



Discovering Alabama

Teacher's Guide

Village Creek

Suggested Curriculum Areas

Social Studies
History
Environmental Studies

Suggested Grade Levels

4–12

Key Concepts

Urban Planning
Ecological Design
Cultural Values

Key Skills

Comparing and Contrasting
Calculating
Problem-Solving

Synopsis

One of the South's earliest industrial cities is Birmingham, Alabama, a place known for its history of iron and steel production. Often forgotten, however, is the history of Birmingham's natural features that were essential to the establishment of this city. One of those features is Village Creek, a primary water source serving the industrial growth of Birmingham for more than one hundred and fifty years. Village Creek flows through the heart of the Birmingham area. It was originally a pure stream extending across a fertile valley that attracted settlers to the region for the purpose of farming in the early nineteenth century. As the industrial age advanced, Village Creek changed dramatically and became a prime example of how uncontrolled urban growth can change the native landscape.



This video traces the history of Village Creek and examines the value of urban planning as a means of preventing environmental degradation and maintaining a high quality of life in urban areas.



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Before Viewing

1. Have the class listen to a piece of music that is loud and frenzied, then play a piece of quiet, soothing music. Ask your students to think about the mood and the images evoked by each of the two contrasting styles of music. Which piece do they think is the most suitable for an urban setting? For a rural scene? What other kinds of thoughts, images, or experiences do they associate with either piece of music? Discuss how prevailing sounds or the physical condition of our neighborhoods and local landscapes can affect our perceptions, feelings, and values.
2. Present the class with an array of items including some of fundamental importance, such as a handful of rich soil and a cup of clean water, and several that are mainstream commercial products, possibly a pair of brand name athletic shoes or a fast-food burger. Ask them to determine the market **price** for each item. Then, ask them to consider their cultural **value**, or the importance assigned to each item in this society independent of purchase price. With your students, discuss the difference between price and value.
3. Have students work in small groups to develop a list of objects considered valuable, but not typically measured in terms of market price. Discuss how the price of consumer goods can sometimes have little connection to their value to us in other respects. Introduce the video by explaining that this program is about Village Creek, but perhaps more importantly, it is the story about how our society can sometimes fail to value our natural environment.

While Viewing

Ask students to note historical names, dates, and events presented in the video, particularly those related to the early development of Birmingham.

Video Mystery Question: Airplanes regularly land on Village Creek. How is this possible? (Answer: Part of Village Creek is covered by pavement to form Birmingham International Airport.)

After Viewing

1. Place the students in small groups. Have each group create a list of the ways in which Village Creek has been degraded (litter, water pollution, etc.). Next, ask them to identify the larger issues that underlie these particular problems. There is no single, correct answer to this question. Valid responses may include population growth, uncontrolled urban development; a lack of environmental education, and an absence of appreciation for nature. Discuss how these underlying problems give rise to the more visible problems of stream degradation.
2. Invite each group to develop a strategy to help urban communities correct and avoid the larger issues identified in the exercise above. One example would be to implement an ecological design approach in local planning. Use both the **Activity/Information Sheet** on the back page and the **Additional References and Resources** for further guidance.

Extensions

1. View other *Discovering Alabama* programs featuring rivers in the state, such as “Locust Fork River,” “Cahaba River Watershed,”

and “Black Warrior River.” Compare the environmental status and natural characteristics of these more rural waterways with that of urban Village Creek.

2. Village Creek drains a watershed area of more than one hundred square miles. Assume that people annually discard 10 pounds of trash and other waste materials per acre in an urban watershed. Using this rough estimate and the fact that there are 640 acres in one square mile, have the class calculate the total amount of waste material that drains into Village Creek in a year’s time. If the length of Village Creek in its urban area is roughly twenty miles, what would be the average amount of received waste per mile in one year?

Philosophical Reflections

Our democratic form of government strives to balance individual rights with the needs and concerns of society as a whole. Thus, we try to maintain the private, profit-driven freedoms afforded by our free market economic system while also protecting the well-being of the general population. The degraded status of Village Creek is largely a consequence of unrestricted growth with inadequate attention paid to the health and environmental needs of the public. For Village Creek, the result has been rapid urban development without consideration for the proper disposal of industrial and urban refuse, causing numerous negative changes in the natural qualities of the Creek and its watershed. How can a free enterprise and democratic society do a better job to taking care of environmental resources like Village Creek? What, if any, is the relationship between traditional American freedoms and the availability of a healthy environment?

Nature in Art

One recurrent theme of modern art examines lives and landscapes in an urban, industrial setting. At times, the artistic exploration of this theme focuses on the starkness or ugliness that can be found in the urban world. Other works present positive points of view of the urban landscape. Not far from Village Creek is the Birmingham Museum of Art. The museum houses a wide variety of modern art that ranges from paintings of landscapes to abstract sculpture. You might wish to visit an art museum and explore firsthand the themes of such contrasting perspectives and forms in art (see **Complementary Aids and Activities**). While there, discuss how visual art can record and reveal the changing character of society and its natural surroundings, as well as the variety of viewpoints found among artists.

Community Connections

1. Investigate a local stream whose watershed is being affected by surrounding development. Enlist the help of local experts to assist students in assessing the environmental conditions of the stream. Determine if there are governmental plans in place to help manage future growth in the watershed area. Do these plans include ample areas to be kept open, forested, or otherwise maintained as natural settings?

2. Obtain a copy of Ian L. McHarg's book *Design with Nature* (see **Additional References and Resources**). Using this book as a guide, design a future vision for your local stream, community, or county that incorporates McHarg's principles for intelligent planning and a sustainable quality of life.

Complementary Aids and Activities

Preserve and restore natural areas in your urban environment using the **School Ground Naturalization** proj-

ject. For information, contact the Evergreen Foundation, 355 Adelaide St., Suite 500, Toronto, Ontario M5V 1S2, Canada; 416-596-1495; and online at: www.evergreen.ca.

Become an activist with the help of **Urban Ecology**, a nonprofit organization working to rebuild cities in balance with nature. Contact Urban Ecology at 405 14th St., Suite 701, Oakland CA 94612; 510-251-6330; or email: urbanecology@igc.apc.org.

Take a **guided tour** of an art museum and learn about artistic explorations of industrial and urban growth. Start with the Birmingham Museum of Art (205-254-2565) or the Montgomery Museum of Fine Art (334-244-5700).

Project Learning Tree, Activity Guide, Grades K-6, "Origin of Urban Open Space" and Activity Guide, Grades 7-12, "Urban Open Space." Teacher training program and activity guides available through Alabama Forestry Association, 555 Alabama St., Montgomery AL 36104; 334-265-8733.

Project WILD, Activity Guide, Grades 7-12, "Planning for People and Wildlife." Available through Alabama Department of Conservation and Natural Resources, 64 N. Union St., Montgomery AL 36130; 334-242-3623.

Additional References and Resources

Where We Live: A Citizen's Guide to Conducting a Community Environmental Inventory by Donald F. Harker and Elizabeth Ungar Natter (1995).

Village Creek: An Architectural and Historical Resources Survey of Ensley, East Birmingham, and East Lake, Three Village Creek Neighborhoods, City of Birmingham (1985). Available from Birmingham Historical Society, 1 Sloss Quarters, Birmingham AL 35222; 205-251-1880.

Design with Nature by Ian L. McHarg (1969, 1971).

The Next American Metropolis: Ecology, Community, and the American Dream by Peter Calthrope (1993).

Gray World, Green Heart: Technology, Nature, and the Sustainable Landscape by Robert Thayer (1994).

Parting Thoughts

The demise of Village Creek took place over a long period of time. Neither the Creek nor its impoundment, Bayview Lake, will be fully cleaned up and "restored" anytime soon. It is a situation that is simply too complex to remedy without significant effort. My fear is that we may be experiencing a parallel situation with the cultural values of modern society. As members of an increasingly urban and technological society, our preoccupation is often with the price of consumer goods rather than with the value of environmental resources such as our streams and rivers. Most distressing of all is the large number of youth today who lack any sense of wonder about the natural world. Instead, they search for meaning in the accumulation and display of material possessions. Like the degraded condition of Village Creek, this too is a situation that may be very difficult to change.

*Oh yeah, I almost forgot. In our democratic society, government is "of the people, by the people, and for the people." If you want government officials to place a high priority on maintaining the natural qualities of your community, let them know your views. Be polite, be understanding, be reasonable, but most importantly, **be involved** in local planning and decision-making.*



Happy outings,

S. Dege



Discovering Alabama

Activity/Information Sheet

Village Creek

Urban Runoff Pollution

The urban environment has lost the soil and vegetation that allow for the absorption of rainfall. The consequence is a large amount of **runoff**, or the portion of precipitation on land that reaches waterways, after displacing or dissolving particles and materials in its path. In the urban environment, many of the particles and materials washed away are pollutants. This is called **urban runoff pollution**. Litter, automobiles, industry, construction sites, and pesticides are among the main sources of urban runoff pollution. The urban drainage system may also contribute to runoff pollutants because of accidental spills of hazardous waster, illegal disposal of oils or paints, and leaking sanitary sewers or septic systems.

National Ranking of Waterways Contaminated Due to Urban Runoff Pollution

Estuaries	1st
Lakes	3rd
Rivers	4th

Source: EPA National Water Quality Inventory, 1994

Ecological vs. Conventional Design

Efforts are being made to curb urban runoff pollution and to improve the quality of city living. One example is the work of city planners, architects, and others who use the **ecological design** approach. Ecological design is different from conventional design in many ways. For example, conventional

design limits the participants in city planning to experts while ecological design opens city planning discussion and debate to everyone. Below is a brief list of issues, and the conventional and ecological design responses to these issues.

Issue:	Conventional Design:	Ecological Design:
Ecological checks and balances	Limited to mandatory requirements such as environmental impact reports	Part of the process at every stage; looks at a wide range of impacts on the environment
Interest in ecological context	Standard approach regardless of location	Integrated with the local, natural environment
Types of learning	Nature and technology are hidden from view and do not educate	Nature and technology are visible and teach us about the systems that sustain us
Interest in cultural context	Builds a uniform global culture	Respects and nurtures cultural diversity and traditional knowledge

Invite your students to discuss the issues as well as the differences between ecological and conventional design. As a class, expand the list of issues based on local problems, then have students work together in small groups to develop both a conventional and an ecological design response to the new list of issues. Have students become active participants in a city

planning project and discuss their lists of issues with city planners. How do *their* projects approach these issues?

References: *Urban Stormwater Modeling and Simulation* by Stephan J. Nix (1994); *Ecological Design* by Sim van der Ryn and Stuart Cowan (1996).



Trolley car crossing Village Creek Bridge after a rainstorm in 1912. Photograph courtesy Birmingham Public Library, Department of Archives and Manuscripts.