

A. Science Connections

CONTENT STANDARD A: Students in the Union Grove area schools will understand that there are unifying themes: systems, order, organization and interactions; evidence, models and explanations; constancy, change and measurement; evolution, equilibrium and energy; form and function among scientific disciplines.

Rationale: These unifying themes are ways of thinking rather than theories or discoveries. Students should know about these themes and realize that the more they learn about science the better they will understand how the themes organize and enlarge their knowledge. Science is a system and should be seen as a single discipline rather than a set of separate disciplines. Students will also understand science better when they connect and integrate these unifying themes into what they know about themselves and the world around them.

A.8.1 Science Themes: *Develop their understanding of the science themes** by using the themes to frame questions about science-related issues and problems.

7:

- Define and explain how the following science themes can be applied to the natural world: systems (body systems), order (classification system), organization (structural organization of organisms), and interactions (interaction of body systems); evidence (data), models (Cells and DNA) and explanations (lab conclusions); constancy (mitosis), change (life span), and measurement (temperature, volume, mass, distance); evolution (changes of organisms over time), **equilibrium** (homeostasis), and energy (photosynthesis) to understand science content. Form and function (body design of animal and how these designs relate to certain functions.)

A.8.2 Science Systems and the Themes: *Describe* limitations of science systems* and give reasons why specific science themes* are included in or excluded from those systems.*

7:

- Describe limitations of science systems and give reasons why specific science themes are included in or excluded from those systems (i.e., collecting data about body systems may be limited by cost, time, technology and knowledge.) NC

A.8.3 Defending and Critiquing Explanations: *Defend explanations* and models* by collecting and organizing evidence* that supports them and critique explanations and models by collecting and organizing evidence that conflicts with them.*

7:

- Explain the characteristics of a good explanation (use supporting evidence) and why models are used (i.e., economical and practical, less dangerous).
- Give examples of when using a model is a disadvantage.

A.8.4 Evidence: *Collect evidence* to show* that models* developed as explanations* for events were (and are) based on the evidence available to scientists at the time.*

7:

- Collect evidence to show that models developed as explanations for events were (and are) based on the evidence available to scientists at the time (i.e. microscope models, spontaneous generation vs. biogenesis, cell theory.) WGSD, WC, D, NC

A.8.5 New Evidence: *Show* [include the following themes when showing] how models* and explanations*, based on systems*, were changed as new evidence* accumulated (the effects of constancy*, evolution*, change*, and measurement* should all be part of these explanations).*

7:

- Understand that models will change over time as new evidence is collected.

A.8.6 Predicting with Models and Explanations: *Use models* and explanations* to predict* actions and events in the natural world.*

7:

- Use models and/or explanations to predict actions and events in the natural world (i.e., predict where bacteria will be most prevalent in the school).

A.8.7 **Models:** *Design real or thought investigations* to test the usefulness and limitations of a model*.*

7:

- Work as a group to identify the usefulness and limitations of a model (i.e., discuss limitations of the cell model, the DNA model). NC, D

A.8.8 **Predicting with Themes:** *Use the themes* of evolution*, equilibrium*, and energy* to predict* future events or changes* in the natural world.*

7:

- Use the themes of evolution, equilibrium, and energy to predict future events or changes in the natural world (i.e. how physical and chemical changes in water will affect life in a pond or river. NC, D

B. Nature of Science

CONTENT STANDARD B: Students in the Union Grove area schools will understand that science is ongoing and inventive, and that scientific understandings have changed over time as new evidence is found. Students should develop an understanding of science as a human endeavor.

Rationale: Students will realize that scientific knowledge is developed from the activities of scientists and others who work to find the best possible explanations of the natural world. Researchers and those who are involved in science follow a generally accepted set of rules to produce scientific knowledge that others can confirm with experimental evidence. This knowledge is public, replicable, and undergoing revision and refinement based on new experiments and data.

B.8.1 Science Knowledge and Concepts: *Describe* how scientific knowledge and concepts have changed over time in the earth and space, life and environmental and physical sciences.*

7:

- Describe how scientific knowledge and concepts have changed over time in life and environmental science (i.e., changes in cell theory, spontaneous generation to biogenesis). NC, D

B.8.2 Change Over Time: *Identify* and describe* major changes that have occurred over time in conceptual models* and explanations* in the earth and space, life and environmental, and physical sciences and Identify* the people, cultures, and conditions that led to these developments.*

7:

- Identify and describe major changes that have occurred over time in conceptual models and explanations in life and environment and identify the people, cultures, and conditions that led to these developments (i.e. discuss the timeline of genetic discovery Mendel cloning). WGSD, NC, D

B.8.3 Rules of Science: *Explain* how the general rules of science apply to the development and use of evidence* in science investigations, model*-making, and applications*.*

7:

- Understand that the rules of science require us to use data without changing data to meet expected outcomes.

B.8.4 Reasoning: *Describe* types of reasoning and evidence* used outside of science to draw conclusions about the natural world.*

7:

- Provide examples of non-scientific reasoning used to draw conclusions about the natural world (i.e., mythology, astrology).

B.8.5 Application of Science Knowledge: *Explain* ways in which scientific knowledge is shared, checked, and extended, and show* how these processes change over time.*

7:

- Know that much of today's scientific knowledge is based on previous scientific ideas that have changed over time (i.e., cell theory).

B.8.6 Uses and Limitations of Science: *Explain* the ways in which scientific knowledge is useful and also limited when applied to social issues.*

7:

- Discuss cost factors, moral and **ethical** issues related to **cloning** of whole organisms and **genetic engineering**.

C. Science Inquiry

CONTENT STANDARD C: Students in the Union Grove area schools will investigate questions using scientific methods and tools, revise their personal understanding to accommodate knowledge, and communicate these understandings to others. .Students should develop abilities necessary to do scientific inquiry and an understanding about scientific inquiry.

Rationale:Students should experience science in a form that engages them in actively constructing ideas and explanations and enhances their opportunities to develop the skills of doing science. Such inquiry (problem solving) should include questioning, forming hypotheses, collecting and analyzing data, reaching conclusions and evaluating results, and communicating procedures and findings to others.

C.8.1 Questioning: *Identify* questions they can investigate** using resources and equipment they have available.
7:

- Be able to use a microscope to answer questions.
- Understand parts, functions and the proper use of a microscope.
- Use microscope to examine life forms.
- Understand the nature of scientific explanations (i.e., use of logically consistent arguments; emphasis on evidence; use of scientific principles, models and theories; acceptance or displacement of explanations based on new scientific evidence).

C.8.2 Data and Information Sources: *Identify* data and locate sources of information* including their own records to answer the questions being investigated.

7:

- Students will use the data collected during investigations to develop conclusions and report findings.
- Given data from another source, students will make inferences and draw conclusions.

C.8.3 Conducting Investigations: *Design and safely conduct investigations* that provide reliable quantitative or qualitative data, as appropriate, to answer their questions.*

7:

- Know that an experiment must be repeated many times and yield consistent results before the results are accepted as correct.
- Know that there is no fixed procedure called the scientific method, but that investigations involve systematic observations, carefully collected, relevant evidence, logical reasoning and some imagination in developing hypotheses and explanations.
- Designs and conducts a scientific investigation (i.e., formulates hypotheses, designs and executes investigations, interprets data, synthesizes evidence into explanations, proposes alternative explanations for observations, critiques explanations and procedures).
- Uses appropriate tools (including computer hardware and software) and techniques to gather, analyze and interpret scientific data.

C.8.4 Inferences: *Use inferences* to help decide possible results of their investigations, [and] use observations to check their inferences.*

7:

- Hypothesize and then use data to determine the validity of an hypothesis.

C.8.5 Explaining Results: *Use accepted scientific knowledge, models*, and theories* to explain* their results and to raise further questions about their investigations*.*

7:

- Explain the results and identify questions that could still be investigated.

C.8.6 Relating Inferences from Investigations: *State what they have learned from investigations*, relating their inferences* to scientific knowledge and to data they have collected.*

7:

- The students will respond back to the purpose statements of the investigation and explain how purposes were met and knowledge gained.

C.8.7 Explaining Conclusions: *Explain* their data and conclusions in ways that allow an audience to understand the questions they selected for investigation* and the answers they have developed.*

7:

- Explain data and conclusions in ways that allow others to understand the questions they elected to investigate.

C.8.8 Using Technology: *Use computer software and other technologies to organize, process, and present their data.*

7:

- Use computer software and other technologies to organize, process, and present their data (Power Point, Inspiration, Excel, internet, etc.).

C.8.9 Defending Validity: *Evaluate*, explain*, and defend the validity of questions, hypotheses, and conclusions to their investigations*.*

7:

- Evaluate, share, explain, and defend data from an investigation with peers and teacher.

C.8.10 Realizing the Importance of Implications: *Discuss the importance of their results and implications of their work with peers, teachers, and other adults.*

7:

- Discuss the importance of data collected from investigations and its implications in real life situations.

C.8.11 Further Questioning: *Raise further questions which still need to be answered.*

7:

- Raise further questions about investigations which still need to be answered.

D. Physical Science

CONTENT STANDARD D: Students in the Union Grove area schools will demonstrate an understanding of the physical and chemical properties of matter, the forms and properties of energy, and the ways in which matter and energy interact. (See Appendix B for NSES details on these fundamental concepts and principles.)

Rationale: Knowledge of the physical and chemical properties of matter and energy is basic to an understanding of the earth and space, life and environmental, and physical sciences. The properties of matter can be explained in terms of the atomic structure of matter. Natural events are the result of interactions of matter and energy. When students understand how matter and energy interact, they can explain and predict chemical and physical changes that occur around them.

D.8.1 Physical and Chemical Properties: *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.***

7:

- *Observe*, describe*, and measure* physical and chemical properties of elements and other substances to identify* and group* them according to properties such as density and solubility (WGSD, D, WC, NC).*
- Know that matter is made up of tiny particles called atoms and different arrangements of atoms into groups compose all substances.
- Know that certain atoms will combine to form a molecule (or crystal), the smallest particle of a substance that retains its properties.
- Know that substances containing only one kind of atom are elements and do not break down by normal laboratory reactions (i.e., heating, exposure to electric current, reaction with acids) and that over 100 different elements exist.

D.8.2 Chemical Interactions (Changes): Use the major ideas of atomic theory and molecular theory to *Describe* physical and chemical interactions* among substances, including solids, liquids, and gases.*

7:

- Know that photosynthesis is an example of a chemical change. D, NC

D.8.3 New Substances: *Understand* how chemical interactions* (change) and behaviors lead to new substances with different properties.*

7:

- Explain photosynthesis and cellular respiration, the compounds necessary, interaction that takes place and the by-products produced.

D.8.4 Explaining Interactions: While conducting investigations*, *use the science themes* to Develop explanations* of physical and chemical interactions* and energy* exchanges.*

7:

- Carry out investigations with sugar and yeast. Observe and discuss interactions that take place, reactions and the by-products produced.

D.8.5 Forces of Motion: While conducting investigations*, *Explain* the motion of objects by describing* the forces acting on them.*

7:

- Identify how earth forces and effect plant growth (tropisms).

D.8.6 Explaining Motion: 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.*

7:

- Calculate current speed during the Watershed study.

D.8.7 Using Definitions and Ideas: While conducting investigations* of common physical and chemical interactions* occurring in the laboratory and the outside world, *Use commonly accepted definitions of energy* and the idea of energy conservation.*

7:

D.8.8 Interactions of Objects: *Describe* and investigate* the properties of light, heat, gravity, radio waves, magnetic fields, electrical fields, and sound waves as they interact* with material objects in common situations.*

7:

- This standard is not addressed at this grade level.

D.8.9 Models of Energy Transmission: *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.*

7:

- Give examples of transfer of energy in life science (i.e. food chain, photosynthesis, cellular respiration, cell process, digestion).

D.8.10 Models of Atomic Structure: *Explain* how models* of the atomic structure of matter have changed over time, including historical models and modern atomic theory.*

7:

- This standard is not addressed at this grade level.

E. Earth and Space Science

CONTENT STANDARD E: Students in the Union Grove area schools will demonstrate an understanding of the structure and systems of earth and other bodies in the universe and of their interactions. (See Appendix B for NSES details on these fundamental concepts and principles).

Rationale: By studying the earth, its composition, history and the processes that shape it, students gain a better understanding of the planet on which they live. In addition, all bodies in space, including the earth, are influenced by forces acting throughout the solar system and the universe. Studying the universe enhances students' understanding of the earth's origins, its place in the universe, and its future. Understanding these geologic, meteorological, astronomical and oceanographic processes allows students to make responsible choices and to evaluate the consequences of their choices.

E.8.1 Changes in Earth Features: Using the science themes*, *Explain* and predict* changes* in major features of land, water, and atmospheric systems.*

7:

- This standard is not addressed at this grade level.

E.8.2 Underlying Structures of the Earth: *Describe* underlying structures of the earth that cause changes* in the earth's surface.*

7:

- This standard is not addressed at this grade level.

E.8.3 Forces Acting on the Earth: 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.*

7:

- This standard is not addressed at this grade level.

E.8.4 Influence of Living Organisms: Using the science themes*, *Analyze* the influence living organisms have had on the earth's systems, including their impact on the composition of the atmosphere and the weathering of rocks.*

7:

- Analyze impact of microorganisms in production of oxygen and carbon dioxide.
- Discuss and use demonstrations to show impact of microorganisms, plants and worms on the decomposition process and weathering.

E.8.5 Evidence of Earth History: *Analyze* the geologic and life history of the earth, including change* over time, using various forms of scientific evidence.*

7:

- This standard is not addressed at this grade level.

E.8.6 Use of Resources: *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.*

7:

- Explain how recycle programs may affect **renewable** and **non-renewable resources**.

E.8.7 Celestial Models: *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.*

7:

- This standard is not addressed at this grade level.

E.8.8 Cycles of the Earth: 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.*

7:

- This standard is not addressed at this grade level.

F. Life and Environmental Science

CONTENT STANDARD F: Students in the Union Grove area schools will demonstrate an understanding of the characteristics and structures of living things, the processes of life, and how living things interact with one another and their environment. (See Appendix B for NSES details on these fundamental concepts and principles.)

Rationale: Students will enhance their natural curiosity about living things and their environment through study of the structure and function of living things, ecosystems, life cycles, energy movement (transfer), energy change (transformation), and changes in populations of organisms through time. Knowledge of these concepts and processes of life and environmental science will assist students in making informed choices regarding their lifestyles and the impact they have on communities of living things in their environment.

F.8.1 Structure and Function of Living Things: *Understand* the structure and function* of cells, organs, tissues, organ systems, and whole organisms.*

7:

- Construct models of cells (plant or animals).
- Perform experiments relating to cell activities and provide an explanation of the results.
- Explain relationships between cells, **organs**, tissues, organ systems, and whole organisms.
- Identify and describe functions of **organelles**, tissues, organs, organ systems, and whole organisms through dissection, development of models, and student-centered research.
- Participate in dissection activities and be able to identify names of organs studied and their function.
- Use microscopes to investigate life forms.
- Know ways in which living things can be classified (i.e., taxonomic groups of plants, animals and fungi; groups based on the details of organisms internal and external features; groups based on functions served within an ecosystem such as producers, consumers and decomposers).

F.8.2 Adaptation Structures: *Show* how organisms have adapted structures to match their functions**, providing means of encouraging individual and group survival within specific environments.

7:

- Compare and contrast adaptations in various organisms.
- Create environments for organisms and hypothesize what the organisms would need to survive.

F.8.3 Single and Multi Celled Organisms: *Differentiate between single-celled and multiple-celled organisms (humans) through investigation*, comparing the cell functions of specialized cells for each type of organism.

7:

- Compare and contrast cell functions of specialized cells (i.e. study of human systems, red and white blood cells, nerve and muscle cells, study of plant and animal cells, protists and bacteria) and give examples of each.
- Differentiate between single-celled (bacteria and protist) and multiple-celled (plants and fungi) organisms.

F.8.4 Characteristic Traits: *Investigate* and explain* that heredity is comprised of the characteristic traits found in genes within the cell of an organism.*

7:

- Know that hereditary information is contained in genes (located in the chromosomes of each cell), each of which carries a single unit of information; an inherited trait of an individual can be determined by either one or many genes, and a single gene can influence more than one trait.
- Know that the characteristics of an organism can be described in terms of a combination of traits; some traits are inherited and others result from interactions with the environment.

F.8.5 Passing on Characteristics: *Show* how different structures both reproduce and pass on characteristics of their group.*

7:

- Define different structures for human reproduction (Human reproduction is in the health curriculum).
- Know that reproduction is a characteristic of all living things and is essential to the continuation of a species.

- Recognize models of different structures for reproduction.
- Understand asexual and sexual reproduction (i.e., in asexual reproduction, all the genes come from a single parent; in sexual reproduction, an egg and sperm unite and half of the genes come from each parent, so the offspring is never identical to either of its parents; sexual reproduction allows for greater genetic diversity; asexual reproduction limits the spread of disadvantageous characteristics through a species).
- Compare and contrast structures and methods of asexual and sexual reproduction.
- Develop charts, and/or graphs depicting how characteristics of organisms are passed on.

F.8.6 Internal and External Regulation: *Understand* that an organism is regulated both internally and externally.*

7:

- Understand that multicellular organisms have a variety of specialized cells, organs, tissues and organ systems that perform specialized functions (i.e., digestion, respiration, reproduction, circulation, excretion movement, control and coordination and protection from disease).
- Know that organisms have a great variety of body plans and internal structures that serve specific functions for survival (i.e., digestive structures in vertebrates, invertebrates, unicellular organisms and plants).
- Know how an organism's ability to regulate its internal environment enables the organism to obtain and use resources, grow, reproduce and maintain stable internal conditions while living in a constantly changing external environment.
- Know that organisms can react to internal and environmental stimuli through behavioral response (i.e., plants have tissues and organs that react to light, water and other stimuli; animals have nervous systems that process and store information from the environment), which may be determined by heredity or from past experience.

F.8.7 Behavior Adaptations: *Understand* that an organism's behavior evolves through adaptation to its environment.*

7:

- Determine how an organism's behavioral changes are connected to changes in its environment.
- Explain the difference between reflexes and learned behavior.
- Give examples of behavioral responses to stimuli.

F.8.8 Population Balance: *Show* through investigations* how organisms both depend on and contribute to the balance or imbalance of populations and/or ecosystems, which in turn contribute to the total system* of life on the planet.*

7:

- Know factors that affect the number and types of organisms an ecosystem can support (i.e., available resources; abiotic factors such as quantity of light and water, range of temperatures, and soil composition; disease; competition from other organisms within the ecosystem; predation).
- Know ways in which organisms interact and depend on one another through food chains and food webs in an ecosystem (i.e., producer/consumer, predator/prey, parasite/host, relationships that are mutually beneficial or competitive).
- How energy is transferred through food webs in an ecosystem (i.e., energy enters ecosystems as sunlight and green plants transfer this energy into chemical energy through photosynthesis; this chemical energy is passed from organism to organism; animals get energy from oxidizing their food, releasing some of this energy as heat).

F.8.9 Changes that Impact on the Survival and Growth of Certain Species: *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.*

7:

- Research and present local and global changes which have affected various species.
- Analyze problems and develop **solutions** regarding local and global changes and how they affect various species.

F.8.10 **Human Influence on the Environment:** *Project how current trends in human resource use and population growth will influence the natural environment, and show how current policies affect those trends.*

7:

- Identify, illustrate, and project natural resource **trends** regarding **population** growth and **environment** (i.e., Watershed Project).
- Research policies which affect natural resource use and explain why they were put in place.
- Suggest changes in policies or develop new policies based on information gathered about current resource trends.

G. Science Application

CONTENT STANDARD G: Students in the Union Grove area schools will demonstrate an understanding of the relationship between science and technology and the ways in which that relationship influences human activities.

Rationale: Science and technology compliment each other. Science helps drive technology and technology provides science with tools for investigation, inquiry and analysis. Together, science and technology applications provide solutions to human problems, needs and aspirations. Students should understand that advances in science and technology affect the earth's systems.

G.8.1 Careers: *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.*

7:

- Identify course work required for specific careers in science.
- Research careers in science and technology through specific current and historical scientists.

G.8.2 Influence of Discoveries: *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.*

7:

- Discuss and analyze **ethical** issues related to scientific and technological discoveries as they relate to new and evolving careers.
- Explain how scientific and technological discoveries have influenced careers (i.e., environmental science, space research, forensics, research, computer programming, transplant technology, gene therapy, water treatment, sanitation, bridge construction).

G.8.3 Impact of Science and Technology: *Illustrate* the impact that science and technology have had, both good and bad, on careers, systems, society, environment, and quality of life.*

7:

- Identify and explain positive and negative effects science and technology have had on society (i.e., faster pace, longer life expectancy, accessibility, invasion of privacy, loss/increase of jobs, organization, opportunities, internet usage, impact on environment, energy sources, energy consumption and costs).

G.8.4 Science Models/Machines: *Propose a 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.*

7:

- Design applied science models or machines and explain how they could affect society (i.e., egg drop, design temperature control {insulation} containers, structural design, landscape design, living habitat design).

G.8.5 Science or Technology Solutions: *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.*

7:

- Identify local scientific or technological problems and their solutions and explain **processes** (methods) by which problems were solved.
- Analyze solutions and problems associated with the solutions (Watershed Study).

G.8.6 Discoveries Result in New Technology: *Use current texts, encyclopedias, source books, computers, experts, the popular press, or other relevant sources to Identify* examples of how scientific discoveries have resulted in new technology.*

7:

- Gather information, using a variety of current and reliable resources, to identify scientific discoveries which have resulted in new technologies (Science in the News activity). (i.e., genetics and cloning, Global Positioning System, pacemakers, velcro, genetic engineering, laser eye surgery.)

G.8.7 Science and Technology Interdependence: *Show* evidence* of how science and technology are interdependent, using some examples drawn from personally conducted investigations*.*

7:

- Describe how science and technology are interdependent by citing examples and explaining the link between technology and science.
- Through Jason Project, students will interact with scientists and students via the internet to share classroom experiment results.

H. Science in Social and Personal Perspectives

CONTENT STANDARD H: Students in the Union Grove area schools will use scientific information and skills to make decisions about themselves, Wisconsin, and the world in which they live. Students should develop an understanding of personal health and science and technology in society.

Rationale: An important purpose of science education is to give students a means to understand and act on personal, economic, social, political and international issues. Knowledge and methodology of the earth and space, life and environment, and physical sciences facilitate analysis of topics related to personal health, environment, and management of resources, and help evaluate the merits of alternative courses of action.

H.8.1 Evidence in Media: *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.*

7:

- Analyze, and discuss scientific evidence from various media sources, for accuracy, logic, bias, relevance of data, and credibility of sources.
- Identify scientific and technological discoveries through discussion of current events.
- Recognize and understand what makes a source reliable.

H.8.2 Scientific Solution: *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.*

7:

- Identify scientific problems and possible solutions.
- Participate in group discussions regarding problems and solutions of an environmental issue.
- Debate or discuss in small groups or as a class the pros and cons of an environmental solution, backing up opinions with research and data, and reaching group **consensus**.

H.8.3 Consequences of Decisions on Health and Safety: *Understand* the consequences of decisions affecting personal health and safety.*

7:

- Define consequences of decisions affecting personal health and safety.
- Identify choices and consequences regarding personal health and safety. (i.e., disease transmissions, microbes, contagious diseases).
- Participate in the Science Safety Unit.