



ZIIBIWING CENTER

of Anishinabe Culture & Lifeways

THE SAGINAW CHIPPEWA INDIAN TRIBE OF MICHIGAN

Manoomin (Wild Rice – *Zizania palustris*) Curriculum Tie-ins

Special thanks to the Michigan Department of Education for allowing us to publish these curriculum points on our Ziibiwing Center website. The complete MDE standards and curriculum documents may be accessed at:
<http://www.michigan.gov/mde/0,1607,7-140-28753---,00.html>

Kindergarten

Social Studies

K-H2.0.4 → Describe ways people learn about the past (e.g., photos, artifacts, diaries, stories, videos).

K-G5.0.1 → Describe ways people use the environment to meet human needs and wants (e.g., food, shelter, clothing).

K-E1.0.3 → Recognize situations in which people trade.

Science

P.FM.E.1 → **Position-** A position of an object can be described by locating the object relative to other objects or a background.

P.FM.00.11 → Describe the position of an object (for example: above, below, in front of, behind, on) in relation to other objects around it.

English Language Arts

L.CN.00.02 → Students will ask appropriate questions during a presentation or report.

L.CN.00.03 → Students will listen to or view knowledgeably while demonstrating appropriate social skills of audience behaviors (e.g., eye contact, attentive, supportive) in small and large group settings; listen to each other, interact, and respond appropriately.

Arts Education

ART.VA.III.K.1 → Explore and discuss why artists create.

ART.VA.III.K.2→ Recognize that art can be created for self-expression or fun.

ART.VA.III.K.3→ Describe the sensory qualities in a work of art.

ART.VA.IV.K.1→ Understand that humans from all cultures, past or present, have created art.

ART.VA.IV.K.2→ Identify and talk about artwork found around the world.

ART.VA.V.K.4→ Explore connections between the visual arts and other curriculum.

1st Grade

Social Studies

1-H2.0.4→ Retell in sequence important ideas and details from stories about families or schools.

1-H2.0.5→ Use historical records and artifacts (e.g., photos, diaries, oral histories, and videos) to draw possible conclusions about family or school life in the past.

1-H2.0.6→ Compare life today with life in the past using the criteria of family, school, jobs, or communication.

1-G4.0.1→ Use components of culture (e.g., foods, language, religion, traditions) to describe diversity in family life.

1-G5.0.1→ Describe ways in which people modify (e.g., cutting down trees, building roads) and adapt (e.g., clothing, housing, transportation) to the environment.

1-E1.0.4→ Describe reasons why people voluntarily trade.

Science

S.IP.E.1→ Inquiry involves generating questions, conducting investigations, and developing solutions to problems through reasoning and observation.

S.IP.01.11→ Make purposeful observation of the natural world using the appropriate senses.

S.IP.01.12→ Generate questions based on observations.

P.PM.E.1→ **Physical Properties-** All objects and substances have physical properties that can be measured.

P.PM.01.11→ Demonstrate the ability to sort objects according to observable attributes such as color, shape, size, sinking or floating.

E.ES.E.1 → Solar Energy- The sun warms the land, air and water and helps plants grow.

E.ES.01.12 → Demonstrate the importance of sunlight and warmth in plant growth.

E.ES.E.2 → Weather- Weather changes from day to day and over the seasons.

E.ES.01.24 → Describe precautions that should be taken for human safety during severe weather conditions (thunder and lightning, tornadoes, strong winds, heavy precipitation).

English Language Arts

L.CN.01.02 → Students will ask appropriate questions for clarification and understanding during a presentation or report.

L.CN.01.03 → Students will listen to or view knowledgeably while demonstrating appropriate social skills of audience behaviors (e.g., eye contact, attentive, supportive) in small and large group settings; listen to the comments of a peer and respond on topic adding a connected idea.

Arts Education

ART.VA.IV.1.2 → Describe how the subject matter of artwork may be connected to the environment in which it was created.

ART.VA.IV.1.3 → Give examples that illustrate how artwork of different groups is influenced by the environment in which it was created.

ART.VA.V.1.1 → Recognize art forms created for functional and recreational purposes.

2nd Grade

Social Studies

2-G4.0.3 → Use components of culture (e.g., foods, language, religion, traditions) to describe diversity in the local community.

2-E1.0.5 → Use examples to show that people can not produce everything they want (specialization) and depend on trade with others to meet their wants.

Science

S.IP.E.1 → Inquiry involves generating questions, conducting investigations, and developing solutions to problems through reasoning and observation.

S.IP.02.11 → Make purposeful observation of the natural world using the appropriate senses.

P.PM.E.1 → **Physical Properties-** All objects and substances have physical properties that can be measured.

P.PM.02.12 → Describe objects and substances according to their properties (color, size, shape, texture, hardness, liquid or solid, sinking or floating).

L.OL.E.1 → **Life Requirements-** Organisms have basic needs. Animals and plants need air, water, and food. Plants also require light. Plants and animals use food as a source of energy and as a source of building material for growth and repair.

L.OL.02.14 → Identify the needs of plants.

L.OL.E.2 → **Life Cycles-** Plants and animals have life cycles. Both plants and animals begin life and develop into adults, reproduce, and eventually die. The details of this life cycle are different for different organisms.

L.OL.02.22 → Describe the life cycle of familiar flowering plants including the following stages: seed, plant, flower, and fruit.

L.HE.E.1 → **Observable Characteristics-** Plants and animals share many, but not all, characteristics of their parents.

L.HE.02.13 Identify characteristics of plants (for example: leaf shape, flower type, color, size) that are passed on from parents to young.

E.FE.E.1 → **Water-** Water is a natural resource and is found under the ground, on the surface of the Earth, and in the sky. It exists in three states (liquid, solid, gas) and can go back and forth from one form to another.

E.FE.02.11 → Identify water sources (wells, springs, lakes, rivers, oceans).

E.FE.02.12 → Identify household uses of water (drinking, cleaning, food preparation).

E.FE.E.2→ Water Movement- Water moves in predictable patterns.

E.FE.02.22→ Describe the major bodies of water on the Earth's surface (lakes, ponds, oceans, rivers, streams).

English Language Arts

L.CN.02.02→ Students will ask appropriate questions for clarification and understanding during a presentation or report.

L.CN.02.03→ Listen to or view knowledgeably while demonstrating appropriate social skills of audience behaviors (e.g., eye contact, attentive, supportive) in small and large group settings; listen to the comments of peers and respond on topic adding a connected idea.

Arts Education

ART.VA.III.2.2→ Recognize that art is created to fulfill personal and/or social needs.

ART.VA.IV.2.2→ Discuss the subject matter of artwork from particular cultures at specific times.

ART.VA.V.2.1→ Describe how art is used in everyday life.

3rd Grade

Social Studies

3-H3.0.5→ Use informational text and visual data to compare how American Indians and Settlers in the early history of Michigan adapted to, used, and modified their environment.

3-H3.0.6→ Use a variety of sources to describe interactions that occurred between American Indians and the first European explorers and settlers in Michigan.

3-H3.0.7→ Use a variety of primary and secondary sources to construct a historical narrative about daily life in the early settlements of Michigan (pre-statehood).

3-G4.0.4→ Use data and current information about the Anishinaabeg and other American Indians living in Michigan today to describe the cultural aspects of modern American Indian life; give an example of how another cultural group in Michigan today has preserved and built upon its cultural heritage.

Science

S.IP.E.1→ Inquiry involves generating questions, conducting investigations, and developing solutions to problems through reasoning and observation.

S.IP.03.11→ Make purposeful observation of the natural world using the appropriate senses.

S.IP.03.12→ Generate questions based on observations.

P.FM.E.2→ **Gravity-** Earth pulls down on all objects with a force called gravity. With very few exceptions, objects fall to the ground no matter where the object is on the Earth.

P.FM.03.22→ Identify the force that pulls objects towards the Earth.

P.FM.E.3→ **Force-** A force is either a push or a pull. The motion of objects can be changed by forces. The size of the change is related to the size of the force. The change is also related to the weight (mass) of the object on which the force is being exerted. When an object does not move in response to a force, it is because another force is being applied by the environment.

P.FM.03.35→ Describe how a push or a pull is a force.

P.FM.03.36→ Relate a change in motion of an object to the force that caused the change of motion.

P.FM.03.38→ Demonstrate when an object does not move in response to a force, it is because another force is acting on it.

L.OL.E.3→ **Structures and Functions-** Organisms have different structures that serve different functions in growth, survival, and reproduction.

L.OL.03.31 Describe the function of the following plant parts: flower, stem, root, and leaf.

L.EV.E.1→ **Environmental Adaptation-** Different kinds of organisms have characteristics that help them to live in different environments.

L.EV.03.11→ Relate characteristics and functions of observable parts in a variety of plants that allow them to live in their environment (leaf shape, thorns, odor, color).

E.ES.E.4→ **Natural Resources-** The supply of many natural resources is limited. Humans have devised methods for extending their use of natural resources through recycling, reuse, and renewal.

- E.ES.03.41** → Identify natural resources (metals, fuels, fresh water, fertile soil, and forests).
- E.ES.03.42** → Classify renewable (fresh water, fertile soil, forests) and non-renewable (fuels, metals) resources.
- E.ES.03.43** → Describe ways humans are protecting, extending, and restoring resources (recycle, reuse, reduce, renewal).

E.ES.E.5 → **Human Impact-** Humans depend on their natural and constructed environment. Humans change environments in ways that are helpful or harmful for themselves and other organisms.

E.ES.03.51 → Describe ways humans are dependent on the natural environment (forests, water, clean air, Earth materials) and constructed environments (homes, neighborhoods, shopping malls, factories, and industry).

E.ES.03.52 → Describe helpful or harmful effects of humans on the environment (garbage, habitat destruction, land management, renewable, and non-renewable resources).

English Language Arts

L.CN.03.01 → Students will ask substantive questions of the speaker that will provide additional elaboration and details.

L.CN.03.02 → Students will listen to or view knowledgeably while demonstrating appropriate social skills of audience behaviors (e.g., eye contact, attentive, supportive) in small and large group settings.

Arts Education

ART.VA.III.3.2 → Examine how art expresses cultural traditions.

ART.VA.IV.3.1 → Examine customs or traditions celebrated by different communities.

ART.VA.IV.3.2 → Describe the materials and art forms used by particular cultures.

ART.VA.IV.3.3 → Recognize how the available materials and processes in a particular time or place can influence the art that is created.

ART.VA.V.3.1 → Describe how art can be found in various environments.

4th Grade
Social Studies
None

Science

S.IP.E.1 → Inquiry involves generating questions, conducting investigations, and developing solutions to problems through reasoning and observation.

S.IP.04.11 → Make purposeful observation of the natural world using the appropriate senses.

S.IP.04.12 → Generate questions based on observations.

S.RS.E.1 → Reflecting on knowledge is the application of scientific knowledge to new and different situations. Reflecting on knowledge requires careful analysis of evidence that guides decision-making and the application of science throughout history and within society.

S.RS.04.18 → Describe the effect humans and other organisms have on the balance of the natural world.

S.RS.04.19 → Describe how people have contributed to science throughout history and across cultures.

P.CM.E.1 → **Changes in State-** Matter can be changed from one state (liquid, solid, gas) to another and then back again. Heating and cooling may cause changes in state.

P.CM.04.11 → Explain how matter can change from one state (liquid, solid, gas) to another by heating and cooling.

L.OL.E.1 → **Life Requirements-** Organisms have basic needs. Animals and plants need air, water, and food. Plants also require light. Plants and animals use food as a source of energy and as a source of building material for growth and repair.

L.OL.04.15 → Determine that plants require air, water, light, and a source of energy and building material for growth and repair.

L.EV.E.2 → **Survival-** Individuals of the same kind differ in their characteristics, and sometimes the differences give individuals an advantage in surviving and reproducing.

L.EV.04.21 → Identify individual differences (color, leg length, size, wing size, leaf shape) in organisms of the same kind.

L.EC.E.1→ Interactions- Organisms interact in various ways including providing food and shelter to one another. Some interactions are helpful; others are harmful to the organism and other organisms.
L.EC.04.11→ Identify organisms as part of a food chain or food web.

L.EC.E.2→ Changed Environment Effects- When the environment changes, some plants and animals survive to reproduce; others die or move to new locations.

L.EC.04.21→ Explain how environmental changes can produce a change in the food web.

English Language Arts

L.CN.04.01→ Students will ask substantive questions of the speaker that will provide additional elaboration and details.

L.CN.04.02→ Students will listen to or view critically while demonstrating appropriate social skills of audience behaviors (e.g., eye contact, attentive, supportive) in small and large group settings.

Arts Education

ART.VA.III.4.2→ Recognize that art may serve functional purposes, be purely decorative, or serve multiple purposes.

ART.VA.III.4.5→ Analyze how art can be a reflection of society and a response to real world experiences.

ART.VA.IV.4.1→ Describe how artwork communicates facts and/or experiences of various cultures.

ART.VA.IV.4.3→ Evaluate the interrelationship between design, trends, events, and the economics of a culture.

5th Grade

Social Studies

K1.3→ Understand the diversity of human beings and human cultures.

5-U1.1.3→ Describe Eastern Woodland American Indian life with respect to governmental and family structures, trade, and views on property ownership and land use.

Science

S.IP.M.1 → Inquiry involves generating questions, conducting investigations, and developing solutions to problems through reasoning and observation.

S.IP.05.11 → Generate scientific questions based on observations, investigations, and research.

S.RS.M.1 → Reflecting on knowledge is the application of scientific knowledge to new and different situations. Reflecting on knowledge requires careful analysis of evidence that guides decision-making and the application of science throughout history and within society.

S.RS.05.17 → Describe the effect humans and other organisms have on the balance in the natural world.

P.FM.M.2 → **Force Interactions-** Some forces between objects act when the objects are in direct contact (touching), such as friction and air resistance, or when they are not in direct contact (not touching), such as magnetic force, electrical force, and gravitational force.

P.FM.05.21 → Distinguish between contact forces and non-contact forces.

English Language Arts

L.CN.05.01 → Students will ask substantive questions based on the argument(s) presented by a speaker when listening to or viewing a variety of presentations.

L.CN.05.02 → Students will listen to or view critically while demonstrating appropriate social skills of audience behaviors (e.g., eye contact, attentive, supportive) in small and large group settings.

Arts Education

ART.VA.III.5.2 → Identify and defend various purposes for creating works of visual art.

ART.VA.IV.5.3 → Demonstrate how history, culture, and the visual arts interrelate in making and studying works of art.

ART.VA.V.5.1 → Explain how visual arts have inherent relationships to everyday life.

ART.VA.V.5.4 → Synthesize connections between the visual arts, and other disciplines in the curriculum.

6th Grade

Social Studies

- K1.3**→ Understand the diversity of human beings and human cultures.
- 6-W2.1.3**→ Use multiple sources of evidence to describe how the culture of early peoples of North America reflected the geography and natural resources available (e.g. Inuit of the Arctic, Kwakiutl of the Northwest Coast, Anasazi and Apache of the Southwest).
- 6-G2.2.1**→ Describe the human characteristics of the region under study (including languages, religion, economic system, governmental system, cultural traditions).
- 6-G4.1.1**→ Identify and explain examples of cultural diffusion within the Americas (e.g., baseball, soccer, music, architecture, television, languages, health care, Internet, consumer brands, currency, restaurants, international migration).

Science

- S.IP.M.1**→ Inquiry involves generating questions, conducting investigations, and developing solutions to problems through reasoning and observation.
- S.IP.06.11**→ Generate scientific questions based on observations, investigations, and research.
- S.RS.M.1**→ Reflecting on knowledge is the application of scientific knowledge to new and different situations. Reflecting on knowledge requires careful analysis of evidence that guides decision-making and the application of science throughout history and within society.
- S.RS.06.17**→ Describe the effect humans and other organisms have on the balance of the natural world.
- S.RS.06.19**→ Describe how science and technology have advanced because of the contributions of many people throughout history and across cultures.
- P.EN.M.1**→ **Kinetic and Potential Energy-** Objects and substances in motion have kinetic energy. Objects and substances may have potential energy due to their relative positions in a system. Gravitational, elastic, and chemical energy are all forms of potential energy.

P.EN.06.11 → Identify kinetic or potential energy in everyday situations (for example: stretched rubber band, objects in motion, ball on a hill, food energy).

P.EN.M.4 → **Energy Transfer**- Energy is transferred from a source to a receiver by radiation, conduction, and convection. When energy is transferred from one system to another, the quantity of energy before the transfer is equal to the quantity of energy after the transfer.

P.EN.06.41 → Explain how different forms of energy can be transferred from one place to another by radiation, conduction, or convection.

L.OL.M.5 → **Producers, Consumers, and Decomposers** - Producers are mainly green plants that obtain energy from the sun by the process of photosynthesis. All animals, including humans, are consumers that meet their energy needs by eating other organisms or their products. Consumers break down the structures of the organisms they eat to make the materials they need to grow and function. Decomposers, including bacteria and fungi, use dead organisms or their products to meet their energy needs.

L.OL.06.51 → Classify producers, consumers, and decomposers based on their source of food (the source of energy and building materials).

L.OL.06.52 → Distinguish between the ways in which consumers and decomposers obtain energy.

L.EC.M.1 → **Interactions of Organisms**- Organisms of one species form a population. Populations of different organisms interact and form communities. Living communities and nonliving factors that interact with them form ecosystems.

L.EC.06.11 → Identify and describe examples of populations, communities, and ecosystems including the Great Lakes region.

L.EC.M.2 → **Relationships of Organisms**- Two types of organisms may interact with one another in several ways: they may be in a producer/consumer, predator/ prey, or parasite/host relationship. Some organisms may scavenge or decompose another. Relationships may be competitive or mutually beneficial. Some species have become so adapted to each other that neither could survive without the other.

L.EC.06.21→ Describe common patterns of relationships between and among populations (competition, parasitism, symbiosis, predator/prey).

L.EC.06.22→ Explain how two populations of organisms can be mutually beneficial and how that can lead to interdependency.

L.EC.06.23→ Predict how changes in one population might affect other populations based upon their relationships in the food web.

L.EC.M.3→ **Biotic and Abiotic Factors-** The number of organisms and populations an ecosystem can support depends on the biotic (living) resources available and abiotic (nonliving) factors, such as quality of light and water, range of temperatures, and soil composition.

L.EC.06.31→ Identify the living (biotic) and nonliving (abiotic) components of an ecosystem.

L.EC.06.32→ Identify the factors in an ecosystem that influence changes in population size.

L.EC.M.4→ **Environmental Impact of Organisms-** All organisms (including humans) cause change in the environment where they live. Some of the changes are harmful to the organism or other organisms, whereas others are helpful.

L.EC.06.41→ Describe how human beings are part of the ecosystem of the Earth and that human activity can purposefully, or accidentally, alter the balance in ecosystems.

L.EC.06.42→ Predict possible consequences of overpopulation of organisms, including humans, (for example: species extinction, resource depletion, climate change, pollution).

English Language Arts

L.CN.06.01→ Students will respond to, analyze, and evaluate the speaker's effectiveness and content while listening to or viewing a variety of speeches and presentations.

L.CN.06.02→ Students will listen to or view critically while demonstrating appropriate social skills of audience behaviors (e.g., eye contact, attentive, supportive); critically examine the verbal and non-verbal strategies during speeches and presentations.

Arts Education

ART.VA.III.6.1 → Observe, describe, and analyze visual characteristics at a developing level.

ART.VA.IV.6.1 → Recognize and describe how art contributes to and reflects all societies and cultures.

ART.VA.IV.6.2 → Develop an understanding of the historical, social, and cultural contexts of artwork with aesthetic sophistication.

ART.VA.V.6.5 → Describe ways in which the principles and subject matter of other disciplines taught in school are interrelated with the visual arts at a developing level.

7th Grade

Social Studies

K1.3 → Understand the diversity of human beings and human cultures.

Science

S.IP.M.1 → Inquiry involves generating questions, conducting investigations, and developing solutions to problems through reasoning and observation.

S.IP.07.11 Generate scientific questions based on observations, investigations, and research.

S.RS.M.1 → Reflecting on knowledge is the application of scientific knowledge to new and different situations. Reflecting on knowledge requires careful analysis of evidence that guides decision-making and the application of science throughout history and within society.

S.RS.07.17 → Describe the effect humans and other organisms have on the balance of the natural world.

S.RS.07.19 → Describe how science and technology have advanced because of the contributions of many people throughout history and across cultures.

E.ES.M.4 → **Human Consequences-** Human activities have changed the land, oceans, and atmosphere of the Earth resulting in the reduction of the number and variety of wild plants and animals, sometimes causing extinction of species.

E.ES.07.41 → Explain how human activities (surface mining, deforestation, overpopulation, construction and urban development, farming, dams, landfills, and restoring natural

areas) change the surface of the Earth and affect the survival of organisms.

English Language Arts

L.CN.07.01→ Students will distinguish facts from opinions and question their validity when listening to or viewing a variety of speeches and presentations.

L.CN.07.02→ Listen to or view critically while demonstrating appropriate social skills of audience behaviors (e.g., eye contact, attentive, supportive); critically examine the verbal and non-verbal strategies during speeches and presentations.

Arts Education

ART.VA.III.7.1→ Critically observe, describe and analyze visual characteristics at an emerging level.

ART.VA.IV.7.1→ Recognize, describe and analyze, and evaluate how art contributes to and reflects all societies and cultures at an emerging level.

ART.VA.IV.7.2→ Articulate an understanding of the historical, social, and cultural contexts of artwork with an emerging level of aesthetic sophistication.

ART.VA.V.7.5→ Analyze and describe ways in which the principles and subject matter of other disciplines taught in school are interrelated with the visual arts at an emerging level.

8th Grade

Social Studies

K1.3→ Understand the diversity of human beings and human cultures.

Science

None

English Language Arts

L.CN.08.01→ Students will analyze main idea, significant details, fact and opinion, bias, propaganda, argumentation or support when listening to or viewing a variety of speeches and presentations.

L.CN.08.02→ Students will listen to or view critically while demonstrating appropriate social skills of audience behaviors (e.g., eye contact,

attentive, supportive); critically examine the verbal and non-verbal strategies during speeches and presentations.

Arts Education

ART.VA.III.8.1 → Critically observe, describe and analyze visual characteristics within works of art.

ART.VA.IV.8.1 → Recognize, describe and analyze, and evaluate how art contributes to and reflects all societies and cultures.

ART.VA.IV.8.2 → Articulate an understanding of the historical, social, and cultural contexts of artwork with aesthetic sophistication.

ART.VA.V.8.5 → Effectively analyze and describe ways in which the principles and subject matter of other disciplines taught in school are interrelated with the visual arts.

High School

Social Studies

K1.5 → Understand the diversity of human beings and human cultures.

Science

E2.2 → **Energy in Earth Systems**-Energy in Earth systems can exist in a number of forms (e.g., thermal energy as heat in the Earth, chemical energy stored as fossil fuels, mechanical energy as delivered by tides) and can be transformed from one state to another and move from one reservoir to another. Movement of matter and its component elements, through and between Earth's systems, is driven by Earth's internal (radioactive decay and gravity) and external (Sun as primary) sources of energy. Thermal energy is transferred by radiation, convection, and conduction. Fossil fuels are derived from plants and animals of the past, are nonrenewable, and, therefore, are limited in availability. All sources of energy for human consumption (e.g., solar, wind, nuclear, ethanol, hydrogen, geothermal, hydroelectric) have advantages and disadvantages.

E2.2A → Describe the Earth's principal sources of internal and external energy (e.g., radioactive decay, gravity, solar energy).

B3.4 → **Changes in Ecosystems**- Although the interrelationships and interdependence of organisms may generate biological communities in ecosystems that are stable for hundreds or thousands of years, ecosystems always change when climate changes or when one or

more new species appear as a result of migration or local evolution. The impact of the human species has major consequences for other species.

B3.4C → Examine the negative impact of human activities.

B4.1 → **Genetics and Inherited Traits-** Hereditary information is contained in genes, located in the chromosomes of each cell. Cells contain many thousands of different genes. One or many genes can determine an inherited trait of an individual, and a single gene can influence more than one trait. Before a cell divides, this genetic information must be copied and apportioned evenly into the daughter cells.

B4.1B → Explain that the information passed from parents to offspring is transmitted by means of genes that are coded in DNA molecules. These genes contain the information for the production of proteins.

B4.2 → **DNA-** The genetic information encoded in DNA molecules provides instructions for assembling protein molecules. Genes are segments of DNA molecules. Inserting, deleting, or substituting DNA segments can alter genes. An altered gene may be passed on to every cell that develops from it. The resulting features may help, harm, or have little or no effect on the offspring's success in its environment.

B4.2B → Recognize that every species has its own characteristic DNA sequence.

P3.1 → **Basic Forces in Nature-** Objects can interact with each other by “direct contact” (e.g., pushes or pulls, friction) or at a distance (e.g., gravity, electromagnetism, nuclear).

P3.1A → Identify the force(s) acting between objects in “direct contact” or at a distance.

P4.3 → **Kinetic and Potential Energy-** Moving objects have kinetic energy. Objects experiencing a force may have potential energy due to their relative positions (e.g., lifting an object or stretching a spring, energy stored in chemical bonds). Conversions between kinetic and gravitational potential energy are common in moving objects. In frictionless systems, the decrease in gravitational potential energy is equal to the increase in kinetic energy or vice versa.

P4.3A → Identify the form of energy in given situations (e.g., moving objects, stretched springs, rocks on cliffs, energy in food).

English Language Arts

- CE 2.1.10**→ Listen to and view speeches, presentations, and multimedia works to identify and respond thoughtfully to key ideas, significant details, logical organization, fact and opinion, and propaganda.
- CE 2.1.11**→ Demonstrate appropriate social skills of audience, group discussion, or work team behavior by listening attentively and with civility to the ideas of others, gaining the floor in respectful ways, posing appropriate questions, and tolerating ambiguity and lack of consensus.
- CE 2.1.12**→ Use a variety of strategies to enhance listening comprehension (e.g., monitor message for clarity and understanding, ask relevant questions, provide verbal and nonverbal feedback, notice cues such as change of pace or emphasis that indicate a new point is about to be made; and take notes to organize essential information).

Arts Education

- ART.VA.IV.HS.1**→ Observe and describe artwork with respect to history and culture.
- ART.VA.IV.HS.2**→ Describe the functions and explore the meaning of specific art objects within varied cultures, times, and places.
- ART.VA.IV.HS.3**→ Analyze the correlation between art, history, and culture throughout time.