



# Using Nature's Resources

## Background Information for Teachers

Wisconsin has many interconnected natural resources, including water, wildlife, soil, trees, minerals, sunlight, and land. Since the retreat of the last glacier about 12,000 years ago, human settlement patterns, lifestyles, and industrial development have been directly related to these resources. Throughout the history of Wisconsin, individuals and communities have made many choices impacting these finite resources, leading to efforts to find a balance between use and protection. These efforts have at times created a tension between governmental policymakers and individuals.

## Program Synopsis

Angie explores a shipwreck while scuba diving in Lake Michigan, which prompts her to investigate the ways in which water resources have been used in Wisconsin's past. Her investigation leads her from Lake Superior to the Fox River to the Horicon Marsh. She explores the relationship between people and natural resources, noting the impact of human decisions on those resources. Angie encourages students to think about the balance between using and protecting natural resources.



*Angie and friend prepare to dive in Lake Michigan to explore a shipwreck.*

## Program Goals

Students will:

- be introduced to Wisconsin's diverse natural resources.
- explore the dynamic relationship among natural resources, economic development, and social organization.
- understand that different natural resources have been used in different ways at different times throughout Wisconsin's history.

## Focus Questions

What are some of Wisconsin's natural resources? How have different groups of people used water resources over the years?

## Career Connections

ecologist, biologist, nature interpreter, historian, conservationist, fishery and wildlife manager, limnologist, hydrogeologist, environmental engineer, geologist, urban planner, natural resources manager, forester, miner, commercial fishing operator

## Clues in Program 8

The category of each clue is noted in parentheses. For information **about the categories**, see pages 27-28.

- shipwreck (Landscape)
- map (Visual Images)
- interview with commercial fishing operator (People)
- Charles A. Grignon Mansion historic site (Places)
- industrial complex (Landscape)
- Horicon National Wildlife Refuge (Places)
- information from an expert\* (People)
- photographs\* (Visual Images)
- film\* (Visual Images)

\*Indicates clues seen in Program 8 but not mentioned specifically by Angie.

## Vocabulary

Words set in italics are not used in Program 8 but are relevant for classroom discussion.

*bird's-eye map* — A map showing a location from the perspective of being directly above it

*contaminated* — Made impure or unclean by contact or mixture

*ecology* — The science of the relationship between organisms and their environment

**environmentalist** — A person who works to protect the well-being of the environment

**generation** — All of the people born at about the same time or living in the same period; each stage in a family descendance (i.e., a grandparent, parent, and child are three generations)

*ground water* — The water contained in the saturated layer below the water table in the earth's subsurface

**industry** — The commercial production and sale of goods

**national lakeshore** — An area of historical and/or natural significance, preserved and protected by the federal government

**natural resources** — Naturally occurring elements in the environment on which humans have placed value; these include wildlife, soil, trees, minerals, sunlight, land, and water

**predator** — An animal that lives by catching other animals for food

**sea lamprey** — A jawless, snake-like fish that feeds by attaching itself to the side of a fish, rasping a hole in the fish's skin, and then extracting its body fluids

*subsistence* — The basic items needed for sustaining life, such as food and shelter

*surplus* — A quantity of items or goods beyond those needed for subsistence and therefore available for trade or sale

*toxin* — A poisonous substance capable of causing injury or death

**underwater archaeologist** — A scientist who studies underwater artifacts to determine what life was like for groups of people who lived in the past

**water table** — The level below which the ground is saturated with water

## Guide Resources

- Investigating the Mystery of History [graphic organizer](#) (p. 29)
- [Investigative Clues chart](#) (p. 30)
- Changes at Patrick Marsh [assessment activity](#) (pp. 14-19)
- Important Dates in Wisconsin History [time line](#) (p. 20)
- Wisconsin [political outline map](#) (p. 31)
- Wisconsin [physical regions map](#) (p. 21)
- Song: *Pick and Shovel* (p. 22)



*Aldo Leopold, father of wildlife conservation, was the first to chair the Department of Game Management at the University of Wisconsin in Madison.*

## Pre-Viewing Activity

Ask students to name some of Wisconsin's natural resources and list them on the chalkboard. Review the reasons why these resources can be found in Wisconsin. The map of Wisconsin's five physical regions (p. 21) may be helpful for this discussion. Explain that Program 8 explores the history of one particular natural resource of Wisconsin: water.

## Viewing Activities

Angie asks a number of questions during Program 8 that are intended to provoke thought and discussion, making them good pause points.

- I wonder how the Great Lakes have been used over the years? And what about Wisconsin's other water resources?
- Can you think of ways we use water?\*
- What has water meant to different people over the years? How have they used our water? What choices have they made?

- The way people have thought about the (Fox) river, and treated the river, has changed a lot over the years. Do you think that's true of Wisconsin's other rivers as well? What's the closest river to your home?
  - Did you know wildlife refuges can be good places to investigate history?
  - People like you and me have to let (lawmakers) know what we believe is important. Can you think of ways to help?\*
- \*Question is answered by the students in Program 8.

### Post-Viewing Activities

1. Using the Investigating the Mystery of History **graphic organizer** (p. 29), review the clues and investigative methods Angie used in Program 8 (see Clues in Program 8 on page 2). Have students record these clues on the appropriate Investigative Clues **charts** (p. 30). Then, have them identify the advantages and limitations of each clue. Methods and clues repeated from previous programs can be developed further after seeing them used again in a different way.

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electronically not  
acquired for  
this image.**

*The upper lock on the Fox  
River at Appleton, 1856.*

2. Label Angie's destinations in Program 8, listed below, on the Wisconsin political outline map (p. 31). For additional site information, see **Angie's Destinations** on page 13. (Geography connection)

- Garret Bay, Door County
- Bayfield (Apostle Islands National Lakeshore)
- Kaukauna (Charles A. Grignon Mansion)
- Mayville (Horicon National Wildlife Refuge)
- Keshena (Wolf River)

3. Review ways in which people have used Wisconsin's water resources as highlighted in Program 8. What effect did their choices have on the water resource? How did their choices impact other natural resources?

- Great Lakes: transportation, fishing for food, recreation, and as a commercial industry
- Rivers: transportation, fishing, power for sawmills, paper mills, and other industry
- Horicon Marsh: hunting and fishing for food, power for a sawmill (dam flooded marsh), hunting for recreation and market (after dam removed), farming (marsh drained), wildlife habitat (marsh restored)

4. Discuss **Important Dates in Wisconsin History** (p. 20). Lead a discussion: What role has government played in protecting Wisconsin's natural resources? How have people's ideas regarding the use of natural resources changed over time?

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*Lead miners in southwest Wisconsin, near Cassville, about 1900.*

### **Student Activity for Assessment**

**Changes at Patrick Marsh** (pp. 14-19) is designed to help students recognize the many ways a natural resource can be used over time. This activity includes a series of pictures that students arrange chronologically to show changes over time.

## Extension Activities

1. Facilitate this “web” activity to show the interconnectedness of natural resources and their uses. Have students sit in a circle, with one student holding a ball of yarn. Ask each student to share an example of how a natural resource is important in his or her life. After sharing an example, the student will hold the strand of yarn in one hand and, with the other hand, toss the ball gently to someone else. In doing this, the class will construct a web. When the web is complete, encourage student observations and comments.

Next, describe a situation in which one natural resource is altered; for example, a water supply becomes polluted. Ask students who named that resource to pull gently his or her part of the web. Observe what happens to the entire web. Discuss the implications of the tension created. Students should understand the interconnections among natural resources. (Science connection)



*Logjam on a Wisconsin river.*

2. Use a Wisconsin road map to identify place names associated with natural resources. Examples include Whitewater, Mineral Point, Iron Ridge, Two Rivers, Black Earth, and Eau Claire (French for “clear water”). Ask students to hypothesize why settlers or explorers chose each name. Do the names reveal anything about the people? For example, Mineral Point was settled by miners, and Black Earth may have been valued by farmers. (Geography connection)
3. Ask each student to choose a natural resource. Have students create collages using pictures from magazines that show various products made from their chosen natural resource. (Art connection)

4. Challenge students to learn which natural resources brought people to their area. Help them research their community to learn what changes occurred due to the decisions people made about the resources.
5. Use the **Wisconsin physical regions map** (p. 21) to highlight the locations of some of Wisconsin's natural resources. Include a key. Divide the class into five groups, one for each region of Wisconsin, to address the following research questions. Or, pair the class with another class from a different region of the state and compare answers.

- How did natural resources contribute to the settlement of Wisconsin?
- Which resources were most likely to attract people to an area? Why?
- How did decisions made about the use of the resources affect the resources?
- Are there some areas that once were heavily populated but declined because of decisions made about local resources?
- Are there some areas that continue to thrive due to a natural resource?

Local chambers of commerce and historical societies can provide information about the growth and development of specific areas. (Geography connection)

6. Have your class debate or simulate a role-play based on the use of a natural resource. For example, have students decide if strict pollution limits should be imposed on a local industry, which would provide a healthier environment but would raise taxes and may cause many people in the industry to lose their jobs. What role do they think government leaders should play in making such a decision? Who should be involved in making the decision? What factors need to be considered? (Science connection)



*New Year's Day sledding party,  
Rock County, 1926.*

7. Early explorers traveled from the St. Lawrence Seaway to the Gulf of Mexico. Highlight this route using a map of North America. (Geography connection)
8. The first commercial hydroelectric plant in the United States, located on the Fox River in Appleton, began producing power on September 30, 1882. This plant produced power for the first electric lights in a private residence and operated machinery in a papermill. Guide students through an exploration of the ways in which waterpower has been harnessed over time to produce power, from paddlewheel mills to hydroelectricity. (Science connection)

Ask students to do an imaginative writing exercise from the point of view of a child experiencing a home lit by electricity for the first time. (Language Arts connection)

*Dells of the Wolf River, 1927.*



9. Ground water is another important water resource, though it was not discussed in Program 8. Help students discover what happens when pollutants — such as pesticides, fertilizers, and sewage — end up in the ground. Conduct the following demonstration: Fill a clear two-liter bottle with layers of sand, soil, and gravel. “Contaminate” one cup of water with red food coloring. Pour the colored water into the bottle. Observe the pollution that occurs as the contaminated water perks down through the layers. (Science connection)

Follow up by asking students these discussion questions:

- Much of the water we use every day comes from ground water. What problem does the above activity represent?
- What responsibility do individuals have for the well-being of others?



Camping at Peninsula State Park,  
1927.

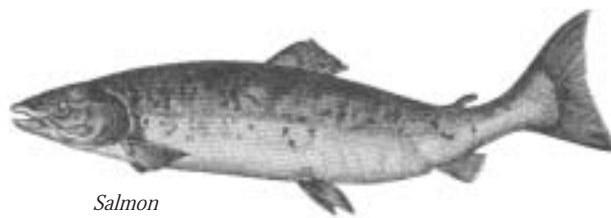


- Why does each person's little bit of pollution make a big difference?
  - What happens when nonliquid pollutants (e.g., powdered cleansers, rodent poisons) are tossed in a landfill?
  - What can be done to help solve the problem of ground water contamination?
10. Explore the recycling efforts in your community. What materials are most commonly recycled? How does the process of recycling work? (Science connection)
11. As an independent study project, have students investigate people or topics related to Wisconsin's strong legacy of environmental protection. Choices could include:
- Walt Bresette (member of the Lake Superior Ojibwa, a leading environmentalist, and an expert on Native American rights and treaties)
  - Aldo Leopold ("father" of the modern conservation movement, author of *A Sand County Almanac*, which is based on his years on a farm in south-central Wisconsin)

- John Muir (a Scottish immigrant who grew up in Wisconsin, founded the Sierra Club, and helped establish the U.S. National Park Service)
  - Gaylord Nelson (former Wisconsin governor and U.S. senator, founder of Earth Day, sponsor/author of legislation to protect the environment)
  - Earth Day
  - community recycling
  - Wisconsin Department of Natural Resources
  - Independent environmental groups, such as The Nature Conservancy, Sierra Club, The Wilderness Society, and Environmental Decade
12. Using the following data, ask students to chart or graph fish populations. For each species, how does the number of fingerlings produced at hatcheries and released into Wisconsin's lakes compare with the number of fish caught? Of the fish caught, what percentage is released and what percentage is kept? (Mathematics connection)

<b>Fish species</b>	<b># fingerlings released</b>	<b># fish caught</b>	<b># fish harvested</b>
Muskellunge	155,000	107,000	6,700
Northern pike	84,000	2,400,000	750,000
Walleye	5,000,000	1,850,000	530,000
Great Lakes trout	1,500,000	304,000	245,000
Salmon	2,600,000	260,000	230,000

*1998 figures, courtesy Wisconsin Department of Natural Resources*



*Salmon*

13. Many extension activities related to science can be found using the following guides. See References and Resources, below, for more information.
- *EE News: Environmental Education in Wisconsin*
  - *Project Learning Tree Environmental Education Guide*
  - *Project Wild Aquatic Education Activity Guide*
  - *Project Wild K-12 Education Activity Guide*
14. Lead the class in singing *Pick and Shovel* (p. 22). Can your students name other songs about work? (Two other working songs appear in **Chapter 10**, on pages 26 and 31.)

## References and Resources

### ***Teacher Literature***

*EE News: Environmental Education in Wisconsin*. A newsletter published quarterly by the Wisconsin Department of Natural Resources. *EE News* provides information about natural resources and offers suggestions for integrating environmental subjects into the curriculum. It also lists environmental education resources and events. School libraries receive a free subscription. For more information, contact the *EE News* editor by calling 608/261-8453.

The Great Lakes Indian Fish and Wildlife Commission provides information regarding treaty-related activities through its *Mazina'igan* newspaper, and brochures, videotapes, and speakers. For more information, contact the GLIFWC at P.O. Box 9, Odanah, WI 54861; telephone 715/682-6619; Web site: [www.glifwc.org/](http://www.glifwc.org/).

*Learning from the Land: Wisconsin Land Use*, by Bobbie Malone. University of Wisconsin Press, 1998, ISBN 0870202944. This fourth-grade reader in the New Badger History series explores the relationships between people and the natural geographical features of Wisconsin.

Project Wild and Project Learning Tree (PLT) activity guides (see below) can be obtained by attending a Project Wild/PLT workshop. Call 608/264-6280 for information.

- *Project Learning Tree Environmental Education Guide*. American Forest Foundation, 1993/1994. For grades PK-8.
- *Project Wild Aquatic Education Activity Guide*. Western Regional Environmental Education Council, Inc., 1987, 1991. For grades K-12.
- *Project Wild K-12 Activity Guide*. 2nd ed. Western Regional Environmental Education Council, Inc., 1992.

*Wisconsin Natural Resources Magazine* This monthly publication features information about wildlife, the environment, natural resources, places, and events that shape Wisconsin's great outdoors. Many issues contain historical articles about the changing landscape of Wisconsin. Available by subscription; contact the magazine at Box 7191, Madison, WI 53707-7191; telephone 800/678-9472.

### ***Student Literature***

*The Christmas Tree Ship*, by Jeanette Winter. Philomel, 1994, ISBN 0399226931 (hardcover); PaperStar Book, 1998, ISBN 0698116534 (paperback). Set in the 1880s, this is the true story of a captain from Manistique, Michigan, who fills his fishing schooner with Christmas trees, sails down Lake Michigan, and delivers the trees to the residents of Chicago.

*The Gulls of the Edmund Fitzgerald*, by Tres Seymour. Orchard, 1996, ISBN 0531095096 (hardcover), 0531088596 (library binding). Striking cut-paper collage illustrations are integrated with a map and several photos of the doomed ship to create a haunting, almost mystical story about the 1975 disaster.

## **Angie's Destinations**

For more information about these sites, which Angie visited in Program 8, contact:

Apostle Islands National Lakeshore  
Route 1 Box 4, Bayfield, WI 54814  
Telephone: 715/779-3397

Charles A. Grignon Mansion  
1313 Augustine Street, P.O. Box 247, Kaukauna, WI 54130  
Telephone: 920/766-3122

Horicon National Wildlife Refuge  
W4279 Headquarters Road, Mayville, WI 53050  
Telephone: 920/387-2658

# Changes at Patrick Marsh

## Time Needed

45 minutes

## Activity Goals

Students will:

- understand that natural resources have been used in different ways at different times throughout Wisconsin's history.
- identify, in chronological order, the changes that have taken place over time to a marsh in southern Wisconsin.
- demonstrate an understanding of the implications of management choices by discussing advantages and disadvantages of different management decisions.

## Materials

- A Wisconsin state highway map
- Student copies or an overhead transparency of the [background reading](#) (p. 17)
- Student copies of the Changes at Patrick Marsh [student activity](#) (p. 18)
- Student copies of the Changes at Patrick Marsh [assessment activity](#) (see #9 under Teacher Instructions) (p. 19)
- One large sheet of paper (minimum size: 8 1/2" x 14") per student

## Teacher Instructions

1. Review the definition of natural resources (i.e., naturally occurring elements in the environment — such as wildlife, soil, trees, minerals, sunlight, land, and water — on which humans have placed value). Remind students that Program 8 explored how some of Wisconsin's water resources have been used in different ways throughout history. Explain that in this activity they will see how a certain marsh in southern Wisconsin has been used in different ways.

2. Use the state highway map to find Sun Prairie, where Patrick Marsh is located.
3. Distribute/display the background reading (p. 17) about Patrick Marsh and read through it. Discuss the different ways people have used the marsh over time. Encourage students to think critically about the implications of the various uses of this natural resource.
4. Distribute the student activity (p. 18) and have students cut out the pictures. Explain that the pictures represent some of the ways people have used Patrick Marsh through time. Introduce the word *chronological* (in order of occurrence). Ask students to arrange the pictures on their desks in chronological order, based on the information they have read.
5. When all students have finished arranging the pictures, discuss the correct chronological order. Each picture is lettered A through E for reference; **the correct chronological order is D, E, B, A, C**. Allow students to rearrange their pictures if necessary.
6. Distribute the large paper. Direct students to glue their pictures on the paper in chronological order, leaving room above and below each one for a label and a caption, respectively.
7. Have students label the pictures as follows:
  - Picture D — Before 1840
  - Picture E — 1840s
  - Picture B — 1930s
  - Picture A — Early 1960s
  - Picture C — 1992
8. Discuss each picture (see the background reading). Then, have students write a caption under each picture that summarizes how the marsh is being used.
9. Distribute the assessment activity (p. 19). Have students complete one sheet for each picture. Or, divide the class into five groups and assign a picture to each group.

10. Lead a class discussion about the changes students examined and the advantages and disadvantages of each.

### **Criteria for Assessment**

Students are proficient in the stated goals if they:

- arrange pictures of Patrick Marsh in correct chronological order to show how the marsh has been used over time,
- summarize accurately the different ways in which the marsh has been used over time, and
- respond reflectively to questions regarding the advantages and disadvantages of one or more management decisions as illustrated in the chronology of change at Patrick Marsh.

## Changes at Patrick Marsh

Before 1840, Patrick Marsh was a shallow lake. Ho-Chunk people used the nearby prairie and forests to trap animals, hunt birds and animals, and gather wild berries. They paddled the lake in their dugout canoes.

By the early 1840s, the shallow lake was becoming a wetland marsh, with tall prairie grass growing around it. Wild flowers bloomed on the banks and in the nearby oak-hickory woods. Wild berries and animals were plentiful. A family of Scottish immigrants built a log cabin on a high bank surrounding the marsh. The family enjoyed the marsh by boating in a flat-bottomed boat and canoeing in a dugout canoe. The Ho-Chunk continued using the marsh as well.

By the 1930s, farms surrounded Patrick Marsh. Thousands of waterfowl flocked to the marsh for habitat. The shallow water made it easy for them to get food. The largest known colony of yellow-headed blackbirds in southern Wisconsin also used the marsh for habitat. Many other kinds of wildlife lived in the marsh as well.

In the early 1960s, the water was drained from Patrick Marsh. Farmers used the land for growing corn. Pumps were used to keep the land dry.

In 1992, the area was restored to a shallow marsh. Waterfowl began to return to the marsh. The yellow-headed blackbirds came back, too. Today, Patrick Marsh continues to thrive. People visit the marsh to observe its many kinds of wildlife. Schoolchildren go on nature walks and take part in outdoor education activities at the marsh.

# Patrick Marsh



## Changes at Patrick Marsh

Name \_\_\_\_\_

You have learned about the different choices people have made about Patrick Marsh over time. Please answer the following questions.

Picture \_\_\_\_\_

Name one major choice people made about using Patrick Marsh during this period.

What were the advantages of this decision?

What were the disadvantages of this decision?

## Important Dates in Wisconsin History

- |         |  |
|---------|--|
| 1763    | The British take control of fur trade in Wisconsin. British fur traders and explorers come to Wisconsin.                                 |
| 1853    | The first fish and game laws are created.  |
| 1892    | The first official state observance of Arbor Day takes place.  |
| 1897    | Interstate State Park, near St. Croix Falls, becomes Wisconsin's first state park.   |
| 1903    | The State Forestry Department is established.  |
| 1919    | Wisconsin's first comprehensive water pollution act, "Keeping the Great Lakes Great," is passed.   |
| 1941-42 | Horicon National Wildlife Refuge is established.   |
| 1949    | Aldo Leopold, "the father of wildlife conservation," publishes <i>A Sand County Almanac</i> .  |
| 1970    | U.S. Senator Gaylord Nelson, a former Wisconsin governor, founds Earth Day.  |
| 1972    | An Environmental Impact Statement is required for all legislation affecting the environment; Wisconsin passes an endangered species act. |
| 1978    | Legislation to control hazardous waste is passed.  |
| 1984    | The state Groundwater Standards Law is passed.   |

## Physical Regions of Wisconsin



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# “Pick and Shovel”

From “Folk Songs Out of Wisconsin: An Illustrated Compendium of Words and Music,” edited by Harry B. Peters. State Historical Society of Wisconsin, 1977. Used with permission.

The pick and the shov-el are all that I know, I'm  
 work-in' the day-shift a-way down be-low. A mile un-der  
 ground I keep pick-in' all day. I work for a liv-in' but  
 not for much pay. From Corn-wall we have come to ex-  
 plore. Yes, we are the men with an eye for ore. We've  
 got to find ore and plen-ty much more, or we'll be hit-tin' the  
 road.

*Verse 2:*  
 The mine whistle blows and the men start to sing.  
 There's fear in their thinkin'. They don't say a thing.  
 Goin' down, down the mine-shaft the echo of song  
 Wipes out fear or worry. Together we're strong.

*Chorus 2:*  
 Since Laddies of six, we've worked with picks  
 Learnin' all of mining's deceiving tricks.  
 And so we dig ore and plenty much more,  
 Or we'll be hittin' the road.

*Verse 3:*  
 The air-blast is li'ble to come any day,  
 And when it comes blowin', it goes its own way.  
 It snatches your breath, lays you out in your tomb.  
 A sociable death, we all lie in one room.

*Repeat Chorus 1*

*Verse 4:*  
 To my wife I'm a hero she pieces my pay,  
 Takes care of the children the long workin' day.  
 She says I'll be foreman, but that won't be so.  
 The pick and the shovel is all that I know.

*Repeat Chorus 2*

# How to Use This Guide

This teacher guide will enable you to make the best use of *Investigating Wisconsin History* in your classroom. It contains suggested activities, which are designed to appeal to multiple learning styles and intelligences, to help you incorporate the video programs into your curriculum.

Each chapter corresponds to a program in the video series and offers activity suggestions specific to that program. There also are several techniques and activities designed to be used consistently throughout the series.

In addition to introducing and reinforcing content about Wisconsin history, *Investigating Wisconsin History* will help students understand how to investigate historical questions. If the series is used in its entirety, students will learn which tools and methodologies historians employ as they search for new understandings of the past. Students also will develop critical thinking skills as they analyze new information.

## Teacher Preview

It is always worthwhile to preview each program before sharing it with your class. In particular, look for points where you may wish to pause the videotape and discuss a question or idea with students.

In each program, Angie, the host of *Investigating Wisconsin History*, asks one or more questions that are answered by target-age children in the program. Angie also asks questions that are not answered directly in the program. Both types of questions are listed in each chapter of the teacher guide, under the heading “Viewing Activities.” As you preview the program, listen for these questions so you will know when to pause the videotape.

## Pre-Viewing Activities

Pre-viewing questions or activities are offered in each chapter. You may want to create word maps on the chalkboard as students brainstorm responses.

Before viewing a program, ask your class the questions that Angie asks of the children who appear in the video program. These questions are listed under the heading “Viewing Activities” and are marked with an asterisk. Record the students’ responses. After viewing the program, compare their responses to the ones given by the children in the program.

### ***Expanded KWL Charts***

You may wish to create an expanded KWL chart on a chalkboard or an overhead projector to help students focus their thoughts about topics presented in the programs. Traditional KWL charts employ three columns: “What I Know,” “What I Want to Know,” and “What I Learned.” Students complete the first two columns prior to beginning an activity, and finish the third after the activity.

An expanded KWL chart used in conjunction with *Investigating Wisconsin History* could include two additional columns. The first two columns stay the same. Label the third column “Where Can I Find Out” and encourage students to brainstorm ideas for pursuing their questions. This will reinforce the inquiry methodologies presented in the video programs. Label the fourth column “What I Learned,” and label the final column “What I May Never Know.” This will help students identify historical questions that can be hypothesized but never answered with certainty.

## **Student Viewing Activities**

As mentioned earlier, Angie asks a number of questions during each program that are not immediately answered. These questions are intended to provoke thought and discussion. Pausing the tape for discussion at one or more of these points during each program can maximize students’ learning potential.

### ***“Fact or Opinion?” Activity***

The “Fact or Opinion?” activity helps students develop their critical thinking and observation skills. This activity appears in printed form in Chapters 3, 4, 5, and 7. If you wish to use the “Fact or Opinion?” activity with other programs, provide students with several statements from the video before they view it. After seeing the program, students can mark which statements are facts and which ones are opinions.

## **Post-Viewing Activities**

### ***Have Map, Will Travel***

In this continuing activity, students will become acquainted with geographic locations that Angie, the series host, visits in the *Investigating Wisconsin History* video programs. Each chapter in this guide contains a list of these locations. (If a particular location is very rural, the nearest town is noted.)

Using a Wisconsin Department of Transportation Official State Highway Map, students will use the map’s coordinates to locate communities of, or nearest, the featured sites. (You can obtain these maps at tourist information centers and by contacting the office of your local state legislator.) Students then will plot and label

the sites on the [political outline map of Wisconsin](#) (page 31). You can provide students with a fresh outline map for each program, or have them use the same map for the entire series.

### ***Time Line***

Chapters 3 through 11 contain a program-specific time line that notes milestones relating to the program's topic. You may want to post a long time line in your classroom, and ask students to plot the milestones after viewing each program. This activity will help students gain a sense of chronology and understand the chronological perspective of key events.

### ***Original Documents***

Some chapters contain reproductions of original documents pertaining to the program topic. Using the document and activity suggestions will enhance students' ability to examine primary documents critically.

### ***In Their Own Words***

Some chapters contain a sampling of original descriptions or thoughts relating to the topic. These can be read aloud in class or used to facilitate discussion. (Some quotes have been edited slightly for punctuation or fourth-grade readability.) For example, you might ask: What does the quote say about the time period in which it was written? What does it say about the experience and perspective of the author? Or, ask students to choose one quote and write an imaginative story about the author and his or her experience.

### ***Extension Activities across the Curriculum***

Chapters 1 through 11 in this teacher guide offer an Extension Activities section that describes ways of integrating a program's theme into various curricular areas. Activities that are relevant to curricular areas other than history — such as language arts, science, mathematics, or art — have the curriculum correlation noted in parentheses. The list below indicates which chapters feature extension activities for the various curricular areas.

Art .....	Chapters 1, 2, 4-11
Dance .....	Chapter 6
Drama .....	Chapters 2, 5, 9
Geography .....	Chapters 1-11
Language Arts ....	Chapters 1-11
Mathematics .....	Chapters 3, 4, 6-9, 11
Music .....	Chapters 4-7, 9, 10
Science .....	Chapters 1-11

### ***Assessment Activity***

Each chapter contains a classroom-ready assessment activity. These activities are designed to have students apply concepts presented in the video programs. The results can be used to assess students' grasp of basic ideas for each new topic.

### **For Future Investigation**

One of the goals of *Investigating Wisconsin History* is to help students understand that history is not a remote and abstract collection of facts. Rather, history is an unending series of mysteries about their own lives, families, and communities. You are encouraged to help your students explore local topical connections after viewing each program.

### ***Kathleen Ernst***

Project Director

*Investigating Wisconsin History*

## Background Information for Teachers

In each program of *Investigating Wisconsin History*, Angie, the series host, asks a question about the past. Her questions are inspired by the places she visits, the people she meets, and her own personal experiences. In her quest to find answers, Angie discovers new investigative methods and clues that help reveal stories from the past. Angie analyzes these clues to resolve the history questions she raises in each program.

As you explain this process to students, you may wish to use the following model:

1. In each program, Angie asks a question about the past. This becomes the mystery she will investigate during the program.
2. Angie employs a variety of investigative methods to discover clues to the past. This action step is symbolized by the arrows on the accompanying graphic organizer. Examples include participating in an archaeological dig, examining the landscape, interviewing an elder, participating in an old folk dance, talking to a scholar, and visiting a museum.
3. After gathering information, Angie analyzes the clues she has found. The clues have been organized into eight broad categories on the Investigating the Mystery of History **graphic organizer**, each labeled with an icon. (These categories are described below.) In most cases, Angie's analysis leads to an answer to her original question. Sometimes, though, it leads to more questions or brings Angie to the conclusion that her question may never be answered with certainty.

Clues and sources of information Angie explores are organized into these eight categories:

### **Visual Images**

Examples include photographs, films, slides, drawings and paintings, and posters. Historians examine visual images to learn what places looked like, how people dressed, etc. They also can learn which events, objects, and people early photographers found important enough to document on film.

### **Written Records**

Examples can include census reports, land deeds, newspaper articles, maps, mail-order catalogs, handbills, and historical fiction. Primary sources include letters, diaries, and other personal accounts written by an individual who experienced or observed a time or event in history. The information in secondary accounts has been synthesized by the author from other accounts he or she has heard or read.

**Objects**

Examples include artifacts such as pottery, tools, and clothing, bones, period reproductions, plants, and animals. Historians study artifacts to learn more about the people who once made, owned, or used them.

**Folklore**

Examples can include songs and music, storytelling and oral tradition, visual art, performance art such as dance and theatre, holiday celebrations, games, and cookbooks. Folklore helps historians understand facets of culture that may have never been written down.

**People**

Examples include information from academic experts, elders, or anyone with a particular skill or firsthand knowledge of a certain time or experience. Historians and folklorists often use audio tape or videotape to record family histories, first-person accounts, or demonstrations of folk arts.

**Landscape**

Examples of human-made features include buildings, statues, murals, highway signs, effigy mounds, and historical markers. Historians also examine the natural landscape when considering how people once living in or traveling through an area may have perceived or used their surroundings.

**Places**

Examples of places historians visit to find information include repositories, such as museums and libraries, and historic sites, such as cemeteries and restored buildings.

**Reference Materials**

Examples include encyclopedias, dictionaries, textbooks, brochures, and the Internet. Reference materials most often provide compilations of information that others have found and analyzed.

## Investigating the Mystery of History





# Investigative Clues Chart

Name \_\_\_\_\_

Program	Clue	Advantages	Disadvantages



# Helpful Research Skills

*Compiled by Howard Kanetzke, former curator of education at the State Historical Museum in Madison.*

As you choose a project and begin to study and research facts, you will do many things. You probably will do all these things more than once. When you find yourself doing them, make a note of it.

## Observe

Develop your eyes and thinking. Take time to look carefully with your eyes, looking at both large and small objects. Take time to make careful and complete notes. Organize notes carefully. Look at objects in their settings. Are there sounds to make note of? Are there railroad tracks near factories? Streams near mills? What natural and built objects do you find in parks? Study details.

## Compare

Compare objects or situations that are alike. Are the houses in a neighborhood alike? Are the shops along a single street similar? Different? How? Compare ways of doing things. What differences can you find between the way you dress and the ways your parents and grandparents dressed when they were your age? Spend time comparing and contrasting. Become skilled at doing this.

## Measure

There are many ways to measure. Sometimes we measure with a ruler, tape measure, or yardstick. We can measure the size of a building with great accuracy. We can also measure a person's feelings about an event (such as being in a tornado) but this is less accurate. We can measure time by asking questions such as these: How long did it take to build the courthouse? How many years was your hometown served by steamboats? Trains? Trucks? We also can measure opinions. Is the new fire engine better than the old one? In what ways?

## Consider and Speculate

Take facts that you have collected and think about them. Do they lead you to think of more questions? If you know that a factory operated on Jones Street between 1900 and 1917 and that 40 people worked there, can you discover where they might have lived? Is there a street near the factory location that has houses of the right age for the workers to have lived in them? If so, you might guess that they lived there and then set about proving yourself correct or wrong. It doesn't matter whether your guess is right or not. When you prove yourself right or wrong, you have added to your knowledge.

## Identify

Identify the questions that you want to answer and look for the answers. For example:

- Who built this house?
- Was there a celebration when the church building was finished? What happened?
- What are the names of the old tools found in the barn?

Try to make your identifications as complete and accurate as possible.

## Classify

Arrange ideas or objects into groups that are related. Grouping related items together often makes them easier to understand. For example, factory workers could be grouped by the jobs they do, by their age, by their ethnic background, or by their rate of hourly wage.

## Record

Make a careful record of all the facts you uncover. Be sure that your notes are complete. Write down the exact spellings of names and places. Double-check all dates to make sure that they are correct.

## Interview

Some facts that you may need can be found in the memories of people. You may want to collect information by conducting an interview. Here are some pointers that will help you:

1. Find out whether the person is willing to be interviewed. You may contact the person by telephone, letter, or e-mail.
2. When choosing a date for the interview, give yourself at least a week to prepare.
3. Try to meet at a time and place where you won't be disturbed.
4. Set a time limit so that you and the person you are interviewing know how long the interview will last.
5. Make up a list of interview questions. Remember, you will want to spend most of your time talking about things you wouldn't find in print.

If information about your topic can be found in books, make a list of the titles. Reading about your topic before the interview can help you write better interview questions and give you background information.

6. Make a copy of your questions and send it to the person before the interview. Be sure to take your own copy of the questions to the interview.
7. Don't take more than one person with you to the interview.
8. Be on time.
9. Wait until the person has answered a question before asking another one. Write down answers briefly, yet completely. Ask for the spellings of names that are unfamiliar to you. Be sure to make careful notes about any dates the person may mention.
10. Make a recording of the interview, but first get permission from the person you are interviewing. Be sure to test your equipment to make sure that it is working and that the volume setting will pick up every word. Even if you make a recording, you should still take written notes, in case the equipment fails.
11. During the interview, you might think of questions that are not on your list. Go ahead and ask them, but stick to the topic and remember your time limit.

12. Before leaving, review any information that is unclear to you.
13. Thank the person for his or her help.
14. As soon as possible, write a report of the interview by using your notes. Be sure to include the name of the person interviewed, your name, the date, and the time and place of the interview.

# Working with Artifacts

Compiled by Howard Kanetzke, former curator of education at the State Historical Museum in Madison.

## **Artifacts have a history.**

Every artifact has a history. Where was it made? When? By whom? Why? We can trace the ownership of objects to reveal more about their past.

## **Artifacts have been made of some materials.**

What is the object made of? Is it a mixture of materials? Iron? Wood? Plastic? Fiber? Glass? Bone? Ceramics?

## **Artifacts have construction features.**

Was the object manufactured? Was the object handmade? What quality of workmanship was employed in its construction?

## **Artifacts have design.**

What special features, styles, or forms can be noted in looking at the object? How is the design the same as or different from other similar items?

## **Artifacts have function or use.**

What was the object's intended use(s)? Does it have modern, unintended uses? How do these modern uses change the object?

Today, artifacts sometimes are used in decorative ways. Notice the walls of some restaurants, for example. You may discover that items designed to be cooking utensils have become objects to decorate walls and create a feeling of the past.

## **Examining an Artifact**

### ***Step 1. Identify the object***

What is the object? What technology was available to make it? Is it a true original or a reproduction?

Handmade items can be difficult to identify, as models of them do not appear in mail-order catalogs. If you can find a person who once used the object, you can gather information and observations

that might not be available anywhere else. For example, if the object is a train ticket, you could ask a former railroad conductor about styles of punches, ticket sales, and stories about people who rode the railroad.

### ***Step 2. Evaluate the object***

What skill(s) and type of workmanship were used in making the item? Is the object the result of someone's work? Leisure time? Is the object the result of seeing a "better way" of doing a task? Does the object do what it is supposed to do? If so, how well does it do this? How rare is it? How does it compare with similar items? Is it "one of a kind?" One of a few? One of many?

### ***Step 3. Analyze the object***

Why was this item handmade or manufactured? What are its intended and unintended uses? Is it an item brought from another culture? If so, was it as necessary an item in America as in another place? (For example, wooden shoes, or a grooved rolling pin for making lefse, a "crepe-like" Norwegian food made from potatoes.) Has the item been kept or used as a reminder of the past, perhaps because it was brought here by an ancestor?

### ***Step 4. Interpret the object***

What can this object tell us? Is it only a symbol of itself, or does it have broader meaning to us? For example, Henry Ford's Model T demonstrated the success of the assembly line and standardization in manufacturing. The automobile led to many things: gas stations, garages, tire gauges, air pumps, highway construction, custom auto painting, seat covers, and even toys. The automobile changed peoples' lives.

Remember, artifacts cannot speak or write messages to us. But artifacts can tell us things if we learn to ask the right questions. Learning from artifacts is a challenge. We must search records carefully and faithfully so that we can learn about them.

# Sources of Information, Resources, and Materials

## Wisconsin Department of Public Instruction

The Wisconsin Department of Public Instruction publishes a variety of innovative guides related to curriculum, classroom activities, and resources. Of particular interest to social studies teachers are *A Guide to Curriculum Planning in Environmental Education*, *A Guide to Curriculum Planning in Global Studies*, *A Guide to Curriculum Planning in Social Studies*, *Classroom Activities in State and Local Government*, and *Wisconsin Citizenship Initiative Program Guide*.

For more information, contact Publication Sales, Wisconsin DPI, P.O. Box 7841, Madison, WI 53707-7841; telephone 800/243-8782 (U.S. only); fax 608/267-9110; Web site: [www.dpi.state.wi.us](http://www.dpi.state.wi.us); e-mail: [pubsales@dpi.state.wi.us](mailto:pubsales@dpi.state.wi.us).

## Wisconsin Historical Society

The Wisconsin Historical Museum, located on the Capitol Square in Madison at 30 N. Carroll Street, includes a gift shop stocked with books, objects, audio-visual materials, and other Wisconsin items useful to teachers and students exploring Wisconsin geography and history. Some of these items are available through the Society's online store, at [www.wisconsinhistory.org/shop/](http://www.wisconsinhistory.org/shop/). Gift shops also are located at state historic sites (Circus World Museum, Madeline Island, Old World Wisconsin, Pendarvis, Stonefield Village, Villa Louis, and Wade House & Wesley Jung Carriage Museum).

The Wisconsin Historical Society also maintains an Office of School Services, which produces instructional materials on state and local history, offers workshops and seminars designed for social studies teachers, and provides information to teachers regarding resources available from the Society and local agencies. For more information, contact the Office of School Services at 608/264-6547 or visit the Web site [www.wisconsinhistory.org/oss/](http://www.wisconsinhistory.org/oss/).

Most Wisconsin Historical Society publications can be ordered through The University of Wisconsin Press (see next page).

## **Wisconsin Department of Natural Resources**

The Wisconsin Department of Natural Resources has a wide selection of study guides, booklets, activity sheets, and maps available free or for a nominal fee to teachers. Topics include environmental education, parks and recreation, forestry, endangered resources, wildlife, fish, water resources, environmental protection, air quality, solid waste, and recycling. An Educ' Ade Environmental Education Publications order form is available through the DNR's Web site, at [www.dnr.state.wi.us](http://www.dnr.state.wi.us). From its home page, click on the Educational Publications link.

## **Cooperative Children's Book Center**

The Cooperative Children's Book Center is a non-circulating library for adults that is dedicated to the examination, study, and research of children's and young adult literature. A part of the University of Wisconsin-Madison's School of Education, the library's main purpose is to provide Wisconsin librarians, teachers, students, and others with informational and educational services based on the CCBC collection. Teachers seeking literature to integrate with their own lessons can call 608/263-3720 for assistance. The CCBC is located at 4290 Helen C. White Hall, 600 N. Park Street, Madison, WI 53706. Visitors of the CCBC Web site, at [www.soemadison.wisc.edu/ccbc/](http://www.soemadison.wisc.edu/ccbc/), are able to browse its collections online using the Virtual CCBC feature.

## **University of Wisconsin Press**

Books and materials produced by the Wisconsin Historical Society, including the Office of School Services, are available from the University of Wisconsin Press. Orders may be placed online, via fax or telephone, or by mail. Details on how to order are provided at the Web site [www.wisc.edu/wisconsinpress/](http://www.wisc.edu/wisconsinpress/).