



# ZIIBIWING CENTER

*of Anishinabe Culture & Lifeways*

THE SAGINAW CHIPPEWA INDIAN TRIBE OF MICHIGAN

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

#### Science

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

**S.IP.00.11** → Make purposeful observation of the natural world using the appropriate senses.

**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.

**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.00.11** → Identify that living things have basic needs.

## **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**

**None**

## **1<sup>st</sup> Grade**

### **Social Studies**

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

### **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.

## **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**

**None**

## **2<sup>nd</sup> Grade**

### **Social Studies**

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

**2-G5.0.1** → Suggest ways people can responsibly interact with the environment in the local community.

### **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.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.

### **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** → 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 peers and respond on topic adding a connected idea.

## Arts Education

None

## 3<sup>rd</sup> Grade

### Social Studies

**3-G4.0.4**→ Use data and current information on 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.

**L.OL.E.4**→ **Classification-** Organisms can be classified on the basis of observable characteristics.

**L.OL.03.41**→ Classify plants on the basis of observable physical characteristics (roots, leaves, stems, and flowers).

**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.03.43**→ 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, clean air, water, Earth materials) and constructed environments (homes, neighborhoods, shopping malls, factories and industry).

### **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**

None

### **4<sup>th</sup> 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.

**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.

### **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**

**None**

### **5<sup>th</sup> Grade**

#### **Social Studies**

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

#### **Science**

**None**

### **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**

**None**

## **6<sup>th</sup> Grade**

### **Social Studies**

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

**6-G2.2.1**→ Describe the human characteristics of the region under study (including languages, religion, economic system, governmental system, cultural traditions).

### **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.

**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.06.52**→ 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 non-living 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 or 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.06.32**→ 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, evaluate and analyze the speaker's effectiveness and content when 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.

**L.RP.06.01**→ Students will listen to or view knowledgeably a variety of genre to summarize, take notes on key points, and ask clarifying questions.

## **Arts Education**

None

## **7<sup>th</sup> 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.

**L.OL.M.6**→ **Photosynthesis**- Plants are producers; they use the energy from light to make sugar molecules from the atoms of carbon dioxide and water. Plants use these sugars along with minerals from the soil to form fats, proteins, and carbohydrates. These products can be used immediately, incorporated into the cells of a plant as the plant grows, or stored for later use.

**L.OL.07.61**→ Recognize the need for light to provide energy for the production of carbohydrates, proteins and fats.

**L.OL.07.62**→ Explain that carbon dioxide and water are used to produce carbohydrates, proteins, and fats.

**L.OL.07.63**→ Describe evidence that plants make, use and store food.

**E.ES.M.4**→ **Human Consequences-** Human activities have changed the land, oceans, and atmosphere of the Earth resulting in the education 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.

**E.ES.07.42** Describe the origins of pollution in the atmosphere, geosphere, and hydrosphere, (car exhaust, industrial emissions, acid rain, and natural sources), and how pollution impacts habitats, climatic change, threatens or endangers species.

### **English Language Arts**

**L.CN.07.02**→ 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.

**L.RP.07.04**→ Students will ask probing questions of speakers, focusing on the claims and conclusions presented.

### **Arts Education**

None

### **8<sup>th</sup> Grade**

#### **Social Studies**

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

#### **Science**

None

## **English Language Arts**

**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.

**L.RP.08.03**→ Students will paraphrase a speaker's main idea, purpose, and point of view, and ask relevant questions about content, delivery, and purpose of the presentation.

## **Arts Education**

None

## **High School**

### **Social Studies**

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

**K1.6**→ Analyze events and circumstances from the vantage point of others.

### **Science**

None

## **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 non-verbal 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).

**CE.2.2.2**→ Examine the ways in which prior knowledge and personal experience affect the understanding of written, spoken, or multimedia text.

**CE.2.2.3**→ Interpret the meaning of written, spoken, and visual texts by drawing on different cultural, theoretical, and critical perspectives.

**Arts Education**  
**None**