Looking to Learn: Materials for Teachers



Volume IV: Along the 45th Parallel

Michigan *Legacy* Art Park

by Janine Winkler



Transit Survey, By David Barr, 2005



About this Booklet

Michigan Legacy Art Park is a 30-acre sculpture park with more than 50 works

Michigan Legacy Art Park with more than 50 works

of art inspired by people and events that helped shape Michigan's history. Because each sculpture in the Park visually tells a story about Michigan's history, the Park offers a unique opportunity for students to learn through art about the environment, history, math, geography, science and culture.

This booklet assists teachers in making interdisciplinary links between the sculpture in the Art Park and Michigan's Merit Curriculum. It contains ideas and projects to help teachers structure lesson plans based on relevant sculptures. This makes for a lively and meaningful field trip to the Art Park and helps teachers fulfill curriculum goals. Photographs of the artwork can be downloaded from the Park's website for use in the classroom.

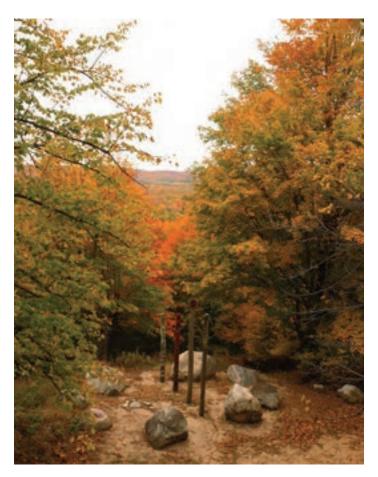
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Other Education Opportunities

Field Trips

Trail guides, scavenger hunt material and youth activity guides available for self-guided tours.

Educational Videos

Visit www.michlegacyartpark.org

Artist-in-Residence

Bring an Art Park artist to your school for a unique learning experience.

To request material, more information or schedule a field trip contact:

Patricia Innis, Education Director 231.378.4963 education@michlegacyartpark.org www.michlegacyartpark.org

Along the 45th Parallel

Along the 45th Parallel North

Michigan Legacy Art Park, committed to enriching lives through experiences that connect art, nature, and Michigan's history, presents The 45th Parallel Project for teachers and students. Art is everywhere! Just as art can be observed along any path we take, at the 45th parallel it is observed in the flora and fauna, the ways of the people, and the very structure of the land itself. Observation along the 45th parallel reveals global mutuality. This booklet provides a vehicle for teachers and students to seek inspiration, extract information, build understanding, bring new art to life, and celebrate common ground by participating in The 45th Parallel Project.

The 45th Parallel Project uses the halfway point between the equator and the North Pole as a unifying line, connecting teachers and students from all around the world who live east or west of Michigan Legacy Art Park along the 45th parallel. Teachers first take their students on an in-person or virtual visit to Michigan Legacy Art Park. Students draw comparisons between the flora and fauna at the park's location along the 45th parallel and the flora and fauna at their location. The class selects another school along the 45th parallel with which to communicate and interview one another. The goal is to among highlight the commonalities plants, animals, geology, fashion, arts, and other characteristics between the locations along the 45th parallel.

Students then create art that represents their space, collaborating in the process by selecting the same project to complete at the two schools or even by shipping the art from school to school so that the students in both places along the 45th parallel can add to the art. Samples of correspondence and completed art will reside at Michigan Legacy Art Park, either physically or virtually on the Michigan Legacy Art Park web page. Visit michiganlegacyartpark.org to participate in The 45th Parallel Project.

Creators of art express what they see and experience from a unique perspective, intertwining elements of geometry, mood, science, and emotion. The 45th Parallel Project helps teachers and students to connect along roughly 17,000 miles of latitude in terms of how colors, shapes, lines, textures, fashions, buildings, celebrations, plants, animals, people and perspectives are the same and different from here to the other side of the world and back again!

Vocabulary

FLORA - the plants of a particular region

FAUNA - the animals of a particular region

ELEMENTS OF ART - color, form, line, shape, space, texture, and value

LATITUDE - an imaginary horizontal line used in mapping to locate places on Earth; the distance north or south of the equator, expressed in degrees Also called parallel

LONGITUDE - an imaginary vertical line used in mapping to locate places on Earth; the distance east or west of the Prime Meridian, expressed in degrees also called meridian

PENINSULA - a piece of land almost surrounded by water or projecting out into a body of water

ISLAND - a piece of land surrounded by water

GLOBAL POSITIONING SYSTEM (GPS) - a worldwide navigation system which allows users to determine their location very precisely by means of receiving equipment that detects timed radio signals from a network of satellites

SOLSTICE - either of the two times in the year, the summer solstice and the winter solstice, when the sun reaches its highest or lowest point in the sky at noon, marked by the longest and shortest days.

EQUINOX - the time or date (twice each year) at which the sun crosses the celestial equator, when day and night are of equal length (about 22 September and 20 March)

PRIME MERIDIAN - the meridian running through Greenwich, England, from which longitude east and west is reckoned

EQUATOR - the great circle of the Earth that is equal distance from the North Pole and South Pole

TIME ZONE - a geographic region within which the same standard time is used

* Sources:

www.dictionary.com

www2.oberlin.edu/amam/asia/sculpture/documents/vocabulary.pdf www.geovista.psu.edu/grants/MapStatsKids/MSK_portal/concepts_latlg.html en.oxforddictionaries.com

KEY IDEAS

- The journey of the sun at the 45th Parallel is experienced at Michigan Legacy Art Park
- Light from the sun creates the basis for calendars.
- •Time zones are established due to the journey of the sun.

ALONG THE 45TH PARALLEL

People's experiences are rooted in location and time. Solar Month allows us to highlight the relationship between Earth and the sun here at Michigan Legacy Art Park's location. If we could move Solar Month to other locations along the 45th parallel, and carefully position its angle, we could observe the same relationship passing through time in the same way. Day becomes night in the same sequence at any location on Earth. Winter becomes spring and then summer in the same sequence at any location on Earth. Along the 45th parallel, though, the sequence is even more similar, with all locations sharing very similar amounts and intensities of sunlight for the same number of days and even hours in a season. This is a fundamental commonality for all locations along the 45th parallel, and an excellent starting place for discussions of what experiences are the same no matter where one is located along the halfway point between the equator and the North Pole.

The relationship between Earth and the sun impacts all living things. Sun provides heat, light and energy for plants to grow, while Earth's soil and air provide minerals and nutrients. Locations along the 45th parallel share common growing seasons for plants (flora, which in turn affect the growth and behavior of animals, fauna.) People living along the 45th parallel share in common their experience of the seasons, climate, and amount of light. This in turn provides the backdrop for common cultural activities.

Pointing out the impact of the sun's relationship to Earth at all locations along Earth's 45th Parallel is critical to beginning a discussion of how inhabitants of Earth along the 45th parallel hold much in common.

BACKGROUND

Just outside the main entrance of Michigan Legacy Art Park founder and artistic director, David Barr, has sculpted a work that provides a benchmark for time and place and serves as a keystone for your tour of the Park. Barr created Solar Month for this exact location. Here, very close to the 45th parallel, the passage of time can easily be measured each month as the sun passes from the Summer to Winter solstice.

In addition to providing a calendar, the relationship of Earth and Sun allows us to fix our location on the planet. Consider that if you were to travel the 45th parallel from this point, you would pass through Bordeaux, France; Turin, Italy; Belgrade, Serbia; Bucharest, Romania; Bole, China; and Horonobe, Hokkaido, Japan.

If you could zoom high above Earth in a spaceship so that you could watch the sunrise taking place along the 45th parallel, your journey would take 24 hours. Begin as the sun rises at 0 degrees latitude (the Prime Meridian and travel east so that the spaceship provides you a view of first light happening longitude by longitude.

Your spaceship's journey and your observations would reveal that each location along the 45th parallel experiences first light, early morning, late morning, noon, and so on in the same sequence. If you kept traveling, you would observe the last light fading from each location. For all 180 latitudes, and all of the places in between them, the sequence of daytime, noon, and nighttime are the same, and happen at the same rate. This is a simple but important part of why all locations along the 45th parallel share a very similar climate and provide very similar habitats in which plants, animals, and humans dwell.

DISCUSSION QUESTIONS

• How does the length of the growing season depend on the sun?

• How do the amount and intensity of sun affect the habitat at a certain location?

• Why are the amount and intensity of sun important to the cultural practices in a certain location?



Stockade Labyrinth, David Barr

KEY IDEAS

· Activities along the 45th parallel in Michigan are connected to the flora and fauna in this location.

• Human activities have both negative and positive impact on the community and the environment.

• Processing and understanding of experience happens from many perspectives and looks back over history

ALONG THE 45TH PARALLEL

Human activity throughout history has been inextricably connected to the environment. As humans gather food, create shelter, travel, apply technological enhancements, and eventually build larger and larger communities, they have an impact that is not always immediately realized or understood. Fish are caught, smoked, fileted and eaten. Deer are hunted, skinned, processed into different foods, and used to create leather. Trees provide shade and fruit, lumber and seeds for more trees. Buried minerals can be discovered and removed from underground to create energy and steel. Roads are built and traveled upon. Trading and commerce take place.

Stockade Labyrinth provides numerous glances at the ways of life along and around the 45th parallel over time. Nets and lines for fishing, saws and axes for lumbering, ores and railroad ties for mining, arrows for hunting—all linger poignantly through the passageways formed inside the stockade, and all represent both subtle and obvious impacts that affect this geographical area.

Open to the sky, the twists and turns of the labyrinth show how connected even seemingly unrelated activities are to the elements of nature in which each activity got its start. The view from the highest point of the labyrinth allows for reflection upon all of the activities highlighted within it in the light of the world as a whole, surrounded by forest and clouds, fresh air and birdsong.

BACKGROUND

"You must live life forwards but you can only understand it backwards." These words from Danish philosopher, Soren Kierkegaard, are central to David Barr's Stockade Labyrinth. From the first encounter, as viewed from the path, the work provokes a wealth of emotion and thought. Each seems independent at the moment of experience but becomes related when the journey through the work is completed.



There is the forbidding stockade, like those built by advancing Europeans to separate the worlds of immigrant and indigenous people. The words within the walls are French, the language of Marquette, Cadillac, Jolliet and LaSalle. The images, such as the hand, a horse pulling a plow and a soaring eagle, each reflect on the impact, both physical and spiritual, of human kind on nature's abundance.

The viewer can pause at "dead-end stations" pondering war, trapping, mining, farming and spiritual quests on the way to the overlook platform. Here is another maze, one that, when followed to its center, brings us to the exact spot of Michigan Legacy Art Park on the globe. Finally, the view... forests, not as they were but as we have made them, DNR managed plantations for renewal and production of lumber.

DISCUSSION QUESTIONS

How have the flora and fauna found along the 45th parallel here in this geographical area helped local and distant communities to survive and flourish?
What positive and negative impacts have come about due to hunting, farming, mining, and lumbering?

• What features of this local area need to be preserved for future generations to enjoy?

KEY IDEAS

 $\cdot\,$ Robin species live, at least seasonally, along all of the land regions making up the 45th parallel.

 $\cdot\,$ Robins migrate based on weather's effect on their food supply.

 $\cdot\,$ Robin families, like human families, react to the environment as well as have an impact upon it.

ALONG THE 45TH PARALLEL

In every direction from the 45th parallel, children have parents. This simple common truth is poignantly expressed in Robins! How do parents help their children, and how do children learn from their parents? Robins live all along the land of the 45th parallel, though there are some differences between species on opposite sides of the dividing oceans. Habitat is well-suited for robins due to similar plant and animal prevalence within the environments along the 45th parallel. Both male and female robins care for their children by building the nest, warming the eggs, providing food for the nest-bound infants and training the fledglings to fly and find food.

BACKGROUND

The state bird of Michigan since 1931, the American robin has been the harbinger of spring for many generations of people living in the state. The American robin is one of the few native American species to have benefited from human development. In Michigan, each new farm that emerged where forests once stood and each town with suburban neighborhoods, parks, gardens and orchards provided new habitat and breeding grounds for the birds. By the 1930s the American robin had become Michigan's most widespread songbird. Part of popular culture with songs such as "Rockin' Robin" and "When the "Red, Red Robin Comes Bob, Bob, Bobbin' Along," robins are often the first birds children can identify.

Robins! is an environmental art installation at Michigan Legacy Art Park that draws attention to bird migration and the impact the American robin has had on our culture. The installation consists of three earth-mound sculptures representing robins and two bird's nests containing eggs. Formed to scale, the robins have a 14foot wingspan, are nine feet in length and two feet in height. The mounds capture the birds in various stages of flight as they head slightly uphill toward the nest. Each are planted with shady grass seed, creating a habitat for live robins.

DISCUSSION QUESTIONS

What are some positive and negative affects to the environment brought about by robins and/or humans?
In their short life spans, how do robins (or humans) impact their surroundings as they meet their needs for food, shelter, and space to occupy?

• What characteristics along the 45th parallel change when robins are present or absent?



Transit Survey, David Barr

KEY IDEAS

 \cdot We navigate and travel in four cardinal directions: north, south, east, and west.

Imaginary lines of latitude (parallels) and longitude (meridians)

intersect to create a grid that is useful in specifying location. • Human error can occur, but technology is also not completely trustworthy.

ALONG THE 45TH PARALLEL

Where in the world are we? The world is a huge place containing seemingly countless locations. How can we know exactly where we are in space? All positions along the 45th parallel can be pinpointed by their intersection with longitudes and expressed in degrees, minutes, and seconds. Although 17,000 miles is a long way, knowing the spot we occupy within those miles is helpful and, in some ways, comforting.

"Transit Survey" allows students to pinpoint a time and event in history that shows how surveyors used the technology of the time to mark east-west and north-south lines through the state to be used as literal landmarks. Human error impacted the results, but even with the misalignment the lines were very useful.

In 1970 a group from Michigan State University laid out what they called the "Polar-Equator Trail" along the 45th parallel in Michigan. The trail extends over 135 miles from the east in Alpena to the west in Leland, and notes that Menominee in Michigan's Upper Peninsula and the southernmost tip of South Manitou Island are also located along the 45th parallel. In its time, the Polar-Equator Trail was hailed as a popular tourist attraction for hikers and drivers alike. Now, very few signs along the trail still exist, but trail guide booklets and other artifacts are kept in the Michigan State University Archives and Historical Collections.

The 45th Parallel Project allows teachers and students to communicate from location to location along 45 degrees North Latitude to compare and contrast the views at each position. Here is where we are in the world and this is what it looks like, sounds like, and feels like! What about where you are? Let's think back, too. How has history left marks for us to move toward or away from, improve upon or stop altogether?

BACKGROUND

"Transit Survey" was inspired by the surveying of Michigan and the effect that had on Michigan's future. The surveying of Michigan began in 1815 by setting up an east-west Base Line (represented by red poles in this installation) and a north-south Meridian (blue poles) from which all land measurement would proceed. The obelisks represent the starting and ending points of the meridian and the baseline and the white pole the point where the two intersect.

Michigan implemented the "rectangular system" of land measurement by setting up an east-west Base Line and a northsouth meridian from which all land measurement would proceed. In Michigan, the intersection of the prime meridian, which runs south from Sault Ste. Marie on the longitude of 84 degrees, 22 minutes and 24 seconds west, and the base line, is the referenced point for all lands surveyed in Michigan.



Townships are numbered east and west and north and south of these lines. The USPLS system is still the primary means by which the location of parcels of land in Michigan are described.

The history of the Base Line surveying reveals the collision of four contrasting concepts of "property": Native American, aristocratic European, colonial American and Jeffersonian. From the collision emerged a new, uniquely American, set of principles that profoundly shaped out landscape, laws, and concept of liberty. From the 1820s on, surveying signaled the end of living freely off the land– hunting, fishing, trapping– and the beginning of settlement–agriculture and "taming the frontier."

The "immaculate grid" of Jeffersonian democracy superseded the Spanish, French, and English territorial colonization of the New World.

DISCUSSION QUESTIONS

- $\cdot\,$ Why is it necessary to have a common way of describing land borders and boundaries?
- $\cdot\,$ How does the latitude and longitude system being used today compared to its uses throughout history?
- · Why is surveying important for construction of roads,
- buildings, and structures such as tunnels, dams, and bridges?

KEY IDEAS

• Inspiration for many Hemingway plots and characters came from his time spent along the 45th parallel.

• Hemingway's writing style used what he called the "iceberg theory" which omits detail and leaves the deeper meaning to be gleaned by the reader.

ALONG THE 45TH PARALLEL

The 45th Parallel Project challenges teacher and students to find commonalities, connections, and bases for understanding that hinge upon one aspect of location: the 45th parallel. All around the world, people have heard of Ernest Hemingway and read his works. "Hemingway Haunts" serves as a brilliantly subtle entry point for discussion of how flora, fauna, fashion, culture, nature, and other characteristics of a location can have an impact on perspective and inspiration within the human mind.

As the figures in "Hemingway Haunts" become perceptible amidst the trees, grasses, ferns, and birdsong on a pleasant day at Michigan Legacy Art Park, their presence subtly impacts the viewer. In much the same way, Hemingway drew inspiration from his childhood summers on Walloon Lake (45.2651° N Latitude) as well as his hospitalization in Milan, Italy (45.4642° N Latitude) due to war wounds received during World War I and his visits during World War II to places like Venice, Italy (45.4408° N Latitude). Many of Hemingway's works are clearly set in areas along the 45th parallel. One example is The Nick Adams Stories, of which several stories are set at Horton Bay (45.2845° N Latitude). Another connection is taken from the simple approach of the figures painted in walnut dye on the trees growing in Michigan Legacy Art Park. The presence of the figures, their vantage points from the trees, and their symbolism in Hemingway's writings are all related to Hemingway's own approach to writing, called the "iceberg theory."

Given the tip of the iceberg by the author, readers can find the deeper, larger meaning. Along the 45th parallel, teachers and students can draw their own inspiration and present art in the form of writing with simple words to represent more complex ideas. Inspirations like these will be relatable to all of the inhabitants along the 17,000-mile stretch in which participants in The 45th Parallel Project dwell.

BACKGROUND

Under the leadership of Innis, students in Mancelona and Frankfort learned about Ernest Hemingway. Painted with natural dyes, these five figures depict Hemingway as Nick Adams the young man; Nick Adams the child; Gregoria Fuentes, the captain of Hemingway's boat the "Pilar" (representative of the hero in the "Old Man and the Sea"); and two characters Robert Jordan (modeled after the actor Gary Cooper) and Maria (modeled after the actress Ingrid Bergman) from the movie version of the book "For Whom the Bell Tolls". Hemingway Haunts was supported by a 2004-2005 grant from the Michigan Council for Arts and Cultural Affairs and the National Endowment for the Arts.

DISCUSSION QUESTIONS

- What inspires you to write?
- $\cdot\,$ How can visual art and written art appear simple but also bring up complex thoughts?



Diversity, David Barr

KEY IDEAS

- Citizens have a responsibility to soften their impact on the environment.
- We can choose to respond to our surroundings with gratitude in the present and respectfully preserve what will be left for the future.

ALONG THE 45TH PARALLEL

The 45th Parallel Project offers teachers and students an opportunity to find similarities and differences as inspiration for art. The position of 45° North Latitude connects us in space, but we can also look for connections over time. How much of the 45th parallel was covered in ice millions of years ago and formed into rolling land or peninsulas and islands amid fresh or ocean water in the thaws? How much of the 45th parallel was treated with awe by those who passed through it on their way to trade animal skins for metal pans and wool blankets? Has any robin passing by or staying to build a nest and raise a family gone unnoticed by the habitat in which it flew? Has any endeavor, such as road-building or hunting, had no consequence at all to the land on which it occurred?

The sculpture Diversity calls to mind the reality that all beings, everywhere, are simultaneously impacting and being impacted by their surroundings. There is nothing inconsequential, but not all are permanently damaging. The 45th consequences Parallel Project opens communication so that new and stronger consideration might happen to result in increasingly improved stewardship of the land not just along the 45th parallel, but everywhere.

Realizing that "life is a tapestry of relationships" and "every thread is crucial" both gives us pause and elevates our authority. As similar and diverse as we each are, we have the option to build a positive and sustaining relationship with the flora, fauna, land and people over which the 45th parallel passes.



BACKGROUND

In Diversity, the intentional breakage of one of its columns is but one of many comments that artist David Barr makes on the impact of human action. This work reminds the viewer, "when we learn how we have negatively impacted our environment, we respond as constructive custodians. For example, Michigan's low point of harvestable trees was around 1900. However, in the last 100 years, we have managed to restore about 75% of the timber."

DISCUSSION QUESTIONS

- In what ways do we show gratitude for resources provided by the land in which we live?
- $\cdot\,$ How do we show respect for diverse cultures, animals, plants, and attitudes?

Bringing it all together

Students form six groups. Each group becomes an expert on one of the six sculptures. Use the sculpture bio to help keep information about each sculpture consistent.

Sculpture Bio	
Title:	
Artist:	
Flora near the sculpture:	
Flora near my home:	
How does this sculpture inspire me?	
Words that come to mind when I view this sculpture:	

Michigan Legacy Art Park Tour Analysis Grid	d to mind	ed to mind	ulpture	۵	by this	vithin this	/ou to be nent	erature e
Name	alle	call	e SCI	enc	puic		sks) ronr	r lite Iptui
Date	ling or c	ding or re	d by the	ı experi	led to m	ou not	pture as ne envii	istory o his scul
Make notes of what your senses experience while observing each of the sculptures	Flora surrounding or called to mind by this sculpture	Fauna surrounding or called to mind by this sculpture	Space occupied by the sculpture	Inspiration you experience	Key words called to mind by this sculpture	Art elements you notice within this sculpture	Ways this sculpture asks you to be respectful of the environment	Events from history or literature connected to this sculpture
<i>Solar Month</i> by David Barr								
Stockade Labyrinth by David Barr								
<i>Robins!</i> by Patricia Innis								
<i>Transit Survey</i> by David Barr								
Hemingway Haunts by Patricia Innis								
<i>Diversity</i> by David Barr								

Activities by Grade Level

At the Art Park:

Take the students through the Park (physically or virtually) with a special focus on Solar Month, Robins!, Stockade Labyrinth, Transit Survey, Hemingway Haunts and Diversity.

In the Classroom:

Kindergarten

- · Count from 1-45
- · Play shadow tag
- \cdot On a bright day, note the position of the sun through your classroom window every hour; create a series of marks showing a timeline of the sun's progression
- $\cdot\,$ Depict each season with drawing or sculpture
- $\cdot\,$ List plants and animals near the school
- $\cdot\,$ List and draw/identify the clothing that goes with each season
- · Act out the path the sun takes in every 24 hours
- $\cdot\,$ Discuss how the calendar is based on the sun

First Grade

· Count by fives to 45

 $\cdot\,$ Classify plants by who eats them/uses them for nectar

· Classify animals by what they eat

 $\cdot\,$ Find a food that grows along the 45th parallel in their lunch

 $\cdot\,$ Research the growing season of that food (or in the case of meats, the growing season of plants eaten by the animal)

 $\cdot\,$ Create a sculpture of a plant or animal using play dough or clay

 Discuss the connection between the amount of sun during a season and the plants that can be grown/eaten

• The Midwest is the "Breadbasket of America." What is meant by that name? How are the seasons and the sun connected to the name?

Second Grade

· Count by fives to 90

 $\cdot\,$ Label equator, 45th parallel, North Pole on map of North America

 $\cdot\,$ Mark the cities nearest to your school that are along the 45th parallel

• Create a map that shows your school and the schools in your region on the 45th parallel—use paper or build your school and the cities with Legos, clay, or another material

 $\cdot\,$ Write to students in one of the cities located on the 45th parallel

 $\cdot\,$ Interview the students to see what plants grow well in their area

Third Grade

• Use an orange or tangerine to depict the earth. Mark the equator, 45 degrees North Latitude, 45 degrees South Latitude

· On a Michigan map, plot the 45th parallel North

- · List Michigan cities on 45th parallel North
- $\cdot\,$ Create interview questions or use those listed at MLAP website

• Write to one of the schools. Use the responses to generate ideas for art projects associated with flora and fauna in both regions.

• Write to one of the schools. Use the responses to generate ideas for art projects associated with the types of celebrations which take place in both regions. (Harvest, winter, planting, etc.)



In the Classroom

Fourth Grade

· Research history connections between Michigan and European visitors/settlers along the 45th parallel—French and British

• List how trees that grow along the 45th parallel were used in lumbering, to build canoes, baskets, dwellings, etc.

· List animal skins that were traded during the time of the French voyageurs and what was given in exchange

· List minerals and fossils that have been discovered along the 45th parallel

 Create a sculpture to represent a tree, animal, mineral, fossil, and the role it has played in Michigan history.

· Create a birch bark canoe, log cabin, or a piece of furniture

 Study the Menominee tribe, which lived along the 45th parallel. Construct a model wigwam, sweat lodge, snow snake toy, or Lacrosse set

Fifth Grade

· Choose two well-known cities over 1000 miles from each other along the 45th parallel and research the animals and plants that grow as well as the events that take place in those cities. List facts for each. Do the same for your home city.

Fifth Grade Continued

· Create a Venn Diagram showing the flora, fauna and events in words or pictures as they relate to one another.

· Create a paper medallion with a distinct animal, plant or event from one city on one side and a distinct animal, plant or event from the other city on the other side.

· Write to students at a school in each city. Send them a copy of the medallion. Interview the students about their city and tell them about where you live. Ask them to create a medallion and send it back to you.

Sixth Grade

· Research George Washington's career as a surveyor.

· List the steps that a surveyor uses to complete a survey

Eighth Grade

· Choose an economic concern (lumbering, mining, trading with Europe, farming, real estate, etc.) and compose an essay discussing what would have happened if it had been handled differently along the 45th Parallel during the decades before you were born.



Diversity (Detail) by David Barr

Suggested Activities by Grade Level

High School:

• Assuming you have unlimited fuel and a wellstocked plane or spaceship, what speed should you travel if you want to see the moment of sunrise along the 45th parallel as you travel through all 360 longitudes in 24 hours?

• What time zones exist along the 45th parallel in the United States? Europe? Asia?

• Contact schools in two cities along the 45th parallel and request soil samples—topsoil, gravel, clay, etc. Use the samples to create groundwater models and compare to a groundwater model made using local soils.

 Study robin migration and plot the high temperatures in your hometown each day until robins leave/arrive

• Locate islands and peninsulas along the 45th parallel. Create a strip map that outlines their coasts from east to west. The result will look a little like a readout from a heart monitor. Label the peninsulas or use contrasting colors to highlight them and create a key.

 \cdot Using a strip map, create a bracelet or hula hoop map of the 45th parallel

• Read The Nick Adams Stories. Create a drawing or sculpture of an outdoor setting that Hemingway describes in one of the stories.

 Write a description of a plant or animal or event found along the 45th parallel using Hemingway's "iceberg theory."

Special Education Students:

• Design a clothing item for use in a particular season along the 45th parallel.

• Touch and compare/describe materials used for coats (animal skins, wool, cotton, nylon, other synthetic fibers)

• Cut out pictures of flora and fauna from local area and create a 45th parallel collage

Solar Month (Detail) by David Barr



Standards and Benchmarks Addressed

KINDERGARTEN

KH2.0.2 Create a timeline using events from their own lives. K.G1.0.1 Recognize that maps and globes represent places.

GRADE 1

ART.VA.V.1.4 Discover connections between the visual arts and other curriculum through student artwork.

1 G5.0.2 Describe ways in which the physical environment in a place or region affects people's lives.

GRADE 2

ART.VA.V.2.1 Describe how art is used in everyday life. 2G1.0.3 Use maps to describe the location of the local community within the state of Michigan in relation to other significant places in the state

2Č 5.0.2 Distinguish between personal and civic responsibilities and explain why they are important in community life.

GRADE 3

ART.VA.III.3.5 Discuss how personal experiences influence the creation of art.

3H3.0.5 Use visual data and informational text or primary accounts to compare a major Michigan economic activity today with that same or a related activity in the past.

3 H3.0.7 Describe past and current threats to Michigan's natural resources; describe how Michigan worked in the past and continues to work today to protect its natural resources. 3 G1.0.3 Use a world map to describe North America with respect to the equator and other continents and oceans, and Michigan within North America.

3 G5.0.1 Locate natural resources in Michigan and explain the consequences of their use.

GRADE 4

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

Writing Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources. 4 G1.0.5 Use hemispheres, continents, oceans and major lines of latitude to describe the relative location of the United States on a world map.

GRADE 5

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

5 U1.2.2 Use case studies of individual explorers and stories of life in Europe to compare the goals, obstacles, motivations, and consequences for European exploration and colonization of the Americas

GRADE 6

6 G1.1.1 Use a variety of maps, globes, and web based geography technology to study the world at global, regional, and local scales. 6 G1.3.3 Explain the different ways in which places are connected and how those connections demonstrate interdependence and accessibility.

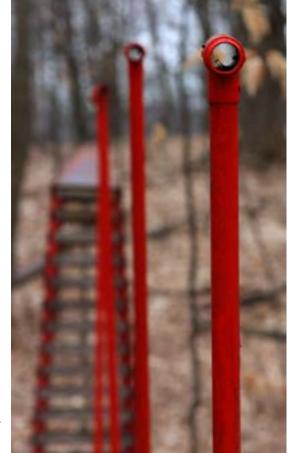
6. G3.2.1 Locate major ecosystems and explain how and why they are similar or different as a consequence of latitude, elevation, landforms, location, and human factors.

6 G3.2.2 Identify major ecosystems of the region under study and explain why some provide greater opportunities (fertile soil, length of growing season, precipitation) and how land use changes with technology.

GRADE 8

ART.VA.IV.8.1 Recognize, describe and analyze, and evaluate how art contributes to and reflects all societies and cultures. Writing: Write arguments to support claims with clear reasons and relevant evidence.

a. Introduce claim(s), acknowledge and distinguish the claim(s) from alternate or opposing claims, and organize the reasons and evidence logically. b. Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text. c. Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), counterclaims, reasons, and evidence. d. Establish and maintain a formal style. e. Provide a concluding statement or section that follows from and supports the argument presented.



Benchmarks and Standards

HIGH SCHOOL

ART.VA.IV.HS.3 Analyze the correlation between art, history, and culture throughout time. (21st Century Skills: I.6, III.1, III.2, III.7, III.8, III.9, III.10)

Writing: Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. a. Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among claim(s), counterclaims, reasons, and evidence. b. Develop claim(s) and counterclaims fairly, supplying evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level and concerns. c. Use words, phrases, and clauses to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. e. Provide a concluding statement or section that follows from and supports the argument presented.

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

SS P1.4 Communicate clearly and coherently in writing, speaking, and visually expressing ideas pertaining to social science topics, acknowledging audience and purpose. SS 6.1.3 Increasing Global Interconnections – Describe increasing global interconnections between societies, through the emergence and spread of ideas, innovations, and commodities including the global spread of major innovations, technologies, and commodities via new global networks.



Hemingway Haunts (Detail) by Patricia Innis

Michigan Department of Education Independent Living Exit Skills for Special Education Students

• Match appropriate clothing to weather associated with each season to show ability to independently select appropriate clothing.

- Know/follow safety procedures for emergency situations associated with weather and seasons (tornado, hurricane, etc.)
- \cdot Understand calendar concepts (days, weeks, months, etc.)
- Understand the difference between day and night
- Demonstrate an understanding of past/future events
- · Demonstrate the awareness of the successive order of events
- \cdot Use time words (yesterday, last night, tomorrow, etc.)
- · Demonstrate awareness of relative length of time
- · Name months of the year
- · Relate months of year/days of week to a calendar



ABOUT THE AUTHOR:

Janine Winkler is an elementary teacher for Grand Traverse Area Catholic Schools and the coordinator for Northwestern Michigan College's College for Kids Junior Counselor Leaders in Training. She grew up in Lake Leelanau, Michigan, less than a tenth of a degree away from the 45th parallel. Her 30+ years of teaching have afforded her the privilege of seeing joy and understanding come into the lives of students when they make connections inspired by science, nature, writing, and art. Over her career, Janine has brought hundreds of students to the Michigan Legacy Art Park.



Michigan Legacy Art Park

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