Science Content Standards**  
**Grade Twelve**

CONTENT STANDARDS	PAGE REFERENCES
<b>1.0 Skills and Processes - Students will demonstrate the thinking and acting inherent in the practice of science.</b>	
<b>Scientific Inquiry</b>	
By the end of <b>grade 12</b> , students know and are able to do everything required at earlier grades and:	
1.12.1 access and process information from readings, investigations, and/or oral communications. (SFS 3.2) (SFS 4.1)	
The student will read a technical selection and interpret it appropriately. (CLG 1.5.6)	SE: 680-687 <i>Investigation</i> 691-694, 702-704, 720-723, 732-733, 761-762
<i>The student will learn the use of new instruments and equipment by following instructions in a manual or from oral direction. (CLG 1.3.4)</i>	SE: <i>Investigation</i> 691-694, 702-704, 716-717, 720-723, 736-737, 739-741, 743-746, 756-757
The student will use relationships discovered in the lab to explain phenomena observed outside the laboratory. (CLG 1.2.7)	SE: <i>Investigation</i> 702-704, 713-714, 758-760, 777-778, 780-781, 781-782
The student will create and/or interpret graphics (scale drawings, photographs, digital images, etc.). (CLG 1.5.4)	SE: <i>Investigation</i> 694-696, 713-714, 751-754, 755-756, 758-760, 770-774
1.12.2 formulate questions that lead to a testable <b>hypothesis</b> , which demonstrates the logical connections between the scientific concepts and the design of an <b>investigation</b> .	
The student will identify meaningful, answerable scientific questions. (CLG 1.2.1)	SE: 14-17 <i>Investigation</i> 696-698, 714-716, 716-718, 726-728, 739-741, 791-792
<i>The student will pose meaningful, answerable, scientific questions. (CLG 1.2.2)</i>	SE: 14-17 <i>Investigation</i> 696-698, 714-716, 716-718, 726-728, 739-741, 791-792
1.12.3 use observations, research, and select appropriate scientific information to form <b>predictions</b> and <b>hypotheses</b> .	
The student will formulate a working hypothesis. (CLG 1.2.3)	SE: <i>Investigation</i> 696-698, 714-716, 716-718, 726-728, 739-741, 782-783, 791-792
1.12.4 design experimental approaches, which answer scientific questions.	
The student will select appropriate instruments and materials to conduct an investigation. (CLG 1.2.5)	SE: <i>Investigation</i> 714-716, 729
The student will identify appropriate methods for conducting an investigation and affirm the need for proper controls in an experiment. (CLG 1.2.6)	SE: <i>Investigation</i> 707-709, 714-716, 726-729, 729
1.12.5 <i>demonstrate safety when conducting an investigation.</i>	
The student will recognize safe laboratory procedures. (CLG 1.3.2)	SE: 680-685 <i>Investigation</i> 697, 699, 700, 703, 711-712, 717, 721, 722, 724 TWE: T18-T28

<b>CONTENT STANDARDS</b>	<b>PAGE REFERENCES</b>
<i>The student will demonstrate safe handling of the chemicals and materials of science. (CLG 1.3.3)</i>	SE: 680-685 <i>Investigation 697, 699, 700, 705, 708, 763</i> TWE: T18-T28
1.12.6 use mathematical processes (measuring, calculating, etc.) when conducting investigations, analyzing information, and/or displaying information.	
The student will recognize mathematics as part of the scientific endeavor, comprehend the nature of mathematical thinking, and become familiar with key mathematical ideas and skills. (CLG 4.6.2)	SE: <i>Investigation 693-694, 702-704, 712-713, 748-749, 749-751, 758-760, 768-770, 792-794</i> <i>Appendix 13A 802-803</i>
The student will recognize the important role that mathematics serves when solving problems in physics. (CLG 5.7.2)	This objective can be met during teacher/class discussion.
<i>The student will recognize mathematics as an integral part of the scientific process. (CLG 1.7.4)</i>	SE: <i>Investigation 693-694, 702-704, 712-713, 748-749, 749-751, 758-760, 768-770, 792-794</i> <i>Appendix 13A 802-803</i>
The student will use ratio and proportion in appropriate situations to solve problems. (CLG 1.6.1)	SE: 351-352 <i>Investigation 693-694, 712-713, 749-751, 758-760, 768-770</i>
<i>The student will use computers and/or graphing calculators to perform calculations for tables, graphs, or spreadsheets. (CLG 1.6.2)</i>	SE: <i>Investigation 696-698, 702-704, 704-707, 716-718, 719-720, 729, 770-774</i> <i>*Computers and/or graphing calculators or spreadsheets can be used with these activities.</i>
The student will express and/or compare small and large quantities using scientific notation and relative order of magnitude. (CLG 1.6.3)	SE: 687-688 <i>Investigation 691-694, 712-713, 756-758</i>
<i>The student will manipulate quantities and/or numerical values in algebraic equations. (CLG 1.6.4)</i>	SE: <i>Investigation 758-760, 769-770</i> <i>Appendix 13A 802-803</i>
The student will judge the reasonableness of an answer. (CLG 1.6.5)	SE: <i>Investigation 700-702, 702-704, 716-718, 749-751, 756-758</i>
1.12.7 collect, organize, and display data in multiple ways that fit the context using appropriate instruments to effectively convey the information (e.g., calculators, spreadsheets, and databases and graphing programs). (SFS 3.2) (SFS 4.1)	
<i>The student will test a working hypothesis. (CLG 1.2.4)</i>	SE: <i>Investigation 696-698, 714-716, 716-718, 726-728, 739-741, 782-783, 791-792</i>
<i>The student will develop and demonstrate skills in using lab and field equipment to perform investigative techniques. (CLG 1.3.1)</i>	SE: <i>Investigation 691-694, 702-704, 707-709, 718-719, 720-723, 726-728, 743-746, 789-791, 792-794</i>
The student will organize data appropriately using techniques such as tables, graphs, and webs (for graphs: axes labeled with appropriate quantities, appropriate units on axes, axes labeled with appropriate intervals, independent and dependent variables on correct axes, appropriate title). (CLG 1.4.1)	SE: <i>Investigation 694-696, 698-700, 702-704, 704-707, 719-720, 729, 778-780, 789-791</i>
The student will use computers and/or graphing calculators to produce tables, graphs, and spreadsheet calculations. (CLG 1.5.5)	SE: <i>Investigation 696-698, 702-704, 704-707, 716-718, 719-720, 729, 770-774</i> <i>*Computers and/or graphing calculators or spreadsheets can be used with these activities.</i>

CONTENT STANDARDS	PAGE REFERENCES
1.12.8 analyze appropriate data to identify <b>trends</b> to form <b>conclusions</b> and apply what has been learned to evaluate the hypothesis.	
The student will analyze data to make predictions, decisions, or form conclusions. (CLG 1.4.2)	SE: <i>Investigation</i> 696-698, 700-702, 713-714, 719-720, 758-760, 760-762, 770-774, 774-777, 791-792
The student will use experimental data from various investigators to validate results. (CLG 1.4.3)	SE: <i>Investigation</i> 700-702, 704-707, 777-778, 780-781, 781-782
The student will determine the relationships between quantities and develop the mathematical model that describes these relationships. (CLG 1.4.4)	SE: <i>Investigation</i> 712-713, 749-751, 758-760, 768-770
The student will check graphs to determine that they do not misrepresent results. (CLG 1.4.5)	SE: <i>Investigation</i> 696-698, 704-707, 716-718, 729, 791-792
The student will describe trends revealed by data. (CLG 1.4.6)	SE: <i>Investigation</i> 696-698, 704-706, 713-714, 716-718, 720-723, 739-741, 755-756, 777-778
The student will use analyzed data to confirm, modify, or reject an hypothesis.(CLG 1.4.9)	SE: <i>Investigation</i> 714-716, 716-718, 720-723, 726-728, 737-739, 782-783, 791-792
1.12.9 interpret and communicate findings through speaking, writing, and drawing in a form suited to the purpose and audience, using developmentally appropriate methods including technology tools and telecommunications. (SFS 3.1) (SFS 4.1)	
The student will demonstrate the ability to summarize data (measurements/observations). (CLG 1.5.1)	SE: <i>Investigation</i> 696-698, 700-702, 704-707, 713-714, 716-718, 720-723, 749-751, 780-781
The student will explain scientific concepts and processes through drawing, writing, and/or oral communication. (CLG 1.5.2)	SE: 686-687 <i>Investigation</i> 694-696, 700-702, 723-724, 743-746, 758-760, 782-783
The student will use tables, charts, and graphs to display data in making arguments and claims in both oral and written presentations. (CLG 2.8.3), (CLG 5.6.4)	SE: <i>Investigation</i> 698-700, 702-704, 704-707, 719-720, 729, 758-760, 778-780, 782-783, 789-791
<i>The student will use computers and/or graphing calculators to produce the visual materials (tables, graphs, and spreadsheets) that will be used for communicating results. (CLG 1.5.3)</i>	SE: <i>Investigation</i> 696-698, 702-704, 704-707, 716-718, 719-720, 729, 770-774 <i>*Computers and/or graphing calculators or spreadsheets can be used with these activities.</i>
The student will communicate conclusions derived through a synthesis of ideas. (CLG 1.5.9)	SE: <i>Investigation</i> 696-698, 700-702, 704-707, 712-713, 719-720, 758-760, 762-763
<b>Critical Thinking</b>	
1.12.10 analyze similarities and differences of objects, materials, concepts, and actions.	
The student will describe similarities and differences when explaining concepts and/or principles. (CLG 1.5.8)	SE: <i>Investigation</i> 698-700, 700-702, 713-714, 723-725, 736-737, 770-774
1.12.11 construct various classification systems and infer degree of divergence and/or kinship of various objects, materials, concepts, actions, and organisms.	
The student will use, explain, and/or construct various classification systems. (CLG 1.5.7)	SE: <i>Investigation</i> 763-764, 764-767

<b>CONTENT STANDARDS</b>	<b>PAGE REFERENCES</b>
1.12.12 critique scientific information in order to detect bias and analyze the source of the bias. (SFS 2.2)	
The student will critique arguments that are based on faulty, misleading data or on the incomplete use of numbers. (CLG 1.1.3)	SE: 16 <i>Focus On 16</i>
The student will recognize data that are biased. (CLG 1.1.4), (CLG 2.8.2), (CLG 5.6.2)	SE: 16, 17 <i>Focus On 16</i>
The student will explain the factors that produce biased data. (CLG 1.1.5)	SE: 16, 17
1.12.13 analyze the adequacy of the supporting evidence used to form conclusions, devise a plan, or solve a practical problem. (SFS 2.2)	
The student will determine the sources of error that limits the accuracy or precision of experimental results. (CLG 1.4.7)	SE: 16, 17 <i>Investigation 702-704, 714-716, 726-728</i>
1.12.14 provide supporting evidence when forming conclusions, devising a plan or solving a practical problem. (SFS 2.2)	
The student will defend the need for verifiable data. (CLG 1.2.8)	SE: 16, 17, 686 <i>Focus On 16</i>
1.12.15 analyze and extend patterns.	
1.12.16 analyze conclusions and modify ideas based on new information from developmentally appropriate readings, data, and the ideas of others.	
The student will modify or affirm scientific ideas according to accumulated evidence. (CLG 1.1.2)	SE: <i>Theory 13</i> <i>Investigation 700-702, 712-713, 748-749, 755-756, 758-760, 760-763, 774-777</i>
1.12.17 describe to others how scientific information was used.	
<b>Applications of Science</b>	
1.12.18 apply scientific principles and/or concepts to understand a new situation.	
1.12.19 The student will apply skills, processes, and concepts of biology, chemistry, physics, and earth/space science to societal issues. (CLG 1.7.1)	SE: 2, 4, 411, 413, 668-672, 674, 677 <i>Biological Challenges: Careers 5</i> <i>Focus On 110, 404</i> <i>Biological Challenges: Research 149, 321, 350, 673</i>
<i>The student will describe the role of science in the development of literature, art, and music. (CLG 1.7.3)</i>	This objective can be met during teacher/class discussion.
<i>The student will apply chemistry to the concepts of biology, earth/space science, and environmental science. (CLG 4.6.1)</i>	SE: 17, 23-42, 54-55, 58, 61-66, 79-80, 111-113, 122-123 <i>Biological Challenges: Research 86, 673</i>
<i>The student will apply physics to the concepts of biology, earth/space science, and environmental science. (CLG 5.7.1)</i>	SE: 103, 105, 440-441 <i>Biological Challenges: Technology 46</i>
<i>The student will investigate the role of chemistry in areas of human endeavor and achievement. (CLG 4.6.3)</i>	SE: <i>Biological Challenges: Technology 442</i> <i>Biological Challenges: Research 673</i> <i>Appendix 798</i>
<i>The student will investigate the role of physics in all areas of human endeavor and achievement. (CLG 5.7.3)</i>	SE: 440-441 <i>Biological Challenges: Technology 46</i>

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1.12.20 defend a position on a scientific issue and take into account the different types of risks and benefits in formulating a plan of action. (SFS 2.3)	
<i>The student will investigate an issue such as climatic changes or electric power generation. (CLG 2.8.1)</i>	SE: 672, 674-675 <i>Investigation 792-794</i>
<i>The student will investigate a social issue related to physics such as alternate energy source, fiber optics in telecommunications, nuclear power, microwave technology, effect of power lines, etc. (CLG 5.6.1)</i>	This objective can be met during teacher/class discussion.
1.12.21 The student will recognize that real problems have more than one solution and decisions to accept one solution over another are made on the basis of many issues. (CLG 1.1.1), (CLG 2.8.5), (CLG 5.6.3) (SFS 2.3)	
The student will explain why curiosity, honesty, openness, and skepticism are highly regarded in science. (CLG 2.8.4)	SE: 6-12, 14-17 <i>Theory 13</i>
<b>Technology</b>	
1.12.22 design, construct, and use <b>models</b> (e.g., math, computer, physical) to make <b>predictions</b> about actual events.	
<i>The student will use models and computer simulations to extend his/her understanding of scientific concepts. (CLG 1.4.8)</i>	SE: <i>Investigation 709-712, 712-713, 730-736, 741-742, 768-770, 787-789</i>
1.12.23 demonstrate and explain how using existing tools extend knowledge and identify the limitations, which drive the need for new technologies (i.e., create improvements in observing, estimating, measuring, computing, collecting, and communicating scientific data and information).	
The student will explain how development of scientific knowledge leads to the creation of new technology and how technological advances allow for additional scientific accomplishments. (CLG 1.7.6)	SE: 17, 157-158, 398-400 <i>Biological Challenges: Technology 46, 401, 644</i> <i>Biological Challenges: Discovery 239</i> <i>Biological Challenges: Research 321, 350</i>
1.12.24 explain that when designing a device, process, or system (e.g., manufacturing, marketing, operating, maintaining, replacing, and disposing of) risk analysis and technology assessment determines how it will be employed.	
1.12.26 explain that science and technology have strongly influenced the course of history and cite how human inventiveness has brought new risks as well as improvements to human existence.	
The student will identify and evaluate the impact of scientific ideas and/or advancements in technology on society. (CLG 1.7.2)	SE: 2, 4, 14-15, 17, 338-339, 411, 413 <i>Biological Challenges: Careers 5</i> <i>Biological Challenges: Research 350</i> <i>Investigation 689-690</i>
<b>History of Science</b>	
1.12.27 describe how various cultures from ancient times to the present have made contributions that led to current scientific ideas and technological invention.	
1.12.28 explain that scientific careers differ from one another in what is studied, techniques used, where studied, and outcomes sought but they share a common purpose and philosophy and are part of the same scientific enterprise.	
<i>The student will investigate career possibilities in the various areas of science. (CLG 1.7.5)</i>	SE: <i>Biological Challenges: Careers 5</i> <i>Biological Challenges: Research 618</i>

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<b>3.0 Life Science - Students will use scientific skills and processes to explain the dynamic nature of living things, their interactions, and the results from the interactions that occur over time.</b>	
<b>Cellular</b>	
3.12.1 explain that most life functions involve chemical reactions regulated by information stored within the cell and may be influenced by the cell's response to its <b>environment</b> .	
The student will be able to describe the unique characteristics of chemical compounds and macromolecules utilized by living systems (water, carbohydrates, lipids, proteins, nucleic acids, minerals, vitamins). (CLG 3.1.1)	SE: 24-25, 33-42, 43-45, 47, 70-71 <i>Focus On</i> 110 <i>Investigation</i> 698-700
The student will be able to discuss factors involved in the regulation of chemical activity as part of a homeostatic mechanism (osmosis, temperature, pH, enzyme regulation). (CLG 3.1.2)	SE: 31-32, 61-62, 78-85, 92-94 <i>Investigation</i> 696-698, 704-706, 709-712
The student will describe the flow of matter and energy between living systems and the physical environment (water cycle, carbon cycle, nitrogen cycle, photosynthesis, cellular respiration, chemosynthesis). (CLG 3.1.3)	SE: 54-60, 102-106, 121-125, 130-142, 640-642 <i>Investigation</i> 702-704, 714-716
The student will explain the function of structures found in cellular and multicellular organisms (transportation of materials, waste disposal, movement, feedback, asexual and sexual reproduction, control of structures, capture and release of energy, protein synthesis). (CLG 3.2.1)	SE: 67-73, 94-97, 103-106, 137, 163-172, 186-197, 708-113 <i>Investigation</i> 713-714, 723-725, 726-728
The student will conclude that cells exist within a narrow range of environmental conditions and changes to that environment, either naturally occurring or induced, may cause death of the cell or organism (pH, temperature, light, water, oxygen, carbon dioxide, radiation, toxins). (CLG 3.2.2)	SE: 32, 92-94, 209, 221 <i>Investigation</i> 696-698, 719-720
3.12.3 describe the abnormal functioning in cell regulation, such as cancer, as it relates to cell growth, division, and response to environment.	
<b>Genetics</b>	
3.12.4 explain how <b>traits</b> are <b>inherited</b> and passed from one generation to the next (i.e., from parental DNA, RNA to gross <b>anatomical</b> traits of offspring).	
The student will demonstrate that the sorting and recombination of genes during sexual reproduction has an effect on variation in offspring (meiosis, fertilization). (CLG 3.3.1)	SE: 317, 319-320, 322-332 <i>Investigation</i> 741-742, 746-748
The student will illustrate and explain how expressed traits are passed from parent to offspring (phenotypes, dominant and recessive traits, sex-linked traits, genotypes, punnett square). (CLG 3.3.2)	SE: 343-349, 351-365, 382-386 <i>Focus On</i> 356 <i>Investigation</i> 749-751, 751-754, 755-756
The student will explain how a genetic trait is determined by the code in a DNA molecule (definition of gene, structure of DNA, sequence of bases directing protein formation, proteins). (CLG 3.3.3)	SE: 43-45, 47, 216-219, 233-238, 240-253, 370-373 <i>Investigation</i> 732-733, 733-736

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The student will describe the effect of gene alteration on an organism and/or a population (mutations, chromosome number, cloning, genetic recombination). (CLG 3.3.4)	SE: 221, 229, 406-409, 421, 425 <i>Focus On</i> 228 <i>Biological Challenges: Research</i> 321 <i>Investigation</i> 756-758, 758-760
<b>Evolution</b>	
3.12.6 analyze the mechanisms of evolutionary changes (i.e., genetic variation, environmental changes, and natural selection).	
The student will explain how new traits may result from new combinations of existing genes or from mutations of genes in reproductive cells within a population (natural selection, adaptations, variation). (CLG 3.4.1)	SE: 7-12, 418-428, 507-511, 513, 515 <i>Theory</i> 13, 514 <i>Investigation</i> 756-758, 758-760, 760-762
The student will estimate degrees of kinship among organisms or species (classification, anatomical similarities, similarities of DNA base and/or amino acid sequence). (CLG 3.4.2)	SE: 461, 465-472, 474-480 <i>Focus On</i> 467 <i>Biological Challenges: Research</i> 473, 481 <i>A Brief Survey of Organisms</i> 483-497
<b>Biochemistry</b>	
3.12.8 explain the correlation between the structure and function of biologically important <b>molecules</b> and their relationships to life processes.	
The student will be able to describe the unique characteristics of chemical compounds and macromolecules utilized by living systems (water, carbohydrates, lipids, proteins, nucleic acids, minerals, vitamins). (CLG 3.1.1)	SE: 24-25, 33-42, 43-45, 47, 70-71 <i>Focus On</i> 110 <i>Investigation</i> 698-700
The student will be able to discuss factors involved in the regulation of chemical activity as part of a homeostatic mechanism (osmosis, temperature, pH, enzyme regulation). (CLG 3.1.2)	SE: 31-32, 61-62, 78-85, 92-94 <i>Investigation</i> 696-698, 704-706, 709-712
The student will analyze the relationships among organisms and between organisms and abiotic factors (abiotic/biotic factors: space, soil, water, air, temperature, food, light, organisms; relationships: predator – prey, parasite – host, mutualism, commensalism). (CLG 3.5.1)	SE: 54-57, 634-643, 645-647 <i>Theory</i> 676 <i>Investigation</i> 791-792, 792-793 <i>Appendix</i> 801-802
<b>Ecology</b>	
3.12.12 analyze the <b>interdependence</b> of diverse living <b>organisms</b> and their interactions with the components of the <b>biosphere</b> .	
The student will analyze the interrelationships and interdependencies among different organisms and explain how these relationships contribute to the stability of the ecosystem (diversity, succession, niche). (CLG 3.5.2)	SE: 638-643, 645-647, 663-668 <i>Investigation</i> 789-791, 791-792, 794-797
The student will investigate how natural and man-made changes in environmental conditions will affect individual organisms and the dynamics of populations (depletion of food, destruction of habitats, disease, natural disasters, pollution, population increase, urbanization). (CLG 3.5.3)	SE: 635, 645-647, 663-664, 671-672, 674-675, 677 <i>Biological Challenges: Research</i> 673 <i>Investigation</i> 791-792, 792-794

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The student will illustrate how all organisms are part of and depend on two major global food webs (oceanic food web, terrestrial food web). (CLG 3.5.4)	SE: 56-57, 636-638, 659-662 <i>Investigation</i> 789-791, 792-794
The student will analyze the consequences and/or trade-offs between technological changes and their effect on the individual, society and the environment. They may select topics such as bioethics, genetic engineering, endangered species, and food supply. (CLG 3.6.1)	SE: 4, 395, 411, 413 <i>Biological Challenges: Careers</i> 5 <i>Biological Challenges: Research</i> 350, 673 <i>Investigation</i> 689-690
<i>3.12.13 analyze the consequences of extinction and introduction of exotic species within ecosystems.</i>	
<b>6.0 Environmental Science - Students will use scientific skills and processes to explain the interactions of environmental factors (living and non-living) and analyze their impact from a local to a global perspective.</b>	
<b>Flow of Matter and Energy</b>	
<i>6.12.1 analyze and explain the movement of matter and energy through the biosphere (lithosphere, hydrosphere, atmosphere, and organisms) and the influence of this movement on weather patterns, climatic zones, and the distribution of life.</i>	
<i>The student will demonstrate that matter cycles through and between living systems and the physical environment constantly being recombined in different ways. (CLG 6.1.1)</i>	SE: 55, 67-73, 121-122, 640-642 <i>Investigation</i> 714-716, 718-719
<i>The student will analyze how the transfer of energy between atmosphere, land masses and oceans results in areas of different temperatures and densities that produce weather patterns and establish climate zones around the earth (CLG 6.1.2)</i>	SE: 652-662, 669 <i>*This topic can be addressed through a study of biome distribution.</i>
<b>Interdependence of Organisms</b>	
<i>6.12.2 use physical, chemical, biological, and ecological concepts to analyze and explain the interdependence of organisms within the environment.</i>	
<i>The student will explain how organisms are linked by the transfer and transformation of matter and energy at the ecosystem level. (CLG 6.2.1)</i>	SE: 54-57, 636-638, 640-642, 669 <i>Investigation</i> 791-792
<i>The student will explain why interrelationships and interdependencies of organisms contribute to the dynamics of ecosystems. (CLG 6.2.2)</i>	SE: 636-640, 645-647, 663-668 <i>Investigation</i> 791-792, 794-797
<i>The student will conclude that populations grow or decline due to a variety of factors. (CLG 6.2.3)</i>	SE: 635, 643, 645-647, 663-664, 665-668
<i>The student will provide examples showing that natural selection leads to organisms that are well suited for survival in particular environments. (CLG 6.2.4)</i>	SE: 423-424, 504-505, 509, 655, 658-659
<b>Natural Resources and Human Needs</b>	
<i>6.12.4 use concepts from chemistry, physics, biology, and ecology to analyze and interpret the impact both positive (recycling) and negative (toxic wastes) of human activities on the earth's resources (land, water, air, energy, biological).</i>	
<i>The student will evaluate the interrelationships between humans and air quality. (CLG 6.3.1)</i>	SE: 672, 674-675 <i>Biological Challenges: Research</i> 673

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<i>The student will evaluate the interrelationship between humans and water quality and quantity. (CLG 6.3.2)</i>	SE: 668 <i>Investigation 792-795</i>
<i>The student will evaluate the interrelationships between humans and land resources. (CLG 6.3.3)</i>	SE: 668-669, 672
<i>The student will evaluate the interrelationships between humans and biological resources. (CLG 6.3.4)</i>	SE: 668-669, 671
<i>The student will evaluate the interrelationships between humans and energy resources. (CLG 6.3.5)</i>	SE: 672, 674, 675
<b>Environmental Issues</b>	
<i>6.12.5 investigate and analyze environmental issues from local to global perspectives (e.g., world population, food production and distribution, pollution and epidemics, biodiversity) to develop an action project that protects, sustains, or enhances the natural environment.</i>	
<i>The student will identify an environmental issue and formulate related research questions. (CLG 6.4.1)</i>	SE: <i>Extensions 697</i> <i>Investigation 792-793</i>
<i>The student will design and conduct the research. (CLG 6.4.2)</i>	SE: <i>Extensions 697</i> <i>Investigation 792-793</i>
<i>The student will interpret findings to form conclusions and make recommendations to help resolve the issue. (CLG 6.4.3)</i>	SE: <i>Extensions 697</i> <i>Investigation 792-793</i>
<i>The student will apply the conclusions to develop and implement an action project. (CLG 6.4.4)</i>	SE: <i>Extensions 697</i> <i>Investigation 792-793</i> <i>*Students can use information from these activities to develop an action project.</i>
<i>The student will analyze the effectiveness of the action project in terms of achieving the desired outcomes. (CLG 6.4.5)</i>	SE: <i>Extensions 697</i> <i>Investigation 792-793</i> <i>*Students can use information from these activities to develop an action project.</i>