



# *Discovering* *Our* Heritage



***A Community  
Collaborative  
Approach***

***Tenth Grade***

*Model Social Studies Program Incorporating  
Environmental Education to Integrate the Teaching of  
History, Geography, Science, Mathematics, and Language Arts*





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Environmental Education to Integrate the Teaching of  
History, Geography, Science, Mathematics, and Language Arts*

## **Tenth Grade**

*Douglas J. Phillips*

*A Program of the Alabama Wildlife Federation*



*Developed by the Alabama Museum of Natural History  
in cooperation with the Alabama Cooperative Extension System  
and the Alabama State Department of Education*

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To obtain copies of the  
*DISCOVERING OUR HERITAGE* Program Materials for  
grades K-6 and grades 10-11,  
please contact:

Alabama Wildlife Federation  
3050 Lanark Road  
Millbrook, Alabama 36054  
1-800-822-WILD (9453)  
[www.alawild.org](http://www.alawild.org)

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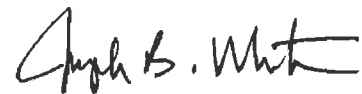


# **A Message from the State Superintendent of Education**

*Throughout Alabama there are many exciting educational programs currently underway. We can be proud of the array of rigorous standards-based opportunities for learning offered in Alabama schools. This diversity is beneficial as it addresses the many learning styles of our students. The professional judgment of local educators in selecting appropriate programs is critical to the success of these programs. With this in mind, I invite your attention to the high school component of DISCOVERING OUR HERITAGE, developed by Alabama educators for Alabama schools and communities.*

*Environmental education is recognized nationally as significant, not only to ensure a healthy environment and to sustain a viable economy, but also to enhance student achievement and academic performance. DISCOVERING OUR HERITAGE addresses these needs and simultaneously supports the requirements of the Alabama Courses of Study. This unique program is sufficiently flexible to allow school systems to implement without interrupting current practices and policies.*

*I am delighted to recognize DISCOVERING OUR HERITAGE, the organizations that sponsored its production, the Alabama teachers who assisted in its development, and the Alabama schools that currently use the program. Join us as we offer DISCOVERING OUR HERITAGE as a worthwhile tool for educational success.*



*Joseph B. Morton  
State Superintendent of Education*





**A**merican education today must meet a greater range of needs and serve a larger number of students than ever before. However, our schools also face an increasing array of difficulties, many of which are complex and closely intertwined with the changing conditions of society at large. Any educational program seeking long-term success must recognize this reality. Any program hoping to truly assist schools must appreciate the prevailing demands on teachers, the heavy responsibilities on administrators, and the conflicting pressures that often beset local school boards.

There may be no simple solution fitting every educational need in the nation, but **Alabama educators have worked together in designing DISCOVERING OUR HERITAGE as a model for addressing many of the needs in Alabama schools.** Central to this design is the philosophy that the realm of nature is an exceptional laboratory for learning, that environmental education, done correctly, provides students with meaningful connections between academic learning, applied problem-solving, civic participation, and the development of personal character and individual responsibility. DISCOVERING OUR HERITAGE is recognized by Alabama teachers for its effectiveness in demonstrating these multiple values of environmental education.

Possibly the greatest potential of this program is suggested by its subtitle, A Community Collaborative Approach. Through development of the DISCOVERING OUR HERITAGE Community Collaborative, **schools can promote greater local understanding of the challenges facing education while also**

**strengthening local support for school policies and for the needs of teachers, students, and the classroom.**

The heritage of our nation is one of freedom-loving peoples striving to improve opportunity for all in a land that is blessed with remarkable natural resources. As a primary vessel of this heritage, **our democratic system depends increasingly upon education to inform society, sustain reason, cultivate civility, and instill both a sense of stewardship for our lands and waters and a sense of humanity for one another.** In turn, to serve this role effectively, education must draw upon a central premise of democracy and ensure that communities are active participants in supporting local schooling.

**DISCOVERING OUR HERITAGE provides a model for addressing these multiple aims through a coherent framework linking people to the land, learning to the real world, and the school to the community.** Students and teachers are assisted in assembling otherwise fragmented subject matter into a more meaningful, conceptual understanding of our world. Science is related to society, institutions to cultures, the environment to economics, and personal responsibility to community well-being. Ultimately, DISCOVERING OUR HERITAGE provides a program and a process for enhancing the role of education as a purposeful means to human progress.

— DR. DOUGLAS J. PHILLIPS  
*Program Director, DISCOVERING OUR HERITAGE*



# Acknowledgments

The design of DISCOVERING OUR HERITAGE (DOH) is the culmination of thoughtful input from master teachers in a variety of school systems, urban and rural, across Alabama. The program was initiated at the fifth grade level in 1996 as an experimental project at Westwood Elementary School, Tuscaloosa County School System. In the following years, the program was piloted in elementary schools throughout Tuscaloosa County. In 1999 it was adopted and expanded to K-6 in the Hoover City Schools and Escambia County Schools. The tenth grade component was developed in 2005 with assistance from Paul W. Bryant High School, Tuscaloosa City School System, in partnership with the Alabama Museum of Natural History and supported by a grant from the Alabama Wildlife Federation.

Special thanks are extended to retired Tuscaloosa County Schools Superintendent, Dr. Neil Hyche, for his support in making this educational program possible. Thanks are also due to the Alabama State Department of Education for assistance in helping ensure that DISCOVERING OUR HERITAGE is fully consistent with the Alabama Course of Study, and to the Alabama Cooperative Extension System for assistance in providing teacher training facilities.

DISCOVERING OUR HERITAGE is made available through the leadership of the Alabama Wildlife Federation (AWF). In 1995, AWF responded to the requests of Alabama teachers for development of a model environmental education program organized sequentially to support requirements of the Alabama Course of Study throughout the school year. With the active involvement of its officers and Board of Directors, AWF spearheaded a successful statewide initiative pulling together diverse interest groups and generating the necessary funding to produce DISCOVERING OUR HERITAGE, A Program of the Alabama Wildlife Federation.



## *Project Staff and Support*

### DOH PROGRAM DIRECTOR AND PRINCIPAL AUTHOR

Dr. Douglas J. Phillips  
Alabama Museum of Natural History (AMNH)

### PROJECT CONSULTANTS

Michael McCracken, Technical Specialist  
Erin Boyer, Technical Assistant  
Sharron Maughn, Correlations Specialist

### PAUL W. BRYANT HIGH SCHOOL TEAM

Amanda Cassity, Principal  
Laren Burger, English Teacher  
Lisa Clark, Science Teacher  
Lisa Matherson, Social Studies Teacher  
Diana Yessick, Science Teacher  
Robyn Walters, Math Teacher  
Rochelle Worman, Media Center Specialist

### DOH OUTREACH COORDINATOR

Doyle Keasal, Alabama Cooperative Extension  
System/Alabama Wildlife Federation

### AMNH COLLABORATING PARTNERS

The Solon and Martha Dixon Foundation, and  
The University of Alabama:

- College of Education
- Department of Biological Sciences
- Department of History
- Culverhouse College of Commerce and  
Business Administration



## Teacher's Welcome

Welcome to DISCOVERING OUR HERITAGE (DOH), Alabama's first sequentially-organized, content-integrated environmental program for grades K–6 and 10–11. We hope you will find DOH

*...flexibility and  
the inclusion of  
good ideas are  
what DOH is all  
about.*

useful and exciting. The program is designed to be a part of a broad support network that consists of you and your students, the whole-hearted support of your school and district administrations, and real, direct connections with your community. You should never feel that you are alone in trying to implement this new way

of approaching your yearly program. An important part of DOH is the Community Collaborative process (see Appendix D), during which your school formally invites members of your local community to participate in your program. This should dramatically increase the local resources and volunteers available to you.

DOH is carefully tied to the Alabama Course of Study (ACS) in social studies, science, language arts, and math. In the tenth grade program we target

algebra and geometry for math courses. The science subjects targeted for tenth grade are physical science and biology. You may be reassured that in implementing DOH you are covering legitimate, recognized subjects and are teaching required content.

At first, you might be slightly uneasy that DOH combines multiple subjects throughout each unit, but you should soon see how this integrated approach can be liberating to your program. By the same token, if you have favorite lessons that seem appropriate, a teachable moment, or an insight as to how to better teach your class, trust your instincts. DOH does not require that you slavishly follow an inflexible regimen. To the contrary, flexibility and the inclusion of your own good ideas are important to DOH design.

You will note that DOH is organized largely around social studies. This is to give you the greatest flexibility in arranging situations for applied learning. Also, the subject of social studies affords a wide variety of learning opportunities suitable for underscoring an important DOH premise: a good basic education should provide students with an understanding of the natural resources that are basic to life; responsible citizenship should include an informed commitment to responsible environmental stewardship.



## *Why was this program developed?*

Alabama is blessed with many organizations, agencies, and individuals seeking a quality future through improved education. Various advisory groups serve the governor and others in helping decide important governmental and legislative needs for education. The Alabama State Department of Education (ADE) is committed to providing official policy, curriculum guidelines, and expert assistance required for educational success. Other groups offer a great variety of educational materials and programs providing supplementary resources to schools.

*DISCOVERING OUR HERITAGE provides a “teacher-friendly” structure that addresses multiple dimensions of students’ academic, civic, and personal growth.*

Therefore, one might ask: Why develop another program when there is already an abundance of educational resources in Alabama? The answer to this question is related in part to the very fact that there are so many different materials and programs available to schools. **DISCOVERING OUR HERITAGE provides an approach for organizing a variety of instructional resources systematically across the school year.**

Another part of the answer has to do with the fact that there are many different and often disparate ways of presenting content and conducting learning in classrooms around the state. While recognizing the importance of such diversity, **DISCOVERING OUR HERITAGE offers a framework to help provide a consistent, conceptual context for learning.**

A final part of the answer is simply that **many teachers have long sought a sequential plan that integrates subject matter, places greater emphasis**

**on the natural environment, incorporates supportive resources, and expedites overall educational improvement and whole-student development.** **DISCOVERING OUR HERITAGE** provides a “teacher-friendly” structure that addresses multiple dimensions of students’ academic, civic, and personal growth.

**DISCOVERING OUR HERITAGE** is offered to assist Alabama schools seeking to achieve overall educational improvement. A primary aim of the program is to support the educational policies of the State of Alabama and the requirements of the Alabama Course of Study. In other words, **DISCOVERING OUR HERITAGE is based on the standards and guidelines of the Alabama State Department of Education and is intended to help meet the genuine educational needs of Alabama’s teachers and students.**

In giving consideration to this program, there are additional questions that might be asked by Alabama educators. Several of these questions are addressed in the following sections.

## *Why the title, DISCOVERING OUR HERITAGE (DOH)? \**

As Ben Franklin was leaving the constitutional convention one afternoon in September 1787, a young woman approached him and asked, “Well, Dr. Franklin, what have you given us?” “A republic—if you can keep it,” was his reply. Keeping the republic requires that United States citizens labor vigilantly to ensure that this form of government continues to extend the blessings of liberty to all its people.

Events in today’s world present new concerns for our republic. These concerns arise not only because of possible developments elsewhere in the world, but also because of challenges within, including the educational challenge of providing citizens with a full understanding of the significance of our nation’s history and development. The title, **DISCOVERING OUR HERITAGE (DOH)**, reflects an overarching aspect of program design whereby the process of

*\* Adapted from Expectations of Excellence: Curriculum Standards for Social Studies, NCSS, 1994.*

*...social studies should illuminate the essential connection among learning, democratic values, positive citizenship, and the abiding interrelationships within and between societies and their natural environments.*

learning through active *discovery* is tied to the outcome of appreciating *America's heritage*.

As we proceed into the twenty-first century, it is clear that the dominant social, economic, cultural, and scientific trends that have defined the western world for centuries are rapidly leading in new directions. We are living in a period of dramatic change that has brought new conceptions of time, community, family, and even nationhood. We are being forced to reexamine fundamental institutions and to construct relationships as we continue

efforts to establish justice, ensure domestic tranquillity, provide for the common defense, protect the environment, promote the general welfare, and secure the blessings of liberty for ourselves and our children.

The twenty-first century brings us face to face with the information-electronic-biotechnological age. New issues and new problems confront us and tax our intellectual and moral fiber. Already, demographic and statistical data force us to look closely at the changing nature of our families, the reconstruction of work, the distribution of justice and poverty, the conditions of illiteracy, and the age, class, gender, and ethnic makeup of our people. Scientific data force us to recognize that an expanding human population has stressed life-supporting environmental systems in many ways. The task of bringing the blessing of the "American Dream" to all will require citizens with a new sense of purpose based on an adequate understanding of our American heritage – our cultural heritage and our natural heritage.

Given the realities of today's world and the desire of U.S. citizens to carry the ideals of our republic into the future, it is necessary that we create a new vision for social studies. That vision must motivate us toward a commitment to extend the promise of education and citizenship to each and every person

in the United States. That is, social studies should illuminate the essential connection among learning, democratic values, positive citizenship, and the abiding interrelationships within and between societies and their natural environments.

As a people, then, our first priority, our first public policy goal, must be to ensure our survival as a free nation through the development of students who appreciate their heritage and who can thoroughly assume the office of citizen. The informed social studies student understands and applies to personal and public experiences the content perspectives of the several academic fields of the social studies. Equally important, the informed social studies student exhibits the habits of mind and behavior of one who respects life (people and nature) and realizes the relationship between education and his or her responsibility to promote community well-being.

Our "We the People" republic is built upon the principle that the people occupy an important position in government—the office of citizen; thus, it is necessary that attention be paid to the education of those who assume this office. This civic culture of our nation is built upon four components: the legislature, the executive, the judicial, and the people. The three branches of government depend on the people (the fourth branch), who must develop the attributes of the enlightened citizen, i.e., individuals who understand the rights and responsibilities of citizenship.

Citizens who take this office seriously are in touch with the cultural and natural heritage of the nation. They possess knowledge of the economic, political, environmental, and social factors that make up the human ecosystem in which all must function, and they understand its relationship to natural ecosystems. They understand the principles of the rule of law, legal limits to freedom, responsible stewardship of resources, and majority rule with protection for minority rights. They have informed geographical, temporal, and cultural perspectives. They possess the attitudes and behaviors that support fair play and cooperation. Without a conscious effort to teach these ideas, a free republic will not endure. Thus, *DISCOVERING OUR HERITAGE* organizes academic studies to facilitate active discovery and meaningful understanding of our remarkable American heritage.



## *Why the subtitle, A Community Collaborative Approach?*

Across the United States today, schools face a number of complex problems and issues. Many of these stem from realities of our society that are manifested to a greater or lesser degree in every local community. A partial list of these realities includes:

- economic, social, and racial disparities
- unprecedented levels of media and marketing influence on youth
- disrupted families, broken homes, transient residency, and other such factors affecting the personal development and adjustment of children
- troublesome levels of peer pressure, discipline problems, and juvenile crime
- school funding shortages
- frequent public misunderstanding of the realities faced by schools, school administrators, and teachers
- politically-charged attempts to impose special-interest ideology upon school programs and policies
- in many parts of the U.S., increasing criticism and dissatisfaction with public schooling

This situation has prompted a new awareness of the importance of achieving and maintaining mutually supportive relationships between the school and the local community. Such relationships may be essential to the future of public schooling in America. Indeed, some experts suggest that only through improved school-community collaboration will many U.S. schools successfully manage the challenges of our time.

Of course, such expert opinion is old news to most administrators and teachers. In fact, every school promotes community involvement through parent-teacher organizations, school publicity, various community events, etc. However, the complex nature of many of today's educational issues often requires a special approach for achieving a fully informed and broadly supportive community.

The DOH Community Collaborative (see Appendix D: Organizing the Community Collaborative) is designed not only to ensure community commitment to DOH, but also to provide an ongoing mechanism for school-community dialogue,

issue analysis, problem-solving, and overall educational support. In other words, DOH recognizes that opportunities for student growth are benefitted when a supportive learning climate exists in the community as well as in the school.

Too often, these opportunities go unrealized because problems such as those listed above lead to misunderstandings, hostilities, lawsuits, and other forms of conflict that can frustrate educators, disrupt communities, and generally stymie educational effectiveness.

The DOH Community Collaborative provides an alternative means of fostering communication, assessing needs, and working for consensus solutions—thereby helping to build stronger communities to support effective schools.

*DOH recognizes that opportunities for student growth are benefitted when a supportive learning climate exists in the community as well as in the school.*

## *Why use social studies as the umbrella for integrated teaching? \**

The DOH approach to integrating content can be organized under most subject areas, from science to language arts. However, social studies is an ideal umbrella for a number of reasons, beginning with its very definition. In 1992, the Board of Directors of the National Council for Social Studies (NCSS) adopted the following definition:

**Social studies** is the integrated study of the social studies and humanities to promote civic competence. Within the school program, social studies provides coordinated, systematic study drawing upon such disciplines as anthropology, archaeology, economics, geography, history, law, philosophy, political science, psychology, religion, and sociology, as well as appropriate content from

\* Adapted from Expectations of Excellence: Curriculum Standards for Social Studies, NCSS, 1994.

the humanities, mathematics, and natural sciences. The primary purpose of social studies is to help young people develop the ability to make informed and reasoned decisions for the public good as citizens of a culturally diverse, democratic society in an interdependent world.

There are two features of social studies that distinguish it from other school subjects and provide special instructional opportunities. First, social studies is diverse, encompassing a great range of potential content. When taught well, its content is drawn not only from its most direct foundational disciplines but also from the arts and humanities, mathematics and science, current events, and students' own interests and experiences. This content, however, is not treated simply as collections of miscellaneous information and activities, but rather is organized within a coherent citizen education curriculum. Second, the social understanding and civic efficacy goals of social studies place special responsibilities on teachers for addressing the ethical and social policy aspects of topics. When taught well, social studies engages students in the difficult process of confronting ethical and value-based dilemmas and encourages them to speculate, think critically, and make personal and civic decisions based on information from multiple perspectives.

The NCSS identifies citizenship education as the primary purpose of K–12 social studies and notes that concern for the common good and citizen participation in public life are essential to the health of our democratic system. The NCSS states that effective social studies programs prepare young people to identify, understand, and work to solve problems facing our nation in an increasingly interdependent world. These programs are characterized by learning experiences that:

- foster individual and cultural identity along with understanding of the forces that hold society together or pull it apart;
- include observation of and participation in the school and community;
- address critical issues and the world as it is;
- prepare students to make decisions based on democratic principles; and
- lead to citizen participation in public affairs.

Curriculum components include knowledge, democratic values and beliefs, thinking skills, and social and civic participation skills. Knowledge refers to interpretations that students construct in response to their experiences in and out of school, but knowledge is not merely a fixed body of information transmitted for students to memorize. Teachers should also provide students with opportunities to think and communicate in ways that will help construct a working knowledge of subject content.

The content of social studies focuses on the world—near and far, social and civic, past, present, and future. Effective social studies teaching draws this content from the social studies foundational disciplines (such as geography, environment, government, and history) and links it with knowledge that students have acquired through life experiences and the media. It builds knowledge about the history and cultures of our nation and the world, geographical relationships, environmental processes, economic systems and procedures, social and political institutions, races, cultures, ecosystems, and institutions. From this knowledge base, exemplary programs help students to: 1) develop skills, concepts, and generalizations necessary to understand the sweep of human affairs; 2) appreciate the benefits of diversity and community, the value of widespread economic opportunity, and the contributions that people of both genders and the full range of ethnic, racial, and religious groups have made to our society; 3) become ready and willing to contribute to public policy formulation; and 4) acquire ways of managing conflict that are consistent with democratic procedures.

The fundamental values and beliefs taught in social studies are drawn from many sources, but especially from the Declaration of Independence and the United States Constitution with its Bill of Rights. These beliefs form the basic principles of our democratic constitutional order. They depend on such practices as due process, equal protection, free expression, and civic participation, and they have roots in the concepts of liberty, justice, equality, responsibility, diversity, and privacy. Exemplary social studies programs do not indoctrinate students to accept these ideas blindly. Instead, they present knowledge about their historical derivation and contemporary application necessary to understand our society and its institutions. Teachers model fundamental democratic principles in their classrooms,

discuss them as they relate to curriculum content and current events, and make them integral to the school's daily operations, e.g., through involving students in making decisions that affect them.

Exemplary social studies programs also prepare students to connect knowledge with beliefs and action using thinking skills that lead to rational behavior in social settings. These include the thinking skills involved in: 1) acquiring, organizing, interpreting, and communicating information; 2) processing data in order to investigate questions, develop knowledge, and draw conclusions; 3) generating and assessing alternative approaches to problems and making decisions that are both well informed and justified according to democratic principles; and 4) interacting with others and with the natural environment in responsible ways.

### *Why this emphasis on environmental education?*

DOH emphasizes environmental education for reasons that can be summarized under two areas. First, there is a basic connection between nature, academic content, and student learning. Most academic subjects originated with someone investigating something about the natural world. This is clearly true of such subjects as mathematics, geography, and science. Today, we find that subjects such as history and social studies are increasingly understood in terms of the interrelationship of human societies and their natural surroundings. Likewise, the realm of nature has long been a source of special excitement and curiosity for children. Involving students in the study of the natural environment can spark heightened interest and motivation for learning while also providing a basic understanding of natural systems and resources that are essential to life itself. This has been demonstrated time and again by environmentally-oriented school programs across the nation (see References below).

Second, there is an essential connection between land and people. Alabama today is a land uniquely rich in natural qualities vital to our state—economically, socially, and environmentally. However, in the modern era of accelerating change, the natural environment is affected by many new pressures from human population growth and a host of related

impacts. Alabama's natural qualities could become increasingly at risk unless future generations are sufficiently educated and prepared to make informed, ethical decisions regarding the state's natural resources, as well as local, national, and global environmental issues.

There is a growing consensus among Alabama teachers about the importance of the above concerns and about the need to coordinate existing environmental education resources to more effectively address these concerns. *DOH is responsive to the wishes of teachers who feel that environmental education, instead of being optional or occasional in the classroom, should be central to the core curriculum throughout the school year.*

DOH builds on social studies content in American history and geography to address multiple areas of student development. The program promotes students' personal, social, and academic growth, and develops responsible citizenship and an appreciation of the significant heritage of our democratic nation. This is done by emphasizing experiential learning, direct student involvement and study of real issues in the community, and close active collaboration between the school, parents, and the community at large.

DOH incorporates a thematic focus that is timely and especially suited to the rich heritage of our own state of Alabama. Just as the native American lands and waters were a fundamental aspect of the nation's settlement, DOH includes the study of natural resources as a fundamental aspect to understanding the development of American society. Thus, natural history and environmental themes are used for linking history, geography, science, math, and language arts into an interdisciplinary perspective of our American heritage.

*Involving students in the study of the natural environment can spark heightened interest and motivation for learning while also providing a basic understanding of natural systems and resources that are essential to life itself.*

An environmental premise for integrating subject matter is the adage that “the nature of life is nature.” Most pursuits of society are ultimately dependent upon the life-supporting systems of nature. Likewise, understanding the systems of nature is of paramount importance for insuring a healthy future for our increasingly complex society.

A related premise for inviting school-community collaboration is reflected in the adage from Shakespeare: “One touch of nature makes the whole world kin.” Respect for fellow humans is enhanced by nurturing respect for life in general. And life in general is enhanced by nurturing respect for the natural environment. Thus, student explorations within the community are geared to increase awareness of the interdependency between our social, economic, and environmental needs.

DOH seeks to benefit Alabama’s students, teachers, and communities by demonstrating the following:

- environmental education can provide a framework for interdisciplinary, experience-based learning and can do so as part of a sophisticated academic regimen covering the requirements of the classroom textbook(s) and the Alabama Course of Study.
- environmental education can provide a catalyst for making learning directly relevant and

personally meaningful by involving students in the active study of the local community.

- available resources for environmental education can be arranged in a format that promotes an ongoing, organized use of existing programs and materials to better help teachers meet each learner’s needs.
- enhanced community support for the school can be generated by implementing environmental education through a guided process of community collaboration.

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There are many ways to design educational curricula. Review of materials from around the nation reveals a range of layouts, from the simple listing of topics in prescribed order to sophisticated arrangements of elaborate content and requisite instructional procedures. Likewise, this range of designs affords a corresponding range of usefulness to the teacher. Some designs provide little guidance to assist daily instructional planning. Other designs are so complex or excessive as to be impractical for easy use. DOH is designed, with the input of teachers, to provide both sufficient guidance for instructional planning and ample ease in application.

## *Whole growth framework*

DISCOVERING OUR HERITAGE arranges the many facets of academic studies into a unified approach infusing our natural heritage with our cultural heritage (see graphic “Unifying Approach” below). The subject of social studies is thereby understood in terms of four major elements—the land, the people, interrelationships, and change—around which required academic content is integrated. Likewise, DISCOVERING OUR HERITAGE is designed to enrich learning experiences and to promote “whole growth” development (see graphics, “Dimensions of Student Growth” and “Dynamics of Student Growth” on the next page).

## UNIFYING APPROACH

### *DISCOVERING OUR HERITAGE*





# DIMENSIONS OF STUDENT GROWTH



# DYNAMICS OF STUDENT GROWTH

## **DISCOVERING**

*Questioning*

*Exploring*

*Investigating*

## **LEARNING**

*Observing*

*Interpreting*

*Understanding*

## **CONTRIBUTING**

*Participating*

*Problem-solving*

*Caring*

## General Sequence

DISCOVERING OUR HERITAGE is organized on a flexible, repeating outline provided via six sequential units. Each unit represents a learning package that incorporates numerous educational resources while centering around a Key Question and Key Experience(s), which guide students in their discovery of the American heritage—the land, the people, interrelationships, and change. Each unit (six weeks) has a **Key Question**. Each Key Question, as much as any other factor, may be seen as the guiding idea

for your activities. Each **Key Experience** is generally recommended to be taken at the beginning of each unit. This is usually an out-of-class experience of some kind. Not to be lightly dismissed, the Key Experience gives the class a common basis of experience to discuss and write about. Importantly, it also helps to build class spirit and cohesiveness.

Within each unit, weekly plans provide topical frameworks that ensure coverage of required subject matter. The weekly plans also provide guidance and suggested resources for consideration in determining your daily lesson plans.

### • AT A GLANCE •

#### TENTH GRADE KEY QUESTIONS AND IDEAS FOR KEY EXPERIENCES

##### *Key Questions*

**Unit I** *What was our country like before settlement?*

**Unit II** *How was America settled?*

**Unit III** *How did the nation emerge?*

**Unit IV** *How did the nation grow?*

**Unit V** *Why was there a Civil War?*

**Unit VI** *How did the U.S. change after the Civil War?*

“Key Questions” developed for DOH are drawn from actual questions raised by students seeking to understand major periods of U.S. History. As a framework for unit study, the key question conveys a categorical area of authentic inquiry and enables us to organize content in a meaningful way that satisfies genuine student curiosity. Of course, there may be occasions when you find it advantageous to alter these key questions depending on your particular teaching situation.

##### *Key Experiences*

**Unit I** Visit a prehistoric site (Moundville, a fossil museum, etc.) or a local feature (historical, archaeological, etc.) related to pre-settlement history.

**Unit II** Visit a wildlife museum or special natural area exemplary of a natural resource prominent in the settlement of America.

**Unit III** Visit an 18th-century site, such as Fort Toulouse (Wetumpka) or Fort Conde (Mobile).

**Unit IV** Visit a 19th-century site, such as Alabama Constitution Village (Huntsville), Old Cahawba Archaeological State Park (Selma), and Tannehill Historical State Park.

**Unit V** Visit Selma, Montgomery, Fort Morgan, or Fort Gaines; Old Gainesville or other Civil War era sites.

**Unit VI** Visit late 19th-century Alabama sites—most old towns, Sloss Furnaces (Birmingham).

“Key Experiences” listed in DOH represent sample stem ideas only. For maximum learning value, selected experiences should be organized to ensure active student involvement in hands-on investigation and/or problem-solving. To arrange for assistance in designing and planning effective Key Experiences, contact: Doyle Keasal, DOH Outreach Coordinator, Alabama Cooperative Extension System, (334) 844-6398 or the Alabama Wildlife Federation, (800) 822-WILD.

## Content integration

DOH design uses the subject of Social Studies to provide a comprehensive framework of required content together with a prescribed arrangement of instructional resources.

### SUBJECT/TOPIC INTEGRATION

DOH units and sections were extrapolated from the Alabama Course of Study and arranged so that required content and skills from each subject area can be integrated in a sequence that is conceptually appropriate. However, instructional pacing and detail are best left to the discretion of the teacher, drawing upon the model units for guidance.

The Social Studies framework accents an essential connection: the relationship between our cultural heritage and our natural heritage, between people and the land—the natural environment. This relationship is noted at every opportunity. Practice will suggest other natural links to the environmental theme. In other words, each unit provides a conceptual orientation to help the teacher in deciding how subjects and activities will be assimilated. Teachers will likely benefit by remaining mindful of a few basic observations regarding primary subject areas:

*Science.* Inquiry and the scientific method are central to DOH. Also, many of the activities drawn from the various environmental resources utilized in the DOH program are heavily science-based. Maintaining sufficient attention to science content should not be a problem.

*Language Arts.* The language arts are easily integrated into DOH, as the state curriculum encourages the teaching of skills in “meaningful context.” DOH also strongly encourages the integration of art and music into the curriculum as appropriate and as much as possible.

*Math.* Aspects of the math curriculum are sometimes difficult to integrate into other subjects. However, many topics of the Alabama Course of Study for Math are easily integrated into environmental themes for the benefit of applied learning.

*Geography.* As a subject, geography is incorporated into the Alabama Course of Study for Social Studies. DOH emphasizes this important area by suggesting activities that enhance map and globe reading skills, timelines, charts, etc.

### ACTIVITY/RESOURCE INTEGRATION

Activities and materials prescribed for each unit are selected to assist the integrated coverage of subject matter. Appendix B: Suggested Supportive Resources, describes the three main categories from which resources have been selected and considered in developing DOH. Also, weekly sections of DOH sometimes list various materials and activities that are not referenced in Appendix B. These have been included at the suggestion of one or more project teachers who found such material useful in their particular teaching situations. DOH cannot officially endorse resources/ materials that don’t comply with standards as described in Appendix B. However, such additional materials are occasionally listed in case they might serve to spark new ideas for stimulating creativity, cooperative learning, or career awareness.

*Community Visitors and Resources.* DOH recommends that, as appropriate, the class invites at least one visitor per week to present a program. These visitors may represent a pertinent career focus or might provide enrichment information (parents often qualify here as well). It is important that students practice standard hospitality with guests, including providing invitations, escorts, thank-you notes, and general courtesies.

*Class Projects.* It is recommended that the class be involved in at least one major project that presents a grand summary concerning a unit or yearly focus. Done by students independently and/or in groups, the projects can take many forms: written report, oral report, press release, video, photo essay, cassette recording, newspaper article, etc. One of the principle intentions of DOH is to encourage group process, the interaction between individuals, in small and large groups, with adults and with community organizations. Every effort should be made to encourage cooperative behavior and problem-solving skills. Toward this end, the class projects are very important.



*Journal.* During the year, each student should keep a journal. Time should be set aside each day for working in the journal. The journal is to help the students record their personal notes, reactions, sketches, and observations. The purpose here is to encourage creativity and introspection. This activity is not to be confused with a workbook.

*Evaluation.* Since DOH is heavily weighted toward group and individual projects, personal experience and community involvement, some expansion of the usual student evaluation scheme is in order. Factual knowledge is, of course, still evaluated by regular tests. In addition, it is suggested that students read a book each unit and submit a written book report. Class and community involvement can be evaluated by examining the products of their group and individual projects. Their progress can also be monitored through their journal. Therefore, at the end of each grading period, each student's personal folder might include: tests, book reports, journal, and various project materials representative of his or her participation.

Also, regular parent feedback can serve several useful purposes, including informing the parents about what's coming up in the next unit, reminding them of the importance of their involvement in the class, and providing parent-assessment of program progress across the year.

#### GUIDING THOUGHTS

DISCOVERING OUR HERITAGE believes that environmental studies is a very useful and worthwhile means to strengthen basic academic studies and to insure a vigorous program of student performance in required content, skills, and intellectual growth. Environmental education is interpreted broadly, with a primary emphasis on involving children actively with subject matter, experiential learning, and the community. At every opportunity, community supporters, parents, and other local resources should be involved.

As connections are drawn between subject matter and community, whenever possible children should read (books, periodicals, and encyclopedias), write and edit (reports, essays, and works of personal expression), use math and history in context, and understand and use science in their daily lives.

#### IDEALLY—

1. *Every day*, every student would have:
  - a DOH lesson/activity (this lesson, whether science or social studies, would be followed by a related language activity),
  - an additional science or social studies lesson (often a spin-off of a DOH activity),
  - a math lesson, where possible supporting the other subjects,
  - physical education,
  - individual reading and writing time, and
  - a formal period to work in the journal
2. *Every week*, the class would have:
  - a speaker to visit the class,
  - at least one video presenting visual information,
  - an out-of-school or outdoor experience,
  - a library experience,
  - a geography lesson,
  - a computer lesson,
  - a music and art lesson, and
  - a series of small group meetings followed by a group project
3. *Every unit*, the class would have:
  - a key experience,
  - a keynote visitor, and
  - a class project, to which each child would contribute

However, DOH recognizes that teaching occurs in the real world of the daily school routine, with unexpected and continuing distractions and various curriculum requirements that are difficult to integrate. This reality can pose limitations, but it should not rob us of the essential DOH idea, i.e., the intrigue of pondering our world and our place in it. Along the way and from time to time, we can expect to teach an old-fashioned math, grammar, or history lesson, and if life brings us a good teachable moment that is not “environmental,” we should take it. DOH is meant to serve as a conceptual framework that allows the teacher freedom to pursue a good opportunity or idea as it occurs.

#### PRELIMINARY PREPARATION

DOH is the product of many years of discussion and input from concerned educators, among whom there is agreement that this model program should “aim high” in expectations for students, teachers, and the community; thus, the extensive scope and regimen of the program. However, insofar as this program is oriented

to overall educational improvement, it will be successful only if adjusted for proper fit and acceptance within each school. (See Appendix C, Ensuring Proper Program Fit for Your School). Therefore, to facilitate program adoption, DOH staff assistance is recommended for establishing the prescribed Community

Collaborative (see Appendix D, Organizing the Community Collaborative) and for conducting special teacher training. To arrange assistance contact: Doyle Keasal, DOH Outreach Coordinator, Alabama Cooperative Extension System, (334) 844-6398, or Alabama Wildlife Federation, (800) 822-WILD.

### *Supportive intent*

In developing DOH, the hope of program staff is to provide Alabama with a program that is realistically doable in schools and communities throughout the state. Therefore, DOH is designed with the intention that it be TRUE to several practical criteria:

<b>T</b> ransportable.	<b>R</b> eceptive to the community.	<b>U</b> seful to teachers.	<b>E</b> ducationally valid.
DOH can be adopted in any school. Many innovative programs fail the test of transportability because, in the end, they may require a special teacher with an unusual interest and personality, or a special physical resource that is not available elsewhere. However, DOH can be successfully transported to any of Alabama's schools because it will work even without these special conditions.	DOH includes the noble and traditional arts of public schools—social skills, community values, patriotism, neighborliness, respect, tolerance, and stewardship. The community agrees to support DOH before it appears in the classroom. (During the Community Collaborative process—see Appendix D).	DOH is easy to use. The program provides ready access to pre-planned sequential lessons that guide learning across the year. By paying particular attention to the needs of school/classroom administration, the program overlays the administrative environment without excessively disturbing the normal school day. (Nevertheless, there must be willingness on the part of the school administration to make allowances for the program.)	DOH emphasizes basic and traditional educational topics—history, math, language arts, civics, and science—in a sound, balanced social studies curriculum with the primary goal of improving student academic performance.

# Program Instructional Overview

The ACS theme for tenth grade is “United States Studies: Beginnings to 1877.” But, of course, it doesn’t matter how we label the year; what matters most is how we conduct the year, how we engage students in the study of material that offers the opportunity to give greater focus to who we are as a nation.

Chronological history provides the loom upon which to weave important understandings about the United States, and to do so in context with the four

*Alabama Course  
of Study Social  
Studies Content:  
United States Studies:  
Beginnings to 1877*

cornerstone elements of the DOH program — the land, the people, interrelationships, and change. Based upon successful learning in previous grades, students are now ready to add significantly to their awareness that the

present is a product of the past, that to fully understand the present we must understand history.

Students should now be ready to greatly expand upon their recognition that our nation is the product of a diverse natural and cultural history. In other words, tenth grade offers us the grand opportunity to instill in students a life-long excitement for “history” because history is actually the study of far more than names, dates, and events. The subject of history, particularly as it is central to the subject of social studies, is about who we are and why we are, where we have come from, and where we are headed. It is the vessel in which we make meaningful sense of science, art, music, and literature. This tenth-grade year of social studies is a primary opportunity to integrate multiple areas of required content through continued active exploration of the world around us.

Moreover, this tenth-grade year of social studies is important in other, profound ways. The world of

human societies today is increasingly complex. There are many new opportunities for cooperation among peoples, but there are also many new possibilities for conflict. Meanwhile, accelerating change continues to bring unprecedented environmental consequences to our Earth. Major challenges for humankind include the need for greater environmental understanding and the need for greater understanding among nations and peoples. Such progress for the future can begin with giving our children a greater understanding of our American heritage.

## *Unit Synopses*

Toward the aims described above, Tenth Grade Unit Plans are developed to help interpret chronological history in the context of our nation’s emerging cultural and national identity.

### UNIT I

**Key Question: What was our country like before settlement?** Looking far back in time, initial questions include: How did the American landscape come to be? Who were the first human inhabitants? How did early cultures change over time? These questions are investigated at the outset of Unit I where we overview the period of prehistory as one vast unrecorded era, an era that ends with the arrival of European explorers. Our curiosity is then shifted to such questions as: What was America like when the Europeans arrived? How did these new people survive in the strange, unfamiliar setting of the new world? How successful were the first attempts at settlement? The period of European exploration is an era when Native Americans were still dominant across the land. However, as the early European colonies became established, Native Americans were forever displaced, marking the end of this era. In Unit I, students should begin to comprehend that

the recorded history of America has progressed from era to era, each stage marked by changes to life and landscape, and by related conflicts with both human and environmental consequences.

*Important connections: The native American landscape was uniquely rich and diverse in natural resources. The cultures of native peoples were greatly shaped through their interrelationships with the natural surroundings, which, in turn, were often affected by the activities of native cultures. Thousands of years of such native interrelationships underwent a new order of change with the arrival of Europeans.*

## UNIT II

**Key Question: How was America settled?**

Unit I concludes with the end of the era of America's dominance by native peoples; thus, a logical question for us is: What next? What led to the expansion of European settlements and the eventual emergence of a new nation? In Unit II, students are provided with opportunities to look at the early development of communities, economies, and philosophies affecting man and nature that gradually formed a new cultural identity and gave rise to the idea of American democracy.

*Important connections: Early colonization, pioneering, and settlement periods represent a formative era in the nation's development, an era that would end with the Declaration of Independence and adoption of the U.S. Constitution.*

## UNIT III

**Key Question: How did the nation emerge?**

As the American colonies acquired an independent identity, their idea for a new government came into violent conflict with the old government of English rule. This conflict helped to crystallize a new concept of freedom as the basis of American democracy. The break with England and the establishment of a new nation was related to newly emerging ways of thinking about human nature and society. This new thinking was influenced, in part, by the tribal beliefs of Native Americans, and, in part, by the native American landscape.

*Important connections: The doctrines of freedom and independence that gave official birth to our nation were the products of independent-minded people embracing the bountiful lands and resources of America. The*

*emergence of the democratic nation of the United States began a new era for America and was a profound event in the course of world history.*

## UNIT IV

**Key Question: How did the nation grow?**

Following the Declaration of Independence, the nation extended its new wings of freedom upon the winds of continued economic and social change. Early in this era, there was land and open space aplenty. The spirit of freedom combined with abundant natural resources to spawn new growth as freedom was dispersed across the land to find its different niche in each region. With this expansion, there was new adventure with explorations into unmapped territories of the country. But there were also new conflicts, as territorial and regional differences gave rise to disputes over matters of social, economic, and governmental control.

*Important connections: America's expansion was made possible by the abundant natural resources of the native land. America's regional economies and related cultures were necessarily linked to regional geography and resources.*

## UNIT V

**Key Question: Why was there a Civil War?**

As a tenet of government, American freedom remained in its youth for much of the nineteenth century and, in many ways, at the whim of regional differences. As environments and economies varied from the urban east to the agrarian south to the untamed west, so, too, the social norms of freedom varied. In the Civil War, conflict between armies was but part of a larger dynamic, the ongoing American struggle to refine the meaning of freedom. Events associated with the Civil War period reveal the human capacity for moral strength, moral frailty, and moral incongruity.

*Important connections: The Civil War can be understood in terms of several factors—social, economic, and political—that were related to early regional differences and influenced by the human and social naivetes of a youthful nation. American democracy was able to progress as regional differences were orchestrated toward cooperation and consensus around common ideals of freedom. Major refinements to the idea of freedom came in the area of human equality.*



## UNIT VI

**Key Question: How did the U.S. change after the Civil War?** In Unit V, students see America apply a mid-course adjustment to how freedom was understood on the human front, only then to witness freedom's unchecked impact on the environmental front. With the dissipation of sectionalism, the nation more easily expanded the freedoms of a free enterprise economy. Rapidly, the industrial age was fueled by a growing population with growing needs. Armed with the doctrine of Manifest Destiny, Americans reached across the western frontier to the Pacific, whereupon many paused to look back on their unchecked mistreatment of the nation's natural heritage. The resulting national call for conservation, for the wise and ethical treatment of natural resources, brought American economic, social, and environmental practices to a critical juncture. The nation began to realize that the freedom to use our resources must be balanced with a sense of responsibility for protecting them.

*Important connections: The emergence of industrial America was made possible by the abundance of native natural resources. The combination of American democracy and American industrial and technological advance brought major transitions in communication, economic development, and social organization. An era of American youthfulness was waning as the nation began to mature and to acquire a sense of coast-to-coast national identity.*

### Applying Key Experiences

Like the Key Questions, the Key Experiences are intended to stimulate genuine curiosity and guide students in active exploration and discovery. In selecting preferred Key Experiences, teachers should plan for maximum learning value by organizing these experiences/activities to ensure active, hands-on student involvement in observing, investigation, and/or problem-solving. Most Alabama schools have nearby historical and natural areas that can serve this purpose. Examples of Key Experiences used by DOH project teachers are repeated below (again, these represent stem ideas only).

**Unit I** Visit a prehistoric site (Moundville, a fossil museum, etc.) or a local feature (historical, archaeological, etc.) related to pre-settlement history.

**Unit II** Visit a wildlife museum or special natural area (forestland, river, farmland) exemplary of a natural resource prominent in the settlement of America.

**Unit III** Visit an 18th-century site, such as Fort Toulouse (Wetumpka) or Fort Conde (Mobile).

**Unit IV** Visit a 19th-century site, such as Alabama Constitution Village (Huntsville), Old Cahawba Archaeological State Park (Selma), and Tannehill Historical State Park.

**Unit V** Visit Selma, Montgomery, Fort Morgan, or Fort Gaines; Old Gainesville or other Civil War era sites.

**Unit VI** Visit late 19th-century Alabama sites—old towns, Sloss Furnaces (Birmingham).

### Understanding the Unit Plans

Each unit comprises six weeks and provides general plans/instructional frameworks for each week, organized according to the headings described below.

*This Week's Topic and Focus Paragraph.* Each week has a basic topic to guide the week's activities. The focus paragraph briefly explains the week's topic and suggests ways to approach it.

*Correlations with Alabama Course of Study.* The Arabic numbers in bold indicate the DOH-relevant Alabama Course of Study sections of the six subjects areas—history/social studies, physical science, biology, geometry, algebra, and language arts. These are also shown in the matrices in Appendix A.

*Thought of the week.* This is really for you, the teacher, although sometimes it may be appropriate for the children. You get only a little encouragement in this job; maybe you'll find a bit of inspiration here!

*Community Visitors and Resources.* These are our suggestions for appropriate visitors to the classroom. As the children become accustomed to visitors, visits will be less disruptive. Don't miss this opportunity to teach appropriate behavior and formal courtesies.

*Activities and Materials.* These are teacher-selected environmental activities from a variety of sources (see Appendix B: Suggested Supportive Resources),

presented to you as a starting point. Since many of you are as experienced as the members of the DOH team, we encourage you to search out appropriate favorite activities and materials of your own.

*Unit Checkpoints.* These activities are enumerated at the beginning of each unit, and it is important that the class try to accomplish them each week.

## **Unit/Weekly Plans**

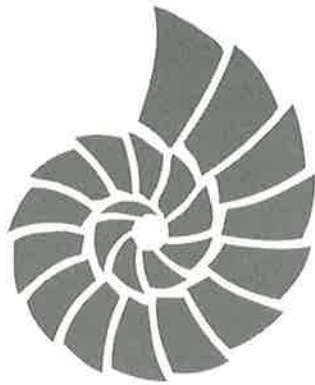
*This section contains the weekly plans for the six units. For many teachers, the temptation may be to skim past earlier sections so as to get quickly to this section, the actual “nuts and bolts” of instruction. However, it must be emphasized that an understanding of DOH Rationale, Design, and Instructional Overview are crucial to effective application. Likewise, the DOH appendices offer valuable information to help ensure success. While each week’s “plan” represents a guiding framework, the teacher is always the chief planner, selecting resources, making adjustments, incorporating preferred lesson plans, and arranging activities as deemed appropriate for individual situations. Of course, not all issues and considerations can be amply addressed in the space of this booklet. So remember, DOH is supported by a project staff and a statewide team of organizations and resources eager to assist your school. Their expertise is available free of charge, except for possibly requiring a small bit of your time to receive training assistance.*







# Unit 1 Week 1



Focus is on what happened up to 1600 beginning with the natural environment of North America—river systems, physical geography, and other natural resources. Students should write about the natural environment and how it has changed since 1600. They should be able to calculate the changes in land use over the past 400 years by comparing various maps.

## *This Week's Topic*

Natural environment of North America

## *Correlations with Alabama Course of Study:*

### *History/Social Studies:*

Examine fossils and old maps to determine pre-settlement (1,2)

### *Physical Science:*

Identify factors that effect the strength of fundamental forces (6)

### *Biology:*

Introduction to Biochemistry (1)

### *Geometry:*

Justify theorems related to pairs of angles (2)

### *Algebra:*

Apply laws of exponents to simplify expressions (1)

### *Language Arts:*

Write an explanation of a complex relationship, phenomenon, or significant event (23)

## *Thought for the Week*

Among scientists are collectors, classifiers, and compulsive tidiers-up; many are detectives by temperament and many are explorers; some are artists and others artisans. There are poet-scientists and philosopher-scientists and even a few mystics.

—SIR PETER MEDAWAR

## *Community Visitors and Resources*

Geographer or Naturalist to discuss the natural environment of North America

## *Activities and Materials*

- Discoveryschool.com, *Lesson Plans*, “Junkyard Wars: Wind Machine”
- *Project Learning Tree*, “Air We Breathe,” “How Big is Your Tree,” “Our Changing World”
- *Project WET*, “Just Passing through,” “Stream Sense”
- *Project WILD*, “My Kingdom for a Shelter”
- Video: *Geological Society of America*, “The Earth Has a History”
- Video: *Discovering Alabama*, “Geological History of Alabama,” and “Tracks Across Time”

## **Unit Checkpoints**

Journal time, independent reading time, sharing information with others, writing invitations and thank-you notes

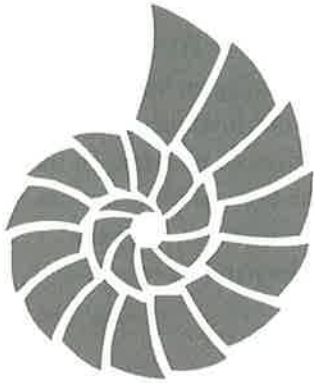
## **Unit 1 Key Question**

*What was our country like before settlement?*

## **Unit 1 Key Experience**

*Visit Moundville and/or a local National Forest*

# Unit 1 Week 2



Focus is on migrations and prehistoric settlements in America. Students should draw and measure migration routes of people across America. They should read and write stories about the progression of culture of the prehistoric American people—hunters, hunter-gatherers, farmers. In science, relate populations of plants and animals in ecosystems to new populations caused by migrations.

## *This Week's Topic*

Migration and Prehistoric Settlements

## *Correlations with Alabama Course of Study:*

*History/Social Studies:*

Compare various prehistoric cultures and settlements (2)

*Physical Science:*

Identify metric units (12)

*Biology:*

Identify reactants and products associated with photosynthesis and cellular respiration and the purposes of these two processes. (3)

*Geometry:*

Verify the relationships among different classes of polygons (3)

*Algebra:*

Simplify numerical expressions using properties of real numbers and order of operations (1)

*Language Arts:*

Write an explanation of another's writing (10, 12, 23)

## *Thought for the Week*

If I live to be old enough I may sit down under some bus, the last lift in the utilitarian world, and feel thankful that intellect in its march has spared one vestige of the ancient forest for me to die by.

—THOMAS COLE

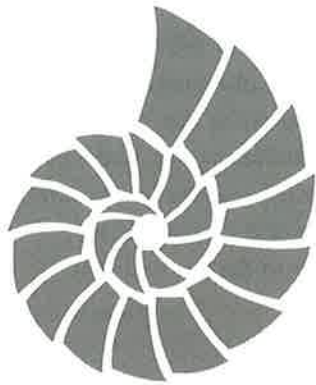
## *Community Visitors and Resources*

Anthropologist to explain reasons for migration and settlement

## *Activities and Materials*

- *Intrigue of the Past*, "It's in the Garbage"
- *Project Learning Tree*, "Charting Diversity," "The Fallen Log"
- *Project WET*, "Adventures in Density"
- *Project WILD*, "Bears can live in this Forest?," "Eco-Enrichers," "Muskox Maneuvers," "Oh Deer," "Wild Words"
- Video: *Discovering Alabama*, "Alabama Caves"

# Unit 1 Week 3



Focus is on the adapting cultures of Native Americans by geographic regions. Students should read about Native Americans and their governments, economies, religions, and their impact on the environment. They should estimate the amount of natural resources during prehistoric times and how that amount has changed over time. Relate fossil formations and how they tell the story of the Earth to methods used by Native Americans to tell their history.

*This Week's Topic*  
Culture of Native Americans

*Correlations with Alabama Course of Study:*  
*History/Social Studies:*  
Compare and examine the relationships of Native Americans with various English settlements (2)

*Physical Science:*  
Describe inertia, acceleration, momentum, friction and action or reaction (7)

*Biology:*  
Describe similarities and differences of major cell organelles (4)

*Geometry:*  
Use the ratios of the sides of special right triangles to find lengths of missing sides (7)

*Algebra:*  
Find the slope of a line from its equation or by applying the slope formula (2)

*Language Arts:*  
Identify main ideas and supporting details from non-fictional reading (13)

*Thought for the Week*

We are an intelligent species and the use of our intelligence quite properly gives us pleasure. In this respect the brain is like a muscle. When it is in use we feel very good. Understanding is joyous.

—CARL SAGAN

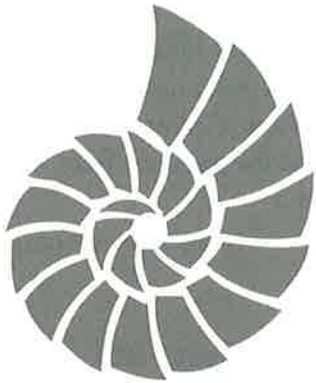
*Community Visitors and Resources*

Native American to speak on his/her culture

*Activities and Materials*

- *Alabama Moments in American History*, "Alabama's Indian Peoples"
- *DiscoverySchool.com*, *Lesson Plans*, "Forces and Motion"
- *Legacy*, "In Hot Water"
- *Project Learning Tree*, "A Look at Lifestyles," "Focus on Forests: What's a Forest to You," "The Native Way," "Tipi Talk"
- *Project WET*, "The Rainstick," "Water Celebration," "Water Messages in Stone"
- *Project WILD*, "Good Buddies," "Tracks!," "What's for Dinner"
- *Project WILD Aquatic*, "Where Have All the Salmon Gone?"
- *Video: Discovering Alabama*, "Moundville"

# Unit 1 Week 4



Focus is on European exploration and early settlements in the Age of Enlightenment. Students should locate and measure the routes of early explorers and read stories about explorers. Relate the study of ecosystems with their specific requirements, plants, and animals to groups of early settlers and the environment they established in their settlements.

*This Week's Topic*  
Age of Enlightenment

*Correlations with*  
*Alabama Course of Study:*

*History/Social Studies:*

Describe the influence of ideas of the Age of Enlightenment on the colonies (2)

*Physical Science:*

Categorize elements as metals, non-metals, metalloids and noble gases (1)

*Biology:*

Select appropriate laboratory glassware, balances, time measuring equipment, and optical instruments to conduct an experiment. (1)

*Geometry:*

Deduce relationships between two triangles (8)

*Algebra:*

Determine the equations of linear functions (2)

*Language Arts:*

Write to clarify and organize thought and ideas (25)

*Thought for the Week*

But ask now the beasts, and they shall tell thee: Or speak to the earth, and it shall teach thee; and the fishes of the sea shall declare unto thee. —JOB 12:7–8

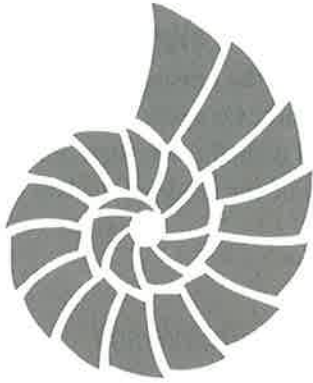
*Community Visitors and*  
*Resources*

Historian to discuss early explorers

*Activities and Materials*

- <http://www.lessonplanspage.com/ScienceGravityErosionMassWasting8.htm>, “Gravity and Erosion”
- *Legacy*, “Using Duckweed to examine Population Dynamics”
- *Project Learning Tree*, “Environmental Education Pre-K-8 Activity Guide,” “Forest for the Trees,” “In the Good Old Days”
- *Project WILD*, “Habitat Rummy,” “Urban Nature Search”
- Video: *PBS*, “The Private Lives of Plants”
- Video: *Discovering Alabama*, “Dauphin Island,” “Night Hike”

# Unit 1 Week 5



Focus is on the impact of Europeans on Native Americans in terms of culture, conflict, and cooperation. Students should describe how Native Americans depended on the environment. They should write stories about what it would be like to be a Native American before 1600. They should graph the number of European settlements in different states.

*This Week's Topic*  
Culture Clashes in the New World

*Correlations with Alabama Course of Study:*  
*History/Social Studies:*  
Discuss the impact of European encounters with native peoples (2)

*Physical Science:*  
Recognizing patterns of elements in the periodic table (1)

*Biology:*  
Justifying the grouping of viruses in a category separate from living things (9)

*Geometry:*  
Determine the areas and perimeters of regular polygons (11)

*Algebra:*  
Graph two variable linear equations and inequalities on the Cartesian plane (2)

*Language Arts:*  
Write an essay for informational purposes (23)

*Thought for the Week*

The optimist proclaims that we live in the best of all possible worlds; and the pessimist fears this is true.

—JAMES BRANCH CABELL

*Community Visitors and Resources*

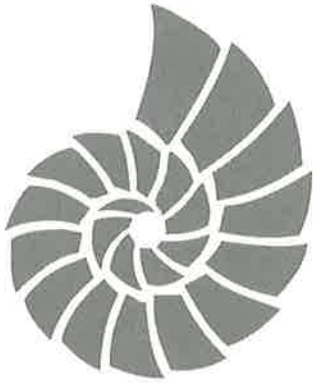
Genealogist to discuss the importance of knowing your heritage

*Activities and Materials*

- *Legacy*, “Chain Gang”
- *Project Learning Tree*, “Forest, Field and Stream,” “Web of Life”
- *Project WILD Aquatic*, “Deadly Skies,” “Edge of Home,” “Glass Menagerie”
- *Project WILD*, “Birds of Prey”
- Video: *Discovering Alabama*, “Native American Festival”



# Unit 1 Week 6



Focus is on the analysis of English settlements in North America in terms of success of settlements and interactions with different groups of people, e.g., Native Americans.

Students should describe these interactions and analyze their importance and success. In science, introduce classification of plants and animals and relate it to classification of early settlers based on characteristics, locations, traditions, etc.

## *This Week's Topic*

Establishment of English settlements

## *Correlations with Alabama Course of Study:*

*History/Social Studies:*  
Identify tensions between Europe and early settlements (2)

## *Physical Science:*

Describe Newton's three laws of motion (7)

## *Biology:*

Describe protective adaptations of animals (12)

## *Geometry:*

Apply distance midpoint and slope formulas to confirm properties of polygons (11)

## *Algebra:*

Analyze linear functions from their equations, slopes and intercepts (2)

## *Language Arts:*

Create early American book trunks (5)

## *Thought for the Week*

There's nothing constant in the universe, / All ebb and flow, and every shape that's born / Bears in its womb the seeds of change. / The face of places, and their forms decay; / And that is solid earth, was once sea; / Seas in their turn, retreating from the shore, / Make solid land, what ocean was before. —OVID

## *Community Visitors and Resources*

Urban planner to discuss considerations made when planning a city

## *Activities and Materials*

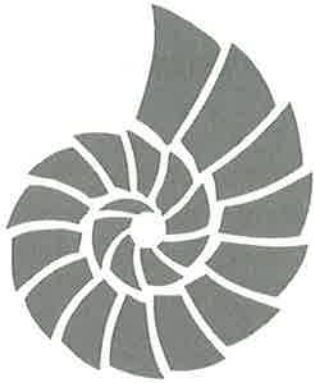
- <http://www.eduref.org/cgi-bin/printlessons.cgi/Virtual/Lessons/Science/Physics/PHS0053.html> "Using Newton's Laws of Motion: Bottle Rocket Experiment"
- *Project Learning Tree*, "Name That Tree," "Then and Now"
- *Project WILD*, "Habit Trekking," "Litter We Know"
- *Project WILD Aquatic*, "Fishy Who's Who"
- Video: *Discovering Alabama*, "Alabama Forests"







# Unit II Week 1



Focus is on what happened from 1600 to 1763 beginning with Jamestown and early settlements. In Biology, begin the study of ecosystems and in Physical Science simple machines take on new importance. As students learn about the settlement of Jamestown, and how from that one settlement America grew to its present size, they research medicines that settlers used and see how the factors in the ecosystem played an important role.

## *This Week's Topic*

Expansion of English Settlements

## *Correlations with Alabama Course of Study:*

### *History/Social Studies:*

Compare various early English settlements (2)

### *Physical Science:*

Solve problems for work efficiency and mechanical advantage of simple machines (7)

### *Biology:*

Describe the interdependence of biotic and abiotic factors in an ecosystem (13)

### *Geometry:*

Determine the equation of line parallel to a second line through a given point (1)

### *Algebra:*

Use simple equations to analyze linear functions (2)

### *Language Arts:*

Research folk medicines (21)

## *Thought for the Week*

Victory awaits those who have everything in order—people call this luck. Defeat awaits those who fail to take necessary precautions—this is known as bad luck.

—ROALD AMUNDSEN

## *Community Visitors and Resources*

Person to discuss natural/alternative medicines

## *Activities and Materials*

- *Alabama Moments in American History*, “Early European conquests and the Settlement of Mobile” (19–20)
- *Project Archaeology*, “Gridding a Site”
- *Project Learning Tree*, “Adopt A Forest,” “Sunlight and the Shades of Green,” “Tree Cookies”
- *Project WET*, “Water Crossings”
- *Project WILD*, “Microtek Treasure Hunt”
- Video: *Discovering Alabama*, “Dauphin Island”

## **Unit Checkpoints**

Journal time, independent reading time, sharing information with others, writing invitations and thank-you notes

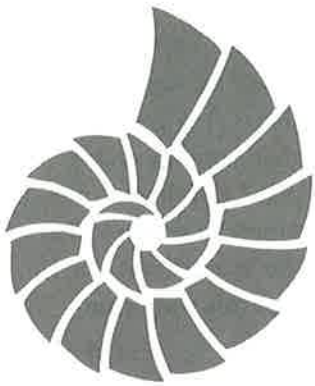
## **Unit II Key Question**

*How was America settled?*

## **Unit II Key Experience**

*Visit a special natural area and/or research folk medicines*

# Unit II Week 2



Focus is on the causes and effects of the French and Indian War in terms of geography, politics, and culture. Students should write about events leading to the war. In Biology, they should describe limiting factors on populations in an ecosystem.

*This Week's Topic*  
French and Indian War

*Correlations with*  
*Alabama Course of Study:*

*History/Social Studies:*  
Trace chronology of events leading to French and Indian War (3)

*Physical Science:*  
Solve problems for velocity, acceleration, force, work and power (7)

*Biology:*  
Identify density-dependent and density-independent limiting factors that affect populations in an ecosystem. (16)

*Geometry:*  
Determine the equation of a line perpendicular to a second line through a given point (1)

*Algebra:*  
Find the range of a function when given its domain (3)

*Language Arts:*  
Read to discover events leading to French and Indian War (3)

*Thought for the Week*

To every thing there is a season, and a time to every purpose under heaven. A time to be born, and a time to die; a time to plant, and a time to pluck up that which is planted. —ECCLESIASTES 3:1–2

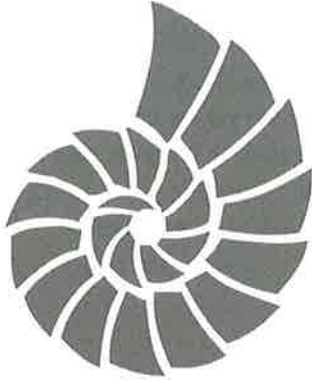
*Community Visitors and*  
*Resources*

Historian to discuss French and Indian War

*Activities and Materials*

- *Intrigue of the Past*, "Gridding a Site"
- *Project WET*, "Energetic Water," "Let's Even Things Out," "Macroinvertebrate Mayhem"
- *Project WILD*, "Saturday Morning Wildlife Watching"
- *Project WILD Aquatic*, "Marsh Munchers," "Micro Odyssey," "Migration Headaches"
- Video: *Discovering Alabama*, "Fort Toulouse/Jackson"

# Unit II Week 3



Focus is on the government and law in colonial America. Students should read about colonial America and write stories about what it would have been like to live in those times. They should locate, draw, and measure the land used in colonial America. They should explain how the Colonists depended on their environment.

## *This Week's Topic*

Governments of Early English Settlements

## *Correlations with Alabama Course of Study:*

### *History/Social Studies:*

Explore the governments of early English settlements (2)

### *Physical Science:*

Discuss simple machines—used in colonial homesteading (7)

### *Biology:*

Identify biomes based on environmental factors and native organisms. (15)

### *Geometry:*

Justify theorems related to pairs of angles (2)

### *Algebra:*

Represent graphically common relations (4)

### *Language Arts:*

Identify main ideas about the governments of early English settlements (13)

## *Thought for the Week*

I expect to pass through this world but once. Any good thing therefore that I can do, or any kindness that I can show to any fellow creature, let me do it. Let me not defer or neglect it, for I shall not pass this way again.

—ANONYMOUS

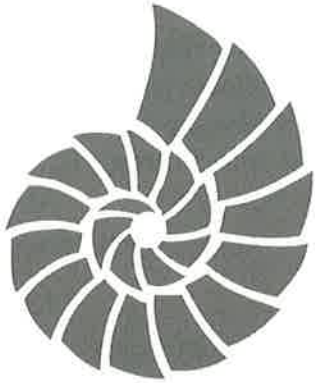
## *Community Visitors and Resources*

Historian to discuss simple machines used in colonial homesteading

## *Activities and Materials*

- *Legacy*, “Generating Methane from Waste”
- *Project Learning Tree*, “Democracy in Action,” “There Ought to be a Law”
- *Project WET*, “Watch on Wetlands,” “Wet Vacation”
- *Project WILD Aquatic*, “Wetland Metaphors”
- Video: *Discovering Alabama*, “Alabama’s Natural Diversity”

# Unit II Week 4



*Focus is on social changes that led to the Protestant Reformation and how it affected colonial America in terms of their trade routes and their impact on society. Students should draw and measure trade routes and write about what it would be like to travel the trade routes and what they would see in the natural environment.*

## *This Week's Topic*

Social culture in the colonies

## *Correlations with Alabama Course of Study:*

### *History/Social Studies:*

Examine social changes occurring in the colonies (2)

### *Physical Science:*

Relate the terms endothermic and exothermic to physical and chemical changes (5)

### *Biology:*

Explain relationships among DNA, genes and chromosomes (8)

### *Geometry:*

Determine the measure of interior and exterior angles associated with polygons (4)

### *Algebra:*

Identify situations that are modeled by common relations (4)

### *Language Arts:*

Write a response journal about social changes that occurred in the colonies (14)

## *Thought for the Week*

If a man does not keep pace with his companions, perhaps it is because he hears a different drummer. Let him step to the music which he hears, however measured or far away.

—HENRY DAVID THOREAU

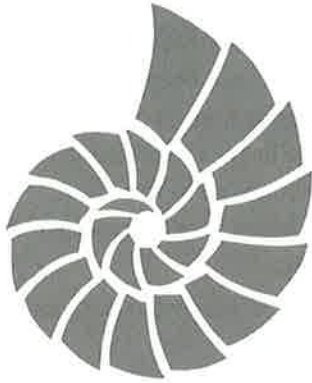
## *Community Visitors and Resources*

Business owner to explain how imports and exports play an important role in their business

## *Activities and Materials*

- Discoveryschool.com; *Lesson Plans*: “Inventors Workshop”
- *Project WET*, “Water Crossings”
- *Project WILD*, “Ants on a Twig”
- *Project WILD Aquatic*, “Riparian Retreat”
- The Forest of S.T. Shaw (20-23)
- Video: *Discovering Alabama*, “A Walk in the Woods,” “Sipsey Wilderness”

# Unit II Week 5



Focus is on the emergence of American culture during colonization in terms of daily life and religious influences.

Students should read about American culture of the period and research various authors and religions of the time.

They should research the key leaders who were emerging in the colonies and write about major ideas of these leaders.

## *This Week's Topic*

Key leaders in early America

## *Correlations with*

### *Alabama Course of Study:*

#### *History/Social Studies:*

Summarize major ideas of key leaders in the colonies (13)

#### *Physical Science:*

Explain how heat is transferred by radiation, conduction and convection (8)

#### *Biology:*

Compare the reaction of plant and animal cells in isotonic, hypotonic and hypertonic solutions (2)

#### *Geometry:*

Determine the equation of a circle given its center and radius (5)

#### *Algebra:*

Divide by a monomial (5)

#### *Language Arts:*

Read about leaders in the colonies and summarize your findings (12)

## *Thought for the Week*

When Daniel Boone goes by at night /  
The phantom deer arise /  
And all lost, wild America /  
Is burning in their eyes.

—STEPHEN VINCENT BENÉT

## *Community Visitors and Resources*

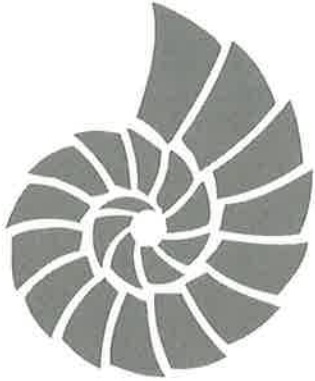
Curator or historian to share history, customs, and traditions of your area

## *Activities and Materials*

- <http://www.proteacher.com/>; "Simple Machines"
- *Project Learning Tree*, "Nature of Plants"
- *Project WET*, "Cold Cash in the Icebox," "No Bellyachers," "Stream Sense"
- *Project WILD*, "Lobster in Your Lunchbox"
- Video: *Discovering Alabama*, "Horse Pens 40"



# Unit II Week 6



Focus is on the culture of African slaves in colonial America. Students should write paragraphs about elements of African culture. They should graph the number of slaves by state. In science, discuss survival relationships and how people depend on each other to survive.

*This Week's Topic*  
African-American Culture

*Correlations with Alabama Course of Study:*  
*History/Social Studies:*  
Compare roles of African-Americans with other groups in early America (3)

*Physical Science:*  
Identify positive and negative uses of nuclear technology (11)

*Biology:*  
Trace biochemical cycles through the environment (14)

*Geometry:*  
Derive the ratios of the sides of 30-60-90 and 45-45-90 triangles (7)

*Algebra:*  
Perform operations of addition, subtraction and multiplication on polynomial expressions (5)

*Language Arts:*  
Write paragraphs comparing roles of African-Americans with other groups in early America (24)

*Thought for the Week*  
I am the inferior of any man whose rights I trample under foot. Men are not superior by reason of accidents of race or color. They are superior who have the best heart—the best brain.

—ROBERT G. INGERSOLL

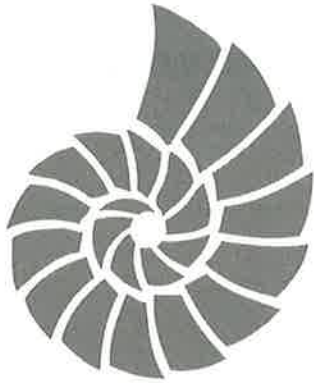
*Community Visitors and Resources*  
Civil rights activist to discuss changes in the last forty years; African to dress in his/her native attire and discuss his/her culture

- Activities and Materials*
- <http://www.mos.org/sln/Leonardo/SketchGadgetAnatomy.html>; “Sketching Gadget Anatomy”
  - *Project Learning Tree*, “Make Your Own Paper,” “People of the Forest,” “Rain Reasons,” “Soil Stories,” “The Web of Life”
  - *Project WET*, “Reaching Your Limits,” “Solutions,” “Water Address,” “Water Messages in Stone,” “Wish Book”
  - *Project WILD Aquatic*, “Deadly Skies,” “Deadly Waters,” “Water Canaries”
  - *Discovering Alabama*, “Forest History”





# Unit III Week 1



Focus is on gaining independence and the social factors leading up to the American Revolution. Students should dramatize events leading up to the Revolution.

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## Unit Checkpoints

Journal time, independent reading time, sharing information with others, writing invitations and thank-you notes

### *This Week's Topic*

Leading up to the American Revolution

### *Correlations with Alabama Course of Study:*

*History/Social Studies:*  
Examine events leading to the American Revolution (2,3,4)

### *Physical Science:*

Compare methods of energy transfer by mechanical and electromagnetic waves (9)

### *Biology:*

Identify scientists who contributed to the cell theory (4)

### *Geometry:*

Verify the relationships among different classes of polygons by using their properties (3)

### *Algebra:*

Factor binomials, trinomials and other polynomials (6)

### *Language Arts:*

Examine and report on the events leading to the American Revolution (12)

### *Thought for the Week*

Conservation is a state of harmony between men and land.

—ALDO LEOPOLD

### *Community Visitors and Resources*

Historian to discuss events leading to the American Revolution

### *Activities and Materials*

- *Alabama Moments in American History*, "The American Revolution and the Land Called Alabama," (235)
- <http://www.middleschoolscience.com/tunefork.htm>; "Tuning Fork Lab"
- *Project Learning Tree*, "400-Acre Woods," "Living With Fire"
- *Project WET*, "What's the Solution," "Imagine"
- Video: *Discovering Alabama*, "Alabama Natural Diversity" and "Red-cockaded Woodpecker"

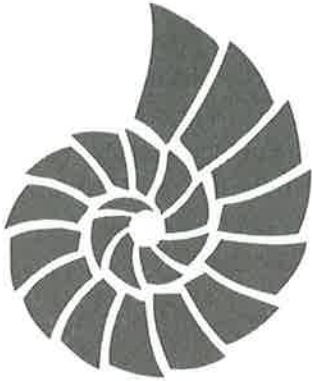
### **Unit III Key Question**

*How did the nation emerge?*

### **Unit III Key Experience**

*Visit an historical site of early American settlement*

# Unit III Week 2



*Focus is on the different leaders and groups involved in the American Revolution and how they helped win independence from England. Students should describe the relationships between the groups and what each did. They should research and write about the life of one of the key leaders in the American Revolution.*

## *This Week's Topic*

Leaders in the American Revolution

## *Correlations with Alabama Course of Study:*

### *History/Social Studies:*

Explain the role of key leaders in the American Revolution (3)

### *Physical Science:*

Research Tesla, George Ohm & Ben Franklin: Contributions to the field of electricity (10)

### *Biology:*

Describe similarities and differences of major cell organelles (4)  
Identify cells, tissues, organs, organ systems, organisms, populations, communities, and ecosystems as levels of organization in the biosphere. (5)

### *Geometry:*

Deduce relationships between two triangles (8)

### *Algebra:*

Write the solution of an equation or inequality in set notation (7)

### *Language Arts:*

Research the life of a leader in the American Revolution (21)

## *Thought for the Week*

In all things that are purely social [blacks and whites] can be as separate as the fingers, yet one as the hand in all things essential mutual progress.

—BOOKER T. WASHINGTON

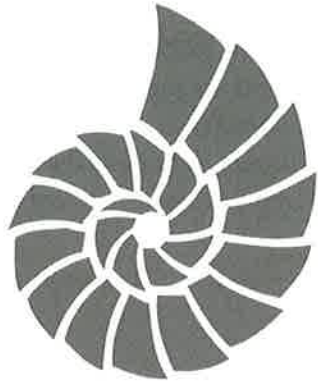
## *Community Visitors and Resources*

Veteran to speak on the pride he/she has as an American

## *Activities and Materials*

- <http://www.middleschoolscience.com/class3.htm>;  
Internet research: Thomas Edison, Nicola
- *Project WET*, “Energetic Water”
- *Project WILD*, “Philosophical Differences”
- Video: *Discovering Alabama*, “Long Leaf Pine”

# Unit III Week 3



Focus is on the political and social differences among the patriots and Loyalists in America and the writing of the Constitution. Students should relate that just as cells differentiate to perform specific functions (Biology), people have differences that lead them to form specific groups.

## *This Week's Topic*

The Declaration of Independence

## *Correlations with Alabama Course of Study:*

### *History/Social Studies:*

Examine, in detail, the Declaration of Independence (4)

### *Physical Science:*

Describe groupings of elements having similar properties (1)

### *Biology:*

Recognize that cells differentiate to perform specific functions (5)

### *Geometry:*

Solve real-life and mathematical problems (5)

### *Algebra:*

Graph the solution of an equation or inequality (7)

### *Language Arts:*

Read in detail the Constitution and identify the main ideas (3,13)

## *Thought for the Week*

I refuse to accept the idea that the "isness" of man's present nature makes him morally incapable of reaching up for the "oughtness" that forever confronts him.

—MARTIN LUTHER KING

## *Community Visitors and Resources*

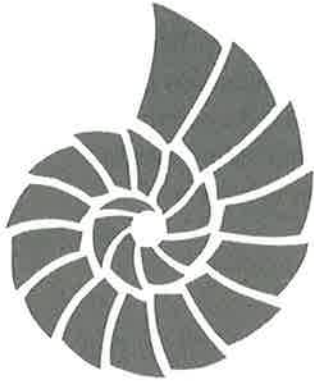
Biologist to discuss cells

## *Activities and Materials*

- Project Learning Tree, "Electromagnetic Fields," "Resource-Go-Round"
- *Project WET*, "Water Meter"
- *Project WILD*, "Planting Animals"
- Video: *Discovering Alabama*, "Long Leaf Ecosystem," "Arboretums"



# Unit III Week 4



Focus is on the factors that led to the development of political parties. Students should discuss these factors after gaining knowledge through research. In physical science, they should be able to define chemical reactions and relate this to how people relate to each other.

*This Week's Topic*  
Political Differences

*Correlations with Alabama Course of Study:*  
*History/Social Studies:*  
Identify factors that lead to development of political parties (4)

*Physical Science:*  
Define chemical reactions (4)

*Biology:*  
Describe the roles of mitotic and meiotic divisions during reproduction, growth, and repair of cells. (6)

*Geometry:*  
Use inductive reasoning to make conjectures (9)

*Algebra:*  
Model real-world problems by developing and solving equations and inequalities (7)

*Language Arts:*  
Discuss in a group the factors that lead to the development of political parties after researching to gain knowledge (15, 16)

*Thought for the Week*

We hold these truths to be self-evident; that all men are created equal; that they are endowed by their creator with certain unalienable rights; that among these are life, liberty, and the pursuit of happiness....

—THOMAS JEFFERSON,  
DECLARATION OF INDEPENDENCE

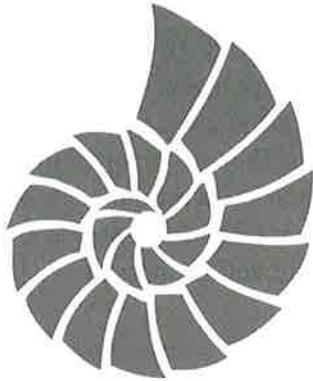
*Community Visitors and Resources*

Spokesperson from various political parties

*Activities and Materials*

- Discoveryschool.com, Curriculum Center: "Building a Telegraph"
- *Habitat Pen Pals*
- *Legacy*, "Don't Flush it Away"
- *Project Learning Tree*, "Values on the Line"
- *Project WET*, "Is There Water on Zork," "Money Down the Drain"
- *Project WILD*, "Flip the Switch for Wildlife"
- *Discovering Alabama*, "Forest Issues," "Bear Creek Watershed"

# Unit III Week 5



*Focus is on the importance of the Founding Fathers and their mindset during the fight for American Independence.*

*Students should read about the Founding Fathers and participate in dramatic activities to express their feelings. In Biology, students will become familiar with genetic terms and relate this to how we pass down our beliefs to others.*

*This Week's Topic*  
The Founding Fathers

*Correlations with*  
*Alabama Course of Study:*

*History/Social Studies:*  
Read a book relative to the mindset of the founding fathers during this this time. Suggestion: Founding Brothers (3)

*Physical Science:*  
Contrast the formation of ionic and covalent bonds (3)

*Biology:*  
Define important genetic terms. (7)  
Identify the structure and function of DNA, RNA, and protein. (8)

*Geometry:*  
Verify the formula for the measure of angles inductively (4)

*Algebra:*  
Solve systems of linear equations and inequalities in two variables or algebraically (8)

*Language Arts:*  
Participate in a dramatic activity expressing the mindset of the founding fathers (12,28)

*Thought for the Week*

From the mountains to the prairies/  
To the oceans white with foam /  
God bless America/  
My home sweet home!

—IRVING BERLIN

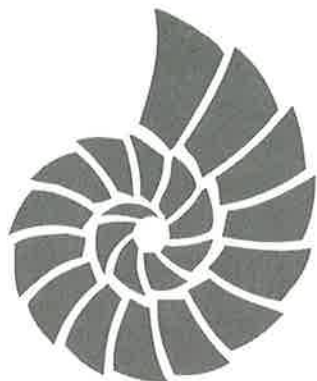
*Community Visitors and Resources*

Local newspaper editor to share what it is like to write about and share ideas and opinions with the public

*Activities and Materials*

- Discoveryschool.com, Curriculum Center: "Make a Magnet"
- *Project WET*, "Molecules in Motion," "Super Sleuths"
- *Project WILD*, "Bottleneck Genes"
- Video: *Discovering Alabama*, "Locust Fork River," "Alabama Adventure"

# Unit III Week 6



*Focus is on the importance of writings related to American independence and how they affected the people. Students should read stories about the struggle for independence and learn how to research subjects through the Library of Congress.*

## *This Week's Topic*

Important people and events

## *Correlations with Alabama Course of Study:*

### *History/Social Studies:*

Discuss issues, ideologies and compromises reached in the writings of early Americans (10)

### *Physical Science:*

Explain the relationship between electricity and magnetism (10)

### *Biology:*

Relate genetic disorders and disease to patterns of genetic inheritance (8)

### *Geometry:*

Collect data and create a scatter-plot comparing the perimeter and area of various rectangles (17)

### *Algebra:*

Solve quadratic equations using zero product property (9)

### *Language Arts:*

Research through Library of Congress (21)

## *Thought for the Week*

Go play with the towns you have  
built of blocks, / The towns where  
you would have bound me! / I sleep  
in my earth like a tired fox, / And  
my buffalo have found me.

—STEPHEN VINCENT BENÉT

## *Community Visitors and Resources*

Mayor or city council member to discuss his/her role in local politics

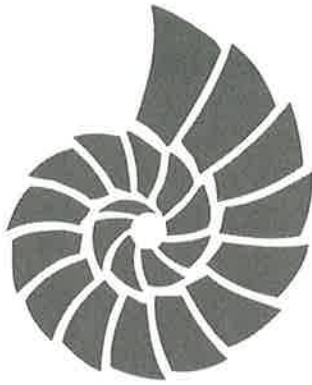
## *Activities and Materials*

- Discoveryschool.com; Curriculum Center: "Create a Compass"
- *Project Learning Tree*, "Waste Watchers"
- *Project WET*, "Color me a Watershed"
- *Project WILD*, "Changing Attitudes," "Philosophical Differences"
- *Discovering Alabama*, "Sipsey Wilderness"





# Unit IV Week 1



Focus is on the reform movement in the U.S. between 1781-1861. Students should trace the events that happened during this time and explore the reasons behind these events. Students should prepare reports on the movement to share with the class.

## Unit Checkpoints

Journal time, independent reading time, sharing information with others, writing invitations and thank-you notes, nature walks

*This Week's Topic*  
The Reform Movement

*Correlations with Alabama Course of Study:*  
*History/Social Studies:*  
Trace the reform movements in the U.S. between 1781-1861 (6,7)

*Physical Science:*  
Relate the law of conservation of energy to various transformations (8)

*Biology:*  
Differentiate between the previous five-kingdom and current six-kingdom classification systems. (9)

*Geometry:*  
Use ratios to find lengths of missing sides in right triangles (7)

*Algebra:*  
Approximate solutions graphically and numerically (9)

*Language Arts:*  
Write a report on the reform movements in the U.S. between 1781-1861 (20)

*Thought for the Week*

I have fallen in love with  
American names, / The sharp  
names that never get fat, / The  
snakeskin titles of mining claims,  
/ The plumed war bonnet of  
Medicine Hat, / Tucson and  
Deadwood and Lost Mule Flat.

—STEPHEN VINCENT BENÉT

*Community Visitors and Resources*

Person to discuss farming methods during this time period

*Activities and Materials*

- *Alabama Moments in American History*, "The War of 1812 in Alabama & Creek War"
- *Alabama Wildlife Federation and Alabama Division of Wildlife and Freshwater Fisheries*, "How to Build a Bluebird Box"
- *Project WET*, "Geyser Guts"
- *Project WILD Aquatic*: "Aquatic Times"
- Video: *Discovering Alabama*, "Alabama Rivers"

## Unit IV Key Question

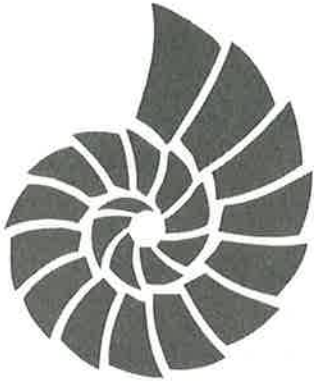
How did the nation grow?

## Unit IV Key Experience

Visit an historical site of early Alabama settlement and/or plant a garden and compare early agriculture with modern methods



# Unit IV Week 2



Focus is on the early documents that helped shape the country and what each contained. Students should identify and write about the main ideas of these documents. In Physical Science, terms related to physical and chemical changes can be related to terms used in important documents.

## *This Week's Topic*

US Constitution and the Bill of Rights

## *Correlations with Alabama Course of Study: History/Social Studies:*

Examine the Constitution and Bill of Rights (4)

### *Physical Science:*

Discuss terms related to physical and chemical changes (5)

### *Biology:*

Identify organisms using a dichotomous key (9)

### *Geometry:*

Calculate specific missing dimensions of solid figures (16)

### *Algebra:*

Derive the distance, midpoint and slope formulas (10)

### *Language Arts:*

Identify the main ideas and supporting details from the Constitution and Bill of Rights (13)

## *Thought for the Week*

America is a tune. It must be sung together.

—GERALD STANLEY LEE

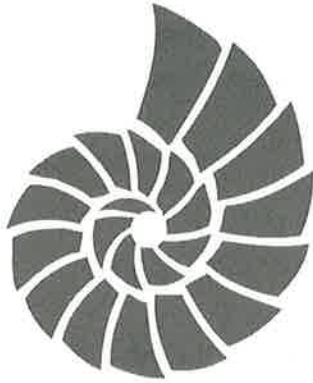
## *Community Visitors and Resources*

Judge to identify the rights of all citizens

## *Activities and Materials*

- <http://www.teachnet.com/lesson/science/icecream051999.html> "Ice Cream in a Bag"
- *Project Learning Tree*, "Words to Live By"
- *Project WET*, "Water Bill of Rights"
- *Project WILD*, "Photos Keep It Happening"
- Video: *Discovering Alabama*, "Alabama Wetlands"

# Unit IV Week 3



Focus is on examining the writings and journals of the Founding Fathers. Students should look for fallacies of logic in these writings. In Physical Science, students will continue to identify physical and chemical changes. They should relate these to the harmful and beneficial ideas of the Founding Fathers.

*This Week's Topic*  
Writings of the founding fathers

*Correlations with Alabama Course of Study:*  
*History/Social Studies:*  
Examine writings/ journals of founding fathers (3)

*Physical Science:*  
Identify various physical and chemical changes (5)

*Biology:*  
Sequence taxa from most inclusive to least inclusive in the classification of living things. (9)

*Geometry:*  
Prove congruence or similarity of two triangles (8)

*Algebra:*  
Apply laws of exponents to simplify expressions, including those containing zero and negative integral exponents (1)

*Language Arts:*  
Look for fallacies of logic in the writings/journals of founding fathers (10)

*Thought for the Week*  
Keep your face to the sunshine  
and you cannot see the shadows.

—HELEN KELLER

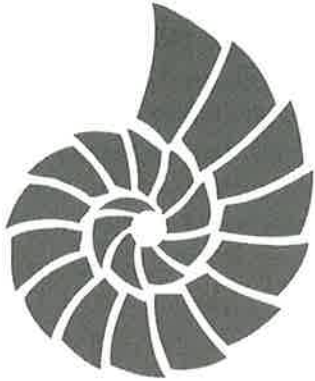
*Community Visitors and Resources*

Historian to share what life was like in the early 19th century

*Activities and Materials*

- *Project Learning Tree*, “Have Seeds Will Travel,” “Waste-to-Energy,” “Watch on Wetlands”
- *Project WET*, “Super Sleuths”
- *Project WILD*, “Owl Pellets”
- Video: *Discovering Alabama*, “Red-hills Salamander”

# Unit IV Week 4



*Focus is on the events leading to the War of 1812 and the impact of that war on American culture and environment.*

*Students should write an informational report on the events that led to the War of 1812.*

*Biology students will compare the characteristics of various kingdoms.*

*This Week's Topic*  
War of 1812

*Correlations with Alabama Course of Study:*  
*History/Social Studies:*  
Examine events that lead to the War of 1812 (6)

*Physical Science:*  
Identify binary solutions in terms of components, solubility, concentration, and conductivity (2)

*Biology:*  
Identify ways in which organisms from the Monera, Protista, and Fungi kingdoms are beneficial and harmful. (9)

*Geometry:*  
Identify Euclidean solids (14)

*Algebra:*  
Apply formulas to solve word problems (11)

*Language Arts:*  
Write an informational report on the events that lead to the War of 1812 (23)

*Thought for the Week*

Men go abroad to wonder at the heights of mountains, at the huge waves of the sea, at the long courses of the rivers, at the vast compass of the ocean, at the circular motions of the stars; and they pass by themselves without wondering. —*ST. AUGUSTINE*

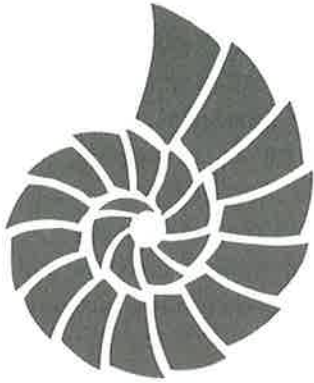
*Community Visitors and Resources*

Forester to discuss the vast forests of Alabama

*Activities and Materials*

- *Project Learning Tree*, "The Fallen Log"
- *Project WET*, "Reaching Your Limits"
- *Project WILD Aquatic*., "Micro Odyssey"
- Video: *Discovering Alabama*, "Black Warrior River," "Horse Pens 40"

# Unit IV Week 5



Focus is on the culture of the United States between the American Revolution and the Civil War. Students should read a variety of authors to gain information about this time. Geometry students can determine the areas of various pieces of land in the United States during this time.

## *This Week's Topic*

Culture from the American Revolution to the Civil War

## *Correlations with Alabama Course of Study:*

### *History/Social Studies:*

Describe the culture of the U.S. between the American Revolution and the Civil War (7)

### *Physical Science:*

Identify factors that affect the strength of electromagnetic waves (6)

### *Biology:*

Describe the histology of roots, stems, leaves, and flowers. (10)

### *Geometry:*

Determine the areas and perimeters of regular polygons (11)

### *Algebra:*

Solve problems algebraically that involve area and circumference of a circle (11)

### *Language Arts:*

Read various authors to find out about the culture of the U.S. between the American Revolution and the Civil War (5,8)

## *Thought for the Week*

I am sure it is a great mistake always to know enough to go in when it rains. One may keep snug and dry by such knowledge, but one misses a world of loveliness.

—ADELINE KNAPP

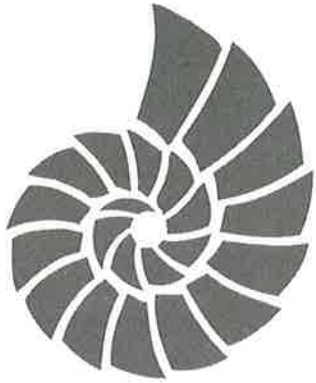
## *Community Visitors and Resources*

Historian on the American Revolution and/or the Civil War

## *Activities and Materials*

- *Discoveryschool.com*; Curriculum Center: “Separating Mixtures”
- *Project Learning Tree*, “Electromagnetic Fields,” “How Plants Grow,” “Old Growth Forests,” “Tough Choices”
- *Project WET*, “Water Match”
- *Project WILD*, “Water Down History”
- Video: *Discovering Alabama*, “Alabama Trees,” “Alabama Soils”

# Unit IV Week 6



Focus is on relating events in Alabama between 1781-1823 to the events that were happening in the nation during this time. Students should work together to publish a newspaper that relates to these events. Biology students should relate what they know about plants to help them distinguish vascular and non-vascular plants. Geometry students will examine the relationships between triangles.

## *This Week's Topic*

Events from 1781-1823 in Alabama

## *Correlations with Alabama Course of Study:*

### *History/Social Studies:*

*Relate events happening in Alabama from 1781-1823 to those happening in the nation (7)*

### *Physical Science:*

*Compare methods of energy transfer (9)*

### *Biology:*

*Distinguish between vascular and nonvascular plants (10)*

### *Geometry:*

*Use the relationships between triangles to solve problems and establish other relationships (8)*

### *Algebra:*

*Solve problems algebraically that involve area and perimeter of a polygon (11)*

### *Language Arts:*

*Work with a group to publish a newspaper (16)*

## *Thought for the Week*

The three great elemental sounds in nature are the sound of rain, the sound of wind in a primeval wood, and the sound of outer ocean on a beach.

—HENRY BESTON

## *Community Visitors and Resources*

Historian to discuss the roles and conflicts of states in their early development

## *Activities and Materials*

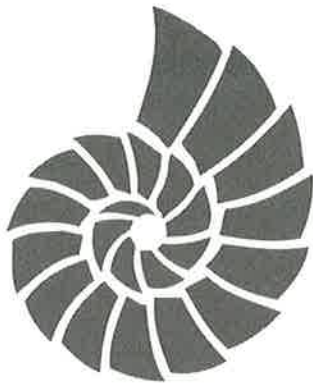
- *DiscoverySchool.com*; Project Idea: "Flower Power"
- *Project Learning Tree*, "Nature of Plants," "We can Work It Out"
- *Project WILD Aquatic*, "Whale of a Tale"
- Video: *Discovering Alabama*, "Coastal Alabama, Part 1: Natural Diversity" and "Horse Pens 40"







# Unit V Week 1



Focus is on the Civil War and Reconstruction. Discuss how the campaign issues and results of the election of 1860 affected American society. Students should survey adults in the community to learn their impressions of the Civil war. Algebra students should evaluate the appropriateness of the survey.

*This Week's Topic*  
The Civil War

*Correlations with Alabama Course of Study:*

*History/Social Studies:*

Survey adults in the community for their impressions of the Civil War and place this in an electronic format for delivery (10)

*Physical Science:*

Examine the physical and chemical changes of fossil fuels (5)

*Biology:*

Recognize chemical and physical adaptations of plants (10)

*Geometry:*

Apply the Pythagorean Theory to solve application problems (6)

*Algebra:*

Evaluate the appropriateness of the design of a survey (12)

*Language Arts:*

Joint debate with a social studies class on causes of Civil War (27)

*Thought for the Week*

Being American is not a matter of birth. We must practice it every day, lest we become something else. —MALCOLM WALLO

*Community Visitors and Resources*

Environmentalist to share the conflicts encountered when presenting issues to the public

*Activities and Materials*

- *Alabama Moments in American History*, "Alabama Reconstruction"
- *Discoveryschool.com*, *Lesson Plans*: "Pursuit of the Properties of Metals and Nonmetals"
- *Project Learning Tree*, "Forest Ecology," "Municipal Solid Waste: 1. The Waste Stream, Part B: Calculating Waste," "Name That Tree"
- *Project WET*, "Thirsty Plants," "What's Happening"
- *Project WILD*, "Checks and Balances," "Wildlife Issues: Community Attitudes Survey"
- Video: *Discovering Alabama*, "Little River Canyon"

## Unit Checkpoints

Journal time, independent reading time, sharing information with others, writing invitations and thank-you notes, nature walks

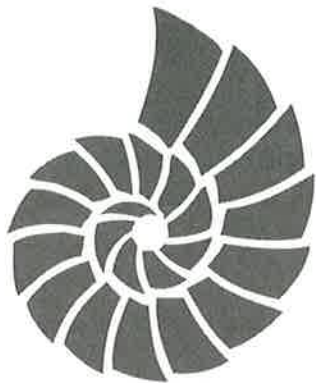
**Unit V Key Question**

Why was there a Civil War?

**Unit V Key Experience**

Visit Civil War era sites

# Unit V Week 2



Focus is on the role Alabama played during the Civil War. Students should write a persuasion paper to convince others of their views on the Civil War. Algebra students should examine the effects of various types of data and relate this to the type of data available during the Civil War period.

## *This Week's Topic*

Alabama's involvement in the Civil War

## *Correlations with Alabama Course of Study: History/ Social Studies:*

Explain Alabama's involvement in the Civil War (10)

## *Physical Science:*

Describe how the periodic table is used (1)

## *Biology:*

Distinguish between angiosperms and gymnosperms. (10)

## *Geometry:*

Determine the missing lengths of sides or measures of angles in similar polygons (3)

## *Algebra:*

Determine the effects of linear transformations of data (12)

## *Language Arts:*

Write a persuasion paper to convince others of the importance of Alabama joining the Civil War (20,23)

## *Thought for the Week*

The function of freedom is to free somebody else.

—TONI MORRISON

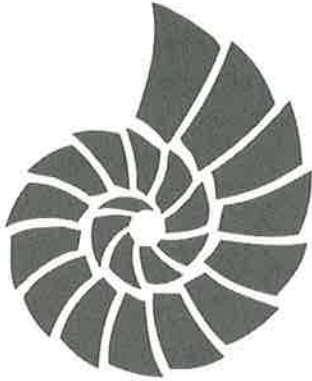
## *Community Visitors and Resources*

Veteran to speak on the sacrifices made during war

## *Activities and Materials*

- *Alabama Moments in American History*, "Alabama Involvement in the Civil War"
- *Project Learning Tree*, "Bursting Buds" 65
- *Project WET*, "Water Write"
- Video set: *Time-Life*, "The Civil War"
- Video: *Discovering Alabama*, "Alabama Black Belt I"

# Unit V Week 3



Focus is on how the Civil War influenced the course and character of the U.S. Students should research this topic and prepare to present their research. Algebra students should examine different methods of data reporting and relate how this influences peoples opinions of issues

## *This Week's Topic*

The Civil War's influence on the United States

## *Correlations with Alabama Course of Study:*

### *History/Social Studies:*

Research how the Civil War influenced the course and character of the U.S. (10)

### *Physical Science:*

Describe factors that affect solubility and rate of solution (2)

### *Biology:*

Distinguish between monocots and dicots. (10)

### *Geometry:*

Identify the coordinates of the vertices of the image of a given polygon that is translated, rotated, reflected, or dilated (13)

### *Algebra:*

Compare various methods of data reporting (12)

### *Language Arts:*

Organize and present the research you selected on how the Civil War influenced the course and character of the U.S. (20,21,22,23,24)

## *Thought for the Week*

The sun, with all those planets revolving around it and dependent on it, can still ripen a bunch of grapes as if it had nothing else in the universe to do.

—GALILEO GALILEI

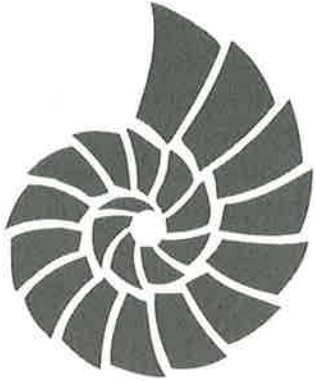
## *Community Visitors and Resources*

Civil War historian to discuss how the Civil War influenced the U.S.

## *Activities and Materials*

- *Alabama Moments in American History*: "Alabama Confederate Heroine, Emma Sansom"
- [http://www.pbs.org/wgbh/nova/teachers/activities/2710\\_monitor.html](http://www.pbs.org/wgbh/nova/teachers/activities/2710_monitor.html) "Lincoln's Secret Weapon"
- *Project Learning Tree*, "Field, Forest and Stream," "Understanding Fire"
- *Project WET*, "Geyser Guts"
- Video: *Discovering Alabama*, "Wetumpka Impact Crater"

# Unit V Week 4



*Focus is on the significant features of the Civil War including battles and leaders. Students should research various battles and how their outcome affected the war. Students should relate geographical features to Civil War battles and how they helped or hindered them. Students should prepare an audio-visual presentation explaining some of the battles. They can relate trees to places where the battles were fought.*

*This Week's Topic*  
Battles of the Civil War

*Correlations with Alabama Course of Study:*  
*History/Social Studies:*  
Examine the military battles of the Civil War (10)

*Physical Science:*  
Contrast the formation of ionic and covalent bonds (3)

*Biology:*  
Trace the flow of energy as it decreases through the trophic levels from producers to the quaternary level in food chains, food webs, and energy pyramids. (13)

*Geometry:*  
Compare the vertices of the image and pre-image of a triangle that is rotated a given number of degrees (13)

*Algebra:*  
Identify characters of a data set (13)

*Language Arts:*  
Prepare an audiovisual presentation explaining the major military battles of the Civil War (29,30)

*Thought for the Week*

Fourscore and seven years ago our fathers brought forth on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal.

—ABRAHAM LINCOLN,  
GETTYSBURG ADDRESS

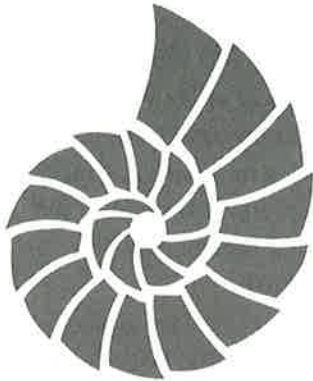
*Community Visitors and Resources*

Civil War historian to discuss how the Civil War influenced the U.S.

*Activities and Materials*

- *Alabama Moments in American History:* "Civil War in Alabama: A Father's Letter to His Sons" Legacy; "Name that Mineral" Project Archaeology, "Measuring Plots"
- *Project WILD,* "Stormy Weather"
- *Video: Discovering Alabama,* "Fort Morgan," "Mobile Tensaw Delta"

# Unit V Week 5



Focus is on the impact of the Civil War on resources, population and transportation in the U.S. Students should visit or arrange for a visit by a group that re-enacts scenes from the Civil War period. Biology students should relate how human activity affects the equilibrium of the ecosystems.

## *This Week's Topic*

Impact of the Civil War on resources, population and transportation

## *Correlations with Alabama Course of Study:*

### *History/Social Studies:*

Describe the impact of the Civil War on resources, population, and transportation (10)

### *Physical Science:*

Demonstrate the formation of positive and negative monatomic ions by using electron dot diagrams (3)

### *Biology:*

Relate natural disasters and human activity to the dynamic equilibrium of ecosystems (14)

### *Geometry:*

Apply the right triangle definitions of sine, cosine, and tangent to find missing measures (10)

### *Algebra:*

Solve quadratic equations (9)

### *Language Arts:*

Demonstrate appropriate listening skills when visiting re-enactment (15)

## *Thought for the Week*

[The Civil War] created in this country what had never existed before—a national consciousness. It was not the salvation of the Union; it was the rebirth of the Union.

—WOODROW WILSON

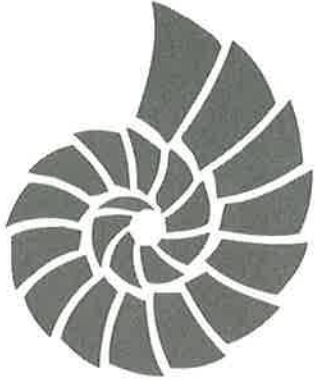
## *Community Visitors and Resources*

Person or group to re-enact scenes from the Civil War period

## *Activities and Materials*

- *Legacy*, “Adopt a Forest”
- *Project Learning Tree*, “Fire Management”
- *Project WILD*, “Changing the Land”
- *Project WILD*, “Shrinking Habitat”
- Video: *Discovering Alabama*, “Mobile River Basin,” “Tannehill Historical State Park”

# Unit V Week 6



Focus is on the Compromise of 1877 and contrasting the congressional and presidential reconstruction plans including African American political participation. Students should recognize characterization as a means of expressing ideas concerning African Americans after the Civil War.

*This Week's Topic*  
Compromise of 1877

*Correlations with Alabama Course of Study:*

*History/Social Studies:*  
Describe the Compromise of 1877 (11)

*Physical Science:*  
Differentiate between fission and fusion (11)

*Biology:*  
Describe protective adaptations of animals. (12)

*Geometry:*  
Develop formula for surface area and volume of solid figures (16)

*Algebra:*  
Compare theoretical and experimental probabilities (15)

*Language Arts:*  
Recognize characterization as a means of expressing ideas concerning African-Americans after the Civil War (7)

*Thought for the Week*

In wildness is the preservation of the world.

—HENRY DAVID THOREAU

*Community Visitors and Resources*

Guest to discuss African-American lifestyles after the Civil War

*Activities and Materials*

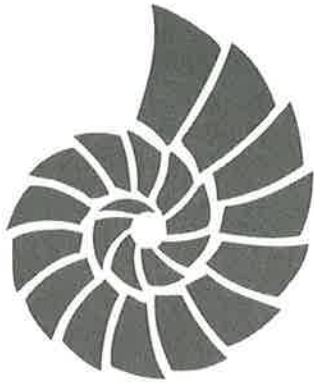
- *Legacy*, “Nuclear Energy”
- *Project Learning Tree*, “Energy Sleuths,” “Saga of the Gypsy Moth”
- *Project WILD*, “Adaptation Artistry,” “Fashion on a Fish,” “I’m Thirsty,” “Quick Frozen Critters”
- Video: *Discovering Alabama*, “Black Warrior River,” “Dugger Mountain Wilderness”







# Unit VI Week 1



Focus is in the economic changes brought by the Civil War and how people's lives were affected. Students should write poems about some aspect of the Civil War. Algebra students should look at economic changes in the U.S. today and relate these to the changes after the Civil War.

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## *This Week's Topic*

Economic changes after the Civil War

## *Correlations with Alabama Course of Study:*

### *History/Social Studies:*

Investigate the economic changes brought by the Civil War period (11)

### *Physical Science:*

Write balanced chemical equations based on the law of conservation of matter (4)

### *Biology:*

Classify animals according to type of skeletal structure (11)

### *Geometry:*

Calculate measures of arcs and sectors of a circle from given information (15)

### *Algebra:*

Estimate probabilities given data in lists or graphs (15)

### *Language Arts:*

Write and share with the class a poem about some aspect of the Civil War (18,23,28)

## *Thought for the Week*

The survival of our wildlife is a matter of grave concern to all of us in Africa. These wild creatures amid the wild places they inhabit are not only important as a source of wonder and inspiration but are an integral part of our natural resources and of our future livelihood and well-being.

—JULIOUS K. NYERERE

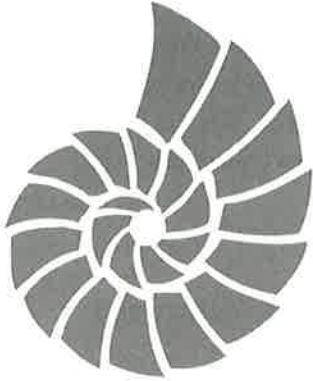
## *Community Visitors and Resources*

Historian or curator to explain changes after the Civil War

## *Activities and Materials*

- *Legacy*, "Plants and Sulfur Dioxide Air Pollution"
- *Project Learning Tree*, "Dynamic Duos"
- *Project WILD*, "Shrinking Habitat"
- *Project WILD Aquatic*, "To Dam or Not to Dam"
- Video: *Discovering Alabama*, "Wildlife History" and "Red-hills Salamander"

# Unit VI Week 2



Focus is on socio-economic changes in the post Civil War period for African Americans and Whites in both the North and the South. Students should read literature from the middle and late 1800's and write responses.

## *This Week's Topic*

Post Civil War socio-economic changes

## *Correlations with Alabama Course of Study:*

### *History/Social Studies:*

Trace socio-economic changes in the post-Civil War period for Whites and African-Americans in the North and South (11)

### *Physical Science:*

Identify factors that affect the strength of fundamental forces (6)

### *Biology:*

Classify animals according to body symmetry. (11)

### *Geometry:*

Determine the area of regular polygons (11)

### *Algebra:*

Use GCF, differences of squares, perfect square trinomials, and grouping to factor polynomials (6)

### *Language Arts:*

Write in response to literature of the middle/late 1800's (14)

## *Thought for the Week*

This is the forest primeval. The murmuring pines and the hemlocks... / Stand like Druids of old.

—HENRY WADSWORTH LONGFELLOW

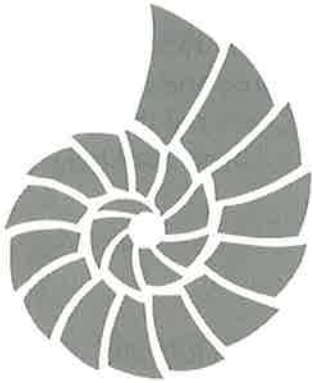
## *Community Visitors and Resources*

Historian to show the routes the explorers used to go west

## *Activities and Materials*

- *Alabama Moments in American History*: "Alabama Writers in the 19th Century"
- [http://www.pbs.org/wgbh/nova/teachers/activities/3206\\_charters.html](http://www.pbs.org/wgbh/nova/teachers/activities/3206_charters.html) "Saving the National Treasures"
- *Project Learning Tree*, "Poet-Tree"
- *Project WET*, "Water Concentration", "Water Crossings"
- Video: *Discovering Alabama*, "Sipsey River Swamp," "Black Belt Part I"

# Unit VI Week 3



Focus is on the Constitutional Amendments passed after the Civil War. Students should write a short story explaining what life was like after the Civil War. Biology students should look at symbiotic relationships and relate this to relationships among people.

## *This Week's Topic*

Post Civil War Constitutional Amendments

## *Correlations with Alabama Course of Study:*

*History/Social Studies:*  
Identify post-Civil War Constitutional Amendments (11)

## *Physical Science:*

Explain how heat is transferred by radiation, conduction, and convection (8)

## *Biology:*

Discriminate among symbiotic relationships. (16)

## *Geometry:*

Calculate specific missing dimensions of solid figures from surface area or volume (16)

## *Algebra:*

Solve equations graphically or algebraically (8)

## *Language Arts:*

Write a short story explaining life after the Civil War (8,23)

## *Thought for the Week*

'Tis the gift to be simple, 'Tis the gift to be free, 'Tis the gift to come down, Where we ought to be.

—JOSEPH BRACKETT

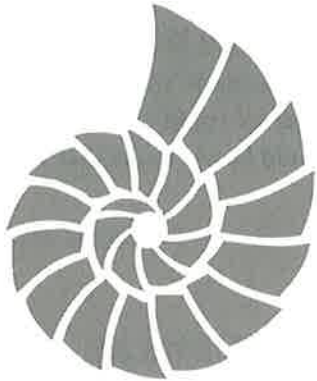
## *Community Visitors and Resources*

Urban planner to share how technology is incorporated into city planning and compare how cities were formed after the Civil War

## *Activities and Materials*

- *Legacy*, "Nuclear Energy"
- *Project Learning Tree*, "Forest Consequences," "Loving it Too Much," "Pass the Plants, Please," "Did You Notice?," "Our Changing World"
- *Project WET*, "Wish Book"
- *Project WILD*, "Here Today, Gone Tomorrow," "To Zone or Not to Zone," "When a Whale is Right"
- Video: *Discovering Alabama*, "Little River Canyon National Preserve," and "Cahaba River Watershed"

# Unit VI Week 4



*Focus is on the social restructuring of the South after the Civil War. Students should research the education possibilities for women and African Americans after the Civil War. Biology students should focus on natural selection and survival of the fittest which they can relate to human populations during and after the Civil War.*

## *This Week's Topic*

Social restructuring of the South

## *Correlations with Alabama Course of Study:*

### *History/Social Studies:*

Describe the social restructuring of the South (11)

### *Physical Science:*

Relate simple formulas to the calculation of potential energy, kinetic energy, and work (8)

### *Biology:*

Describe natural selection, survival of the fittest, geographic isolation, and fossil record (12)

### *Geometry:*

Determine the relationships between the surface areas of similar figures and volumes of similar figures (16)

### *Algebra:*

Solve multi-step equations and inequalities including linear, radical, absolute value, and literal equations (7)

### *Language Arts:*

Research the education possibilities for women and African-Americans after the Civil War (21)

## *Thought for the Week*

The American dream is not over.  
America is an adventure.

—THEODORE WHITE

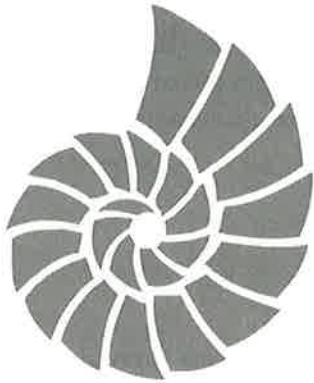
## *Community Visitors and Resources*

Biologist to discuss survival of the fittest

## *Activities and Materials*

- Discoveryschool.com; *Lesson Plans*: "Savage Sun"
- *Project Learning Tree*, "A Peek at Packaging," "Paper Civilizations," "Understanding Fire"
- *Project WET*, "Reaching Your Limits"
- *Project WILD*, "Who Fits Here"
- *Project WILD*, "I'm Thirsty," "Quick Frozen Critters"
- Video: *Discovering Alabama*, "National Forests of Alabama," "Oak Mountain State Park"

# Unit VI Week 5



*Focus is on the impact of the westward migration and examination of others ideas in the literature of the period.*

*Students should develop a web page to share the information they have learned. Students should compare results of major conflicts in our nation today with those of the Civil War.*

## *This Week's Topic*

Socio-political and other influences of a Growing Nation

## *Correlations with Alabama Course of Study:*

### *History/Social Studies:*

Develop a class web page on the routes/trails to the west (10)

### *Physical Science:*

Identify types of nuclear emissions (11)

### *Biology:*

Classify animals according to methods of fertilization and reproduction (11)

### *Geometry:*

Calculate surface areas of solid figures (16)

### *Algebra:*

Use a scatterplot and its line of best fit to determine the relationship existing between two sets of data (14)

### *Language Arts:*

Examine and report other's ideas in the literature about the results of the Civil War (10,11,12)

## *Thought for the Week*

If the human brain were so simple that we could understand it, we would be so simple that we couldn't.

—EMERSON M. PUGH

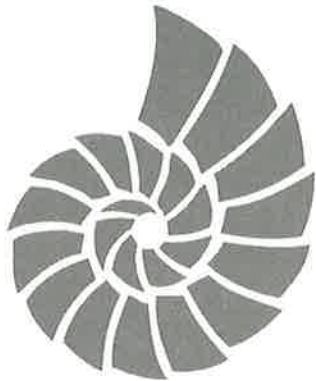
## *Community Visitors and Resources*

Computer person to help students set up web page

## *Activities and Materials*

- *Legacy*; "Enlightened and Reformed"
- *Project Learning Tree*, "Improve Your Place," "In the Good Old Days," "On the Move"
- *Project WILD*, "Improving Wildlife Habitat in the Community," "Seeing is Believing or the Eyes Have It"
- *Project WILD Aquatic*, "Turtle Hurdles"
- Video: *Discovering Alabama*, "Village Creek"

# Unit VI Week 6



Focus continues on the expanding nation after the Civil War. Students should develop a web page on the growth of the nation. Biology students will begin to classify animals according to their methods of locomotion. They should relate this to animals used in this period of time as they continue their study.

*This Week's Topic*  
Growth of the West

*Correlations with Alabama Course of Study:*  
*History/Social Studies:*

Examine the reconstruction plans after the Civil War (11)

*Physical Science:*  
Define chemical reactions (4)

*Biology:*  
Classify animals according to method of locomotion (11)

*Geometry:*  
Determine the perimeters of regular polygons (11)

*Algebra:*  
Factor binomials, trinomials, and other polynomials (6)

*Language Arts:*  
Develop a webpage of results of Civil War (22)

*Thought for the Week*

This land is your land, this land is my land, / From California to the New York island, / From the redwood forest to the Gulf Stream waters, / This land was made for you and me.

—WOODROW “WOODY” GUTHRIE

*Community Visitors and Resources*

Geologist to discuss the geologic features of our region

*Activities and Materials*

- *Alabama Moments in American History*, “The Morrill Land-Grant Act” (77)
- *Project Learning Tree*, “Cast of Thousands: Forest Measurement Guide”
- *Project WET*, “The Great Stony Brook”
- *Project WILD Aquatic*, “Mermaids and Manatees”
- Video: *Geological Society of America*, “The Earth Has a History”
- Video set: *Time-Life* “The West”
- *Discovering Alabama*, “Forest History,” “Wildlife History”

## Unit Checkpoints

Journal time, independent reading time, sharing information with others, writing invitations and thank-you notes, nature walks

### Unit VI Key Question

How did the U.S. change after the Civil War?

### Unit VI Key Experience

Visit early Alabama industrial sites and/or develop a class web page on westward expansion—effects on biological environments





## ***Appendix A: DOH Correlations with the Alabama Course of Study***

*(History/Social Studies, Physical Science, Biology,  
Geometry, Algebra, and Language Arts)*

The following matrices compare the requirements of the Alabama Department of Education's official Alabama Course of Study (ACS) and the Alabama High School Graduation Exam (AHSGE) with the DISCOVERING OUR HERITAGE (DOH) units. This will serve to guide and reassure teachers, parents, and administrators that the exciting activities of DOH more than meet the requirements of the ACS.

## Grade 10 Social Studies Correlations to ACS and AHSGE

Week	<i>Unit I</i>	<i>Unit II</i>	<i>Unit III</i>	<i>Unit IV</i>	<i>Unit V</i>	<i>Unit VI</i>
	<i>What was our country like before settlement?</i>	<i>How was America settled?</i>	<i>How did the nation emerge?</i>	<i>How did the nation grow?</i>	<i>Why was there a Civil War?</i>	<i>How did the U.S. change after the Civil War</i>
1	Examine fossils and old maps to determine pre-settlement <b>1, 2</b> (I-1)	Compare various early English settlements <b>2</b> (I-1)	Examine events leading to the American Revolution <b>2, 3, 4</b> (III-1)	Trace the reform movements in the U.S. between 1781-1861 <b>6, 7</b> (III-2) (III-3)	Survey adults in the community for their impressions of the Civil War & put in an electronic format <b>10</b> (IV-1)	Examine the reconstruction plans after the Civil War <b>11</b> (IV-1)
2	Compare various early English settlements <b>2</b> (I-1)	Trace chronology of events leading to French and Indian War <b>3</b> (I-1) (II-1)	Explain the role of key leaders in the American Revolution <b>3</b> (II-2) (III-1)	Examine the Constitution and Bill of Rights <b>4</b> (II-2)	Explain Alabama's involvement in the Civil War <b>10</b> (IV-1)	Trace economic changes in the post-Civil War period for Whites /Blacks in the North/ South <b>11</b> (IV-1)
3	Compare & examine the relationships of Native Americans with various English settlements <b>2</b> (I-1)	Explore the governments of early English settlements <b>2</b> (II-2)	Examine, in detail, the Constitution <b>4</b> (II-2)	Examine writings/journals of founding fathers <b>3</b> (II-2)	Research how the Civil War influenced the course & character of the U.S. <b>10</b> (IV-1)	Develop a class web page on the results of the Civil War <b>10</b> (IV-1)
4	Describe the influence of ideas of the Age of Enlightenment on the colonies <b>2</b> (II-1)	Examine social changes occurring in the colonies <b>2</b> (II-1)	Identify factors that lead to development of political parties <b>4</b> (II-1)	Examine events that lead to the War of 1812 <b>6</b> (III-3)	Examine the military battles of the Civil War <b>10</b> (IV-1)	Describe the Comprise of 1877 <b>11</b> (IV-1) (V-1)
5	Discuss the impact of the Great Awakening on colonial society <b>2</b> (II-1)	Summarize major ideas of key leaders in the colonies <b>13</b> (II-2)	Read a book relative to founding fathers during this time. Suggestion: Founding Brothers <b>3</b> (II-2)	Describe the culture of the U.S. between the American Revolution and the Civil War <b>7</b> (III-3)	Describe the impact of Civil War on resources, population, & transportation <b>10</b> (IV-1)	Describe the social restructuring of the South <b>11</b> (IV-1) (V-1)
6	Identify tensions between Europe and early settlements <b>2</b> (II-1)	Compare roles of African-Americans with other groups in early America <b>3</b> (II-1)	Discuss issues, ideologies & compromises reached in the writings of early Americans <b>10</b> (II-2)	Relate events happening in Alabama from 1781-1823 to those happening in the nation <b>7</b> (III-3)	Investigate the economic changes brought by the Civil War period <b>11</b> (IV-1)	Identify post-Civil War Constitutional Amendments <b>11</b> (IV-1) (V-1)

*\*The Arabic numbers in bold correspond to the current (2004) Alabama Course of Study for the respective grade and subject. The Roman numbers in ( ) correspond to the Alabama High School Graduation Exam.*

# Grade 10 Physical Science Correlations to ACS and AHSGE

Week	Unit I	Unit II	Unit III	Unit IV	Unit V	Unit VI
	<b>What was our country like before settlement?</b>	<b>How was America settled?</b>	<b>How did the nation emerge?</b>	<b>How did the nation grow?</b>	<b>Why was there a Civil War?</b>	<b>How did the U.S. change after the Civil War</b>
1	Identify factors that effect the strength of fundamental forces <b>6 (VIII-1)</b>	Solve problems for work efficiency & mechanical advantage of simple machines <b>7</b>	Compare methods of energy transfer by mechanical & electromagnetic waves <b>9 (II-1)</b>	Relate the law of conservation of energy to various transformations <b>8 (VIII-1)</b>	Examine the physical and chemical changes of fossil fuels <b>5 (II-4)</b>	Define chemical reactions <b>4 (II-4)</b>
2	Identify metric units <b>12 (I-1)</b>	Solve problems for velocity, acceleration, force, work and power <b>7 (VIII-1)</b>	Research Tesla, George Ohm & Ben Franklin: Contributions to the field of electricity <b>10</b>	Discuss terms related to physical and chemical change <b>5 (II-4)</b>	Describe how the periodic table is used <b>1 (II-3)</b>	Identify factors that affect the strength of fundamental forces <b>6 (VIII-1)</b>
3	Describe inertia, acceleration, momentum, friction & action/reaction <b>7 (VIII-1)</b>	Discuss simple machines used in colonial homesteading <b>7</b>	Describe groupings of elements having similar properties <b>1 (II-3)</b>	Identify various physical and chemical changes <b>5 (II-4)</b>	Describe factors that affect solubility & rate of solution <b>2</b>	Identify types of nuclear emissions <b>11</b>
4	Categorize elements as metals, non-metals, metalloids & noble gases <b>1 (II-3)</b>	Relate the terms endothermic and exothermic to physical & chemical changes <b>5 (II-4)</b>	Define chemical reactions <b>4 (II-4)</b>	Identify binary solutions in terms of components, solubility, concentration, & conductivity <b>2</b>	Contrast the formation of ionic & covalent bonds <b>3 (II-3)</b>	Differentiate between fission and fusion <b>11</b>
5	Recognize patterns of elements in the periodic table <b>1 (II-3)</b>	Explain how heat is transferred by radiation, conduction and convection <b>8 (II-1)</b>	Contrast the formation of ionic and covalent bonds <b>3 (II-3)</b>	Identify factors that affect the strength of electromagnetic waves <b>6 (VII-2)</b>	Demonstrate the formation of positive & negative monatomic ions by using electron dot diagrams <b>3 (II-3)</b>	Relate simple formulas to the calculation of potential energy, kinetic energy, & work <b>8 (VII-1)</b>
6	Describe Newton's three laws of motion <b>7 (VIII-1)</b>	Identify positive and negative uses of nuclear technology <b>11</b>	Explain the relationship between electricity & magnetism <b>10</b>	Compare methods of energy transfer <b>9 (II-1)</b>	Write balanced chemical equations based on the law of conservation of matter <b>4 (II-3)</b>	Explain how heat is transferred by radiation, conduction, & convection <b>8 (II-1)</b>

\*The Arabic numbers in bold correspond to the current (2004) Alabama Course of Study for the respective grade and subject. The Roman numbers in ( ) correspond to the Alabama High School Graduation Exam.

# Grade 10 Biology Correlations to ACS and AHSGE

Week	Unit I	Unit II	Unit III	Unit IV	Unit V	Unit VI
	<b>What was our country like before settlement?</b>	<b>How was America settled?</b>	<b>How did the nation emerge?</b>	<b>How did the nation grow?</b>	<b>Why was there a Civil War?</b>	<b>How did the U.S. change after the Civil War</b>
1	Introduction to Biochemistry <b>1 (I-1)</b>	Describe the interdependence of biotic and abiotic factors in an ecosystem <b>13 (VI-1)</b>	Identify scientists who contributed to the cell theory <b>4 (V-1)</b>	Differentiate between the previous five-kingdom and current six-kingdom classification systems. <b>9 (III-1)</b>	Recognize chemical and physical adaptations of plants. <b>10 (II-4) (III-2)</b>	Classify animals according to method of locomotion. <b>11 (III-3)</b>
2	Identify reactants & products related to photosynthesis & cellular respiration & their purposes. <b>3 (III-2)</b>	Identify density-dependent & density-independent limiting factors that affect populations in an ecosystem. <b>16 (VI-1)</b>	Describe similarities & differences of major cell organelles <b>4</b> Identify cells, tissues, organs, organ systems, organisms, populations, communities, & ecosystems as levels of organization in the biosphere. <b>5 (V-1)</b>	Identify organisms using a dichotomous key <b>9 (III-1)</b>	Distinguish between angiosperms and gymnosperms. <b>10 (III-2)</b>	Classify animals according to body symmetry. <b>11 (III-3)</b>
3	Describe similarities and differences of major cell organelles <b>4 (V-1)</b>	Identify biomes based on environmental factors and native organisms. <b>15 (VI-1)</b>	Recognize that cells differentiate to perform specific functions <b>5 (V-1)</b>	Sequence taxa from most inclusive to least inclusive in the classification of living things. <b>9 (III-1)</b>	Distinguish between monocots and dicots. <b>10 (III-2)</b>	Classify animals according to methods of fertilization and reproduction <b>11 (III-3)</b>
4	Select appropriate lab glassware, balances, time measuring equipment, & optical instruments to conduct an experiment. <b>1 (I-1)</b>	Explain relationships among DNA, genes and chromosomes <b>8 (IV-2)</b>	Describe the roles of mitotic and meiotic divisions during reproduction, growth, and repair of cells. <b>6 (V-2)</b>	Identify ways in which organisms from the Monera, Protista, & Fungi kingdoms are beneficial & harmful. <b>9 (III-2)</b>	Trace the flow of energy through food chains, food webs, and energy pyramids. <b>13 (II-1)</b>	Describe protective adaptations of animals. <b>12 (III-3)</b>
5	Justifying the grouping of viruses in a category separate from living things <b>9 (III-1)</b>	Compare the reaction of plant and animal cells in isotonic, hypotonic and hypertonic solutions <b>2 (V-1)</b>	Define important genetic terms. <b>7</b> Identify the structure and function of DNA, RNA, and protein. <b>8 (IV-2)</b>	Describe the histology of roots, stems, leaves, & flowers. <b>10 (III-2)</b>	Relate natural disasters and human activity to the dynamic equilibrium of ecosystems. <b>14 (VI-1)</b>	Describe natural selection, survival of the fittest, geographic isolation, & fossil record. <b>12 (VI-1)</b>
6	Describe protective adaptations of animals <b>12 (III-3)</b>	Trace biochemical cycles through the environment <b>14 (II-4)</b>	Relate genetic disorders and disease to patterns of genetic inheritance. <b>8 (IV-1)</b>	Distinguish between vascular and nonvascular plants <b>10 (III-2)</b>	Classify animals according to type of skeletal structure. <b>11 (III-3)</b>	Discriminate among symbiotic relationships. <b>16 (VI-1)</b>



# Grade 10 Geometry Correlations to ACS and AHSGE

Week	Unit I	Unit II	Unit III	Unit IV	Unit V	Unit VI
	<b>What was our country like before settlement?</b>	<b>How was America settled?</b>	<b>How did the nation emerge?</b>	<b>How did the nation grow?</b>	<b>Why was there a Civil War?</b>	<b>How did the U.S. change after the Civil War</b>
1	Justify theorems related to pairs of angles <b>2</b> (VII-1)	Determine the equation of line parallel to a second line through a given point <b>1</b> (II-3) (V-1,4)	Verify the relationships among different classes of polygons by using their properties <b>3</b> (VII-4)	Use ratios to find lengths of missing sides in right triangles <b>7</b> (VII-1)	Apply the Pythagorean Theory to solve application problems <b>6</b> (VII-2)	Determine the perimeters of regular polygons <b>11</b> (IV-1) (VII-3)
2	Verify the relationships among different classes of polygons <b>3</b> (VII-3)	Determine the equation of a line perpendicular to a second line through a given point <b>1</b> (V-1,4)	Deduce relationships between two triangles <b>8</b> (VII-1)	Calculate specific missing dimensions of solid figures <b>16</b> (VII-4)	Determine the missing lengths of sides or measures of angles in similar polygons <b>3</b> (VII-3)	Determine the area of regular polygons <b>11</b> (IV-1) (VII-3)
3	Use the ratios of the sides of special right triangles to find lengths of missing sides <b>7</b> (IV-1)	Justify theorems related to pairs of angles <b>2</b> (VII-1)	Solve real-life and mathematical problems <b>5</b> (II-1) (VII-7)	Prove congruence or similarity of two triangles <b>8</b> (VII-1) (VII-4)	Identify the coordinates of the vertices of the image of a given polygon that is translated, rotated, reflected, or dilated <b>13</b> (VIII-1)	Calculate surface areas of solid figures <b>16</b> (IV-1) (VII-4)
4	Deduce relationships between two triangles <b>8</b> (VII-1)	Determine the measure of interior and exterior angles associated with polygons <b>4</b> (VII-1)	Use inductive reasoning to make conjectures <b>9</b> (VI-1)	Identify Euclidean solids <b>14</b> (VII-4)	Compare the vertices of the image and pre-image of a triangle that is rotated a given number of degrees <b>13</b> (VII-1)	Develop formula for surface area and volume of solid figures <b>16</b> (IV-1) (VII-4)
5	Determine the areas and perimeters of regular polygons <b>11</b> (IV-1)	Determine the equation of a circle given its center and radius <b>5</b> (VII-4)	Verify the formula for the measure of angles inductively <b>4</b> (VI-1)	Determine the areas and perimeters of regular polygons <b>11</b> (IV-1)	Apply the right triangle definitions of sine, cosine, and tangent to find missing measures <b>10</b> (VII-1)	Determine the relationships between the surface areas of similar figures and volumes of similar figures <b>16</b> (VII-1)
6	Apply distance midpoint and slope formulas to confirm properties of polygons <b>11</b> (VII-3)	Derive the ratios of the sides of 30-60-90 and 45-45-90 triangles <b>7</b> (VII-1)	Collect data & create a scatterplot comparing the perimeter & area of various rectangles <b>17</b> (V-1,4) (VII-1)	Use the relationships between triangles to solve problems and establish other relationships <b>8</b> (VII-1)	Calculate measures of arcs and sectors of a circle from given information <b>15</b> (VII-4)	Calculate specific missing dimensions of solid figures from surface area or volume. <b>16</b> (IV-1) (VII-4)

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# Grade 10 Algebra Correlations to ACS and AHSGE

Week	Unit I	Unit II	Unit III	Unit IV	Unit V	Unit VI
	<b>What was our country like before settlement?</b>	<b>How was America settled?</b>	<b>How did the nation emerge?</b>	<b>How did the nation grow?</b>	<b>Why was there a Civil War?</b>	<b>How did the U.S. change after the Civil War</b>
1	Apply laws of exponents to simplify expressions <b>1 (I-1)</b>	Use simple equations to analyze linear functions <b>2 (II-3)</b>	Factor binomials, trinomials and other polynomials <b>6 (I-4)</b>	Approximate solutions graphically and numerically <b>9 (VI-1)</b>	Evaluate the appropriateness of the design of a survey <b>12 (V-1,4) (V-2)</b>	Factor binomials, trinomials, and other polynomials <b>6 (I-4)</b>
2	Simplify numerical expressions using properties of real numbers and order of operations <b>1 (I-1)</b>	Find the range of a function when given its domain <b>3 (III-2)</b>	Write the solution of an equation or inequality in set notation <b>7 (II-4)</b>	Derive the distance, midpoint and slope formulas <b>10 (IV-2)</b>	Determine the effects of linear transformations of data <b>12 (V-1,4)</b>	Use GCF, differences of squares, perfect square trinomials, and grouping to factor polynomials <b>6 (I-4)</b>
3	Find the slope of a line from its equation or by applying the slope formula <b>3 (IV-2)</b>	Represent graphically common relations <b>4 (V-1,4)</b>	<b>Graph the solution of an equation or inequality</b> <b>7 (VI-1)</b>	Apply laws of exponents to simplify expressions, including those containing zero & negative integral exponents <b>1 (II-1)</b>	Compare various methods of data reporting <b>12 (IV-1)</b>	Use a scatterplot and its line of best fit to determine the relationship existing between two sets of data <b>14 (VI-1,4)</b>
4	Determine the equations of linear functions <b>2 (II-3)</b>	Identify situations that are modeled by common relations <b>4 (V-1,4)</b>	Model real-world problems by developing and solving equations and inequalities <b>7 (II-1) (II-4)</b>	Apply formulas to solve word problems <b>11 (VII-8)</b>	Identify characters of a data set <b>13 (I-1)</b>	Compare theoretical and experimental probabilities <b>15 (VII-6)</b>
5	Graph two variable linear equations and inequalities on the Cartesian plane <b>2 (V-1,4)</b>	Divide by a monomial <b>5 (I-1)</b>	Solve systems of linear equations and inequalities in two variables or algebraically <b>8 (II-3)</b>	<b>Solve problems algebraically that involve area and circumference of a circle</b> <b>11 (IV-1) (VII-8)</b>	Solve quadratic equations <b>9 (II-2)</b>	Solve multi-step equations & inequalities including linear, radical, absolute value, & literal equations <b>7 (II-1)</b>
6	Analyze linear functions from their equations, slopes and intercepts <b>2 (IV-2) (II-3)</b>	Perform operations of addition, subtraction and multiplication on polynomial expressions <b>5 (I-2) (I-3)</b>	Solve quadratic equations using zero product property <b>9 (II-2)</b>	Solve problems algebraically that involve area and perimeter of a polygon <b>11 (IV-1) (VII-8)</b>	Estimate probabilities given data in lists or graphs <b>15 (VII-6)</b>	Solve equations graphically or algebraically <b>8 (VI-1,4)</b>

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# Grade 10 Language Arts Correlations to ACS

Week	Unit I	Unit II	Unit III	Unit IV	Unit V	Unit VI
	<b>What was our country like before settlement?</b>	<b>How was America settled?</b>	<b>How did the nation emerge?</b>	<b>How did the nation grow?</b>	<b>Why was there a Civil War?</b>	<b>How did the U.S. change after the Civil War</b>
1	Write an explanation <b>23</b> (III-1)	Research folk medicines <b>21</b> (IV-4)	Examine and report on the events leading to the American Revolution <b>12</b> (IV-4)	Write a report on the reform movements in the U.S. between 1781-1861 <b>20</b> (I-2)	Joint debate with a social studies class on causes of Civil War <b>27</b> (III-1)	Develop a webpage of results of Civil War <b>22</b> (IV-4)
2	Write an explanation of another's writing <b>10,12,23</b> (III-1)	Read to discover events leading to French and Indian War <b>3</b> (II-1) (II-2)	Research the life of a leader in the American Revolution <b>21</b> (IV-4)	Identify the main ideas and supporting details from the Constitution and Bill of Rights <b>13</b> (II-1)	Write a persuasion paper to convince others of the importance of Alabama joining the Civil War <b>20, 23</b> (III-1)	Write in response to literature of the middle/late 1800's <b>14</b> (III-2)
3	Identify main ideas and supporting details from non-fictional reading <b>13</b> (II-1)	Identify main ideas about the governments of early English settlements <b>13</b> (II-1)	Read in detail the Constitution and identify the main ideas <b>3, 13</b> (II-1)	Look for fallacies of logic in the writings/journals of founding fathers <b>10</b> (III-1)	Organize & present your research on how the Civil War influenced the course of the U.S. <b>20,21, 22,23,24</b> (II-3)	Examine and report other's ideas in the literature about the results of the Civil War <b>10,11,12</b> (II-4)
4	Write to clarify and organize thought and ideas <b>25</b> (IV-2,3)	Write a response journal about social changes that occurred in the colonies <b>14</b> (II-4)	Discuss in a group the factors that lead to the development of political parties <b>15, 16</b> (II-2)	Write an informational report on the events that lead to the War of 1812 <b>23</b> (IV-1)	Prepare an audiovisual presentation explaining the major military battles of the Civil War <b>29, 30</b> (IV-4)	Recognize characterization as a way of expressing ideas about African-Americans after the Civil War <b>7</b> (III-2)
5	Write an essay for informational purposes <b>23</b> (II-2)	Read about leaders in the colonies and summarize your findings <b>12</b> (II-5)	Participate in a dramatic activity expressing the mindset of the founding fathers <b>12, 28</b> (IV-4)	Read various authors to determine the culture of the U.S. between the American Revolution & the Civil War <b>5, 8</b> (IV-4)	Demonstrate appropriate listening skills when visiting re-enactment <b>15</b> (IV-1)	Research the education possibilities for women & African-Americans after the Civil War <b>21</b> (IV-4)
6	Create early American book trunks <b>5</b> (IV-2,3)	Write paragraphs comparing roles of African-Americans with other groups in early America <b>24</b> (II-2)	Research through Library of Congress <b>21</b> (IV-4)	Work with a group to publish a newspaper <b>16</b> (IV-2,3)	Write and share with the class a poem about some aspect of the Civil War <b>18,23,28</b> (III-3)	Write a short story explaining life after the Civil War <b>8, 23</b> (IV-4)

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## Appendix B: Suggested Supportive Resources

### Part I. Primary Activity Resources

Being a flexible program, DOH can accommodate a variety of activity resources. However, teachers are strongly encouraged to make sure that all primary resources are consistent with recognized standards for quality and effectiveness. If you have primary resources in mind other than those listed below, contact: Doyle Kiesel c/o AWF or Dr. Doug Phillips c/o AMNH for assistance in determining their consistency with national standards.

The following resources are incorporated as primary materials for DOH because:

- these materials are widely accepted and highly rated by master teachers and environmental educators,
- these materials are consistent with nationally recommended guidelines for accuracy, balance, and effectiveness in helping teachers include environmental education as a regular component of instruction,
- these materials have been specifically correlated with academic requirements of the Alabama Course of Study, and
- parent organizations of these materials have worked closely in the development of DOH and are committed to effective environmental education in support of overall educational improvement and student success—personally, civically, and academically.

*Discovering Alabama*, a public television series hosted and produced by Dr. Doug Phillips for Alabama Public Television and the Alabama Museum of Natural History; over 60 titles with Teacher's Guides. AMNH, 1985—.

*Discovering Alabama*  
Alabama Museum of Natural History  
University of Alabama  
Box 870340  
Tuscaloosa AL 35487-0340  
(205) 348-2039  
[www.discoveringalabama.org](http://www.discoveringalabama.org)

*Project Learning Tree: Environmental Education Pre K-8 Activity Guide*. 3d edition. American Forest Foundation, 1995.

Project Learning Tree  
Alabama Forestry Association  
555 Alabama Street  
Montgomery AL 36104

*Project WET: Curriculum and Activity Guide*. The Watercourse; Western Regional Environmental Education Council, 1995.

Project WILD  
Alabama Department of Conservation & Natural Resources  
64 N. Union Street  
Montgomery AL 36130  
(334) 242-3623

*Project WILD Activity Guide*. 2d edition. Western Regional Environmental Education Council, 1992.

Project WILD  
Alabama Department of Conservation & Natural Resources  
64 N. Union Street  
Montgomery AL 36130  
(334) 242-3623

*Project WILD Aquatic Education Activity Guide*. 2d edition. Western Regional Environmental Education Council, 1992.

Project WILD  
Alabama Department of Conservation & Natural Resources  
64 N. Union Street  
Montgomery AL 36130  
(334) 242-3623

### Part II. Supplemental Resources

The following is a partial listing of resources considered supplemental because they have been recommended by DOH teachers as potential sources of information and activities. Many of these materials are not environmentally-based and most have not been officially evaluated for consistency with national environmental education

standards. Likewise, these materials have not been formally correlated to requirements of the Alabama Course of Study.

In keeping with DOH policy, teachers are encouraged to take care in choosing supplemental materials that are consistent with recognized standards for quality, accuracy, and balance. Of course, materials that do not meet such standards are sometimes helpful in developing critical thinking skills and students' abilities to analyze biases or inaccuracies that might apply. Here again, assistance can be obtained by contacting Doyle Kiesel or Dr. Phillips.

*Agriculture in the Classroom: Alabama Treasures*  
by Jacquelyn Autrey et al. Agriculture in the  
Classroom Foundation, Inc., 1987  
Alabama Department of Agriculture &  
Industries  
P.O. Box 336  
Montgomery AL 36109-0336

*Acorn Naturalists.* Resources for the trail and  
classroom; free catalogue.

17300 East 17th Street, #J-236  
Tustin CA 92680  
(800) 422-8886

Alabama Forest Resources Center  
660 Adams Avenue  
Montgomery AL 36130

Alabama Geographic Alliance  
Department of Geography  
Jacksonville State University  
Jacksonville AL 36265  
(800) 346-5444

*Alabama Heritage Magazine*  
Box 870342  
The University of Alabama  
Tuscaloosa AL 35487-0342  
(205) 348-7467

Alabama Museum of Natural History  
Box 870340  
Smith Hall  
The University of Alabama  
Tuscaloosa AL 35487-0340  
(205) 348-7550

Alabama Natural Heritage Program  
Alabama Department of Conservation and  
Natural Resources  
64 N. Union Street  
Montgomery AL 36130

*Alabama PALS Litter Education Activity Guide*  
340 North Hull  
Montgomery AL 36104  
(334) 263-7737

*America's Private Land: A Geography of Hope.*  
U.S.D.A., 1996  
U.S.D.A.  
Natural Resource Conservation Service  
Washington DC 20250  
(800) 245-6340

Anniston Museum of Natural History  
P.O. Box 1587  
Anniston AL 36202-1587  
(256) 237-6766

*APT Classroom.* A complete listing of APT  
programs suitable for classroom use is available.  
Alabama Public Television  
2112 11th Avenue South, Suite 400  
Birmingham AL 35205-2884  
(800) 239-5233

Audubon Society Field Guide series

*Big Book of Everything: Social Studies,*  
edited by Rosemary Alexander. Educational  
Instructor Publications, 1986

*Creative Science Experiences for the Young Child*  
by Imogene Foret and Joy MacKenzie. Incentive  
Publications, Inc., 1973

*Environmental Education*  
American Forest Foundation  
1111 19th Street, NW  
Washington DC 20036

*Ft. Toulouse/Jackson Educational Activities*  
Ft. Toulouse/Ft. Jackson Historic Site  
2521 West Ft. Toulouse Road  
Wetumpka, AL 36093

Geological Survey of Alabama  
P.O. Box 869999  
The University of Alabama  
Tuscaloosa AL 35486-9999  
(205) 349-2852

Geological Society of America  
P.O. Box 9140  
Boulder CO 80301-9140  
(303) 447-2020; (800) 472-1988  
[www.geosociety.org](http://www.geosociety.org)

Global Learning and Observation to Benefit the Environment (*The Globe*), a series of activities and investigations about the earth and global environmental systems for teachers and students.  
The Globe Program  
744 Jackson Place NW  
Washington DC 20503  
(800) 858-9947

Golden Press and Western Publishing Company  
field guide series (now Golden Books)

*Instant Kids Books: Martin Luther King*  
111 W Blanche St.  
Mansfield OH 44903  
[www.InstantKidsBooks.com](http://www.InstantKidsBooks.com)

Nature Conservancy of Alabama  
Pepper Place  
2821C 2nd Avenue S.  
Birmingham AL 35233

*Nature Link*, Wildlife Education Series  
Alabama Wildlife Federation  
P.O. Box 1109  
Montgomery AL 36102  
(800) 822-WILD

*Nature's Way* series  
Center for Environmental Research & Service  
Troy State University  
Troy AL 36082

*Outdoor Classrooms on School Sites*. U.S.  
Department of Agriculture,  
Soil Conservation Service, 1980.

Peterson Field Guide series, Houghton Mifflin Co.

*Pollution Prevention: A Common Sense Solution to a Complex Problem*—video.

*Discovering Alabama*  
Alabama Museum of Natural History  
University of Alabama  
Box 870340  
Tuscaloosa AL 35487-0340  
(205) 348-2039

*Project CATE*, Conservation Action Through Education, a series of CD-ROMs.

Project CATE  
P.O. Box 123  
Mobile AL 36601  
(334) 694-6247

Public Broadcasting Service, Inc. Various series, e.g., *The American Experience* and the Dallas County (TX) Community College American History series, as well as other educational programs.

PBS Videos  
1320 Braddock Place  
Alexandria VA 22314  
(800) 344-3337

*School Yard Habitat Information Kit*, item #79948  
Alabama Wildlife Federation  
P.O. Box 1109  
Montgomery AL 36102  
(800) 822-WILD

Simon & Schuster's Field Guide series

*Outdoor Classroom and School Habitat Planning Guide*  
Alabama Wildlife Federation  
P.O. Box 1109  
Montgomery AL 36102  
(800) 822-WILD

*Teaching about the Environment: A Resource Guide for Getting Started in Environmental Education*.

Alabama Wildlife Federation, 1997.  
Alabama Wildlife Federation  
P.O. Box 1109  
Montgomery AL 36102  
(800) 822-WILD

*Thematic Units Collections*, Carson Dellosa  
Publishing Company

Time-Life Videos  
P.O. Box 85060  
Richmond VA 23285-5060  
[www.timelife.com](http://www.timelife.com)

U.S. Department of the Interior  
Fish and Wildlife Service  
Division of Ecological Services  
P.O. Drawer 1190  
Daphne AL 36526

U.S. Geological Survey  
Dept. P  
601 National Center  
Reston VA 22092  
(703) 648-7440

*Waste—A Hidden Resource...* Activity Guide,  
published by the Tennessee Valley Association

*What a Web Site!* United States Department of  
Agriculture, Center for Nutrition Policy and  
Promotion. [www.usda.gov/fcs/cnpp](http://www.usda.gov/fcs/cnpp)

*WOW! The Wonders of Wetlands, an Educator's  
Guide.* Environmental Concern, Inc. and The  
Watercourse, 1995.

Acorn Naturalists  
17300 East 17th Street, #J-236  
Tustin CA 92680  
(800) 422-8886

### **Part III. Additional Materials for General Consideration**

The following materials represent a sampling of suggested readings for teachers who might wish to explore various perspectives from different areas—the environment, history, science, society, educational philosophy, teaching methodology—pertinent to adopting and implementing DOH. These materials typically do not include instructional resources or activities. They are intended mainly for the teachers' personal enrichment/development.

The first book on the list, *A Sand County Almanac*, is considered the “bible” of conservation philosophy among outdoor enthusiasts. The **conser-**

**vation ethic** espoused by author Aldo Leopold is central to the DOH aim of imbuing students with an ethic of environmental stewardship. The other materials—listed in alphabetical order—are a potpourri of suggestions from DOH staff and teachers. You are invited to add your own suggestions to this list.

Leopold, Aldo. *A Sand County Almanac*. Oxford University Press, 1949.

Abrams Planetarium. *Sky Calendar*. Michigan State University.

*Alabama Atlas & Gazetteer*. DeLorme Publishing, 1998.

Bartram, William. *Travels*. Francis Harper (Ed.), naturalist's edition. University of Georgia Press, 1998.

Borland, Hal. *A History of American Wildlife*. National Wildlife Federation, 1975.

Brown, Lester, Christopher Flavin, and Hilary French (Eds.). *State of the World 1999: A Worldwatch Institute Report on Progress Toward a Sustainable Society*. W.W. Norton & Co., 1999.

Duncan, Dayton and Ken Burns. *Lewis & Clark: The Journey of the Corps of Discovery, An Illustrated History*. Alfred A. Knopf, 1998.

Field, William. *Make a Movie that Tells a Story: Using a Home Camcorder...and Other Stuff You Already Own*. William Field, 2000. (P.O. Drawer 1549, Tuscaloosa AL 35403)

Glasser, William. *The Quality School: Managing Students without Coercion*. 2d ed. HarperCollins, 1992.

Goldfarb, Theodore D. *Taking Sides: Clashing Views on Controversial Environmental Issues*. 6th ed. Duskin Publishing Group, Inc., 1995.

Harker, Donald F. and Elizabeth Ungar Natter. *Where We Live: A Citizen's Guide to Conducting a Community Environmental Inventory*. Island Press, 1995.



- Hawken, Paul. *The Ecology of Commerce: A Declaration of Sustainability*. Harper, 1994.
- Hudson, Charles M. *Knights of Spain, Warriors of the Sun: Hernando de Soto and the South's Ancient Chiefdoms*. University of Georgia Press, 1997.
- Hudson, Charles M. *The Southeastern Indians*. University of Tennessee Press, 1976.
- Hyams, Edward. *Soil & Civilization*. Harper Colophon Books, 1976.
- Kellert, Stephen R. *The Value of Life: Biological Diversity and Human Society*. Island Press, 1996.
- McQuillan, Alan G. and Ashley L. Preston (Eds.). *Globally and Locally: Seeking a Middle Path to Sustainable Development*. University Press of America, 1998.
- Owsley, Frank. *Struggle for the Gulf Borderlands: The Creek War and the Battle of New Orleans, 1812–1815*. University of Alabama Press, 2000.
- Pierson, George Wilson. *Tocqueville in America*. Johns Hopkins University Press, 1938; paperback edition, 1996.
- Read, William A. *Indian Place Names in Alabama*. University of Alabama Press, 1984.
- Rogers, William W., Richard D. Ward, Leah Rawls Atkins, and J. Wayne Flynt. *Alabama: The History of a Deep South State*. University of Alabama Press, 1994.
- Schlichter, Carol L. and W. Ross Palmer (Eds.). *Thinking Smart: A Primer of the Talents Unlimited Model*. Creative Learning Press, Inc., 1993.
- Tarnas, Richard. *The Passion of the Western Mind: Understanding the Ideas that have Shaped our World View*. Ballantine Books, 1991.
- Taylor, Alan. *American Colonies*. Viking Penguin, 2001.
- Thayer, Robert. *Gray World, Green Heart: Technology, Nature, and the Sustainable Landscape*. Wiley, 1994.
- Tocqueville, Alexis de. *Democracy in America*. Edited and abridged by Richard D. Heffner. Penguin Books, 1956.
- Torricelli, Robert and Andrew Carroll (Eds.). *In Our Own Words: Extraordinary Speeches of the American Century*. Pocket Books, 1999.
- Trimble, Stephen (Ed.). *Words from the Land: Encounters with Natural History Writing*. Peregrine Smith Books, 1988.
- Watts, May Theilgaard. *Reading the Landscape of America*. Revised and expanded edition. Collier Macmillan Publishers, 1975.
- Whimbey, Arthur and Jack Lochhead. *Problem Solving & Comprehension*. 4th ed. Lawrence Erlbaum Assoc., 1986.
- Wilkinson, Loren. *Earth Keeping: Christian Stewardship of Natural Resources*. William B. Eerdmans Publ. Co., 1980.
- Wilson, Edward O. *Biophilia*. Harvard University Press, 1984.
- Winn, William W. *The Old Beloved Path*. Chattahoochee Indian Heritage Assoc., 1992.





## Appendix C: Ensuring Proper Program Fit for your School

There are certain instructional “realities” of the classroom that apply for most Alabama teachers. Typically, the daily teaching task is one of: a) covering selected material from the textbook or primary content source, b) addressing the requirements of the Alabama Course of Study, and c) where applicable, also meeting additional objectives of the local school system. The usual method of trying to attend to these different realities is via the teacher’s “lesson plan.” In developing lesson plans, the teacher often faces an additional reality, the reality that neither the textbook nor the Alabama Course of Study provides a comprehensive, academic-year program regularly incorporating important ingredients for learning such as:

- parent involvement
- community participation
- hands-on, real-world experiences
- genuine problem-solving
- environmental knowledge and awareness
- the use of available enrichment materials/resources
- effectively integrated subject matter
- a clear sense of educational purpose and whole growth outcomes
- an overall coherent body of knowledge grounded in conceptual understanding

The teacher and the local school system must work toward including these ingredients. Sometimes there are constraints and demands that prohibit successful arrangement of such elements into a coherent academic-year plan. DOH provides a model framework for overcoming such constraints and for enabling a comprehensive, sequential plan for the year. In DOH, the many ingredients supportive of learning are linked together, providing a systematic program of practical design for practical use.

Determining whether DOH might be an appropriate fit for your school is a relatively easy process. The first step is to simply review existing school programs and requirements to see whether these already adequately address the scope of important educa-

tional needs. Secondly, you might wish to contact DOH program staff or teachers to discuss with those who have first-hand experience conducting DOH. In addition, some thought must be given to the necessity for clear understanding and commitment to DOH.

### *School commitment*

Regardless of practical design, no program can fully succeed without open recognition of key assumptions. DOH asks that the school appreciate the importance of these listed below.

**Assumption 1. A primary concern is to further the basic education of children under the guidance provided by the Alabama Course of Study and local policies and procedures.** DOH is not intended as a radical educational tactic, but instead, is designed to teach basic skills—reading, history and civics, mathematics, and science—in the interesting and important setting provided by environmental studies.

**Assumption 2. The faculty understands and welcomes DOH.** No matter how noble and excellent, new programs will not work if forced on teachers who do not believe in them. It must be recognized that many motivated and sincere teachers may be hesitant and reluctant about accepting a new program. If the faculty is currently conducting an excellent and successful program, disrupting the existing program against the teacher’s will is apt to be counterproductive. On the other hand, if the teacher believes the new program can improve or stimulate the existing one, then there is a much greater likelihood of success.

**Assumption 3. The school administration is supportive.** The school administration, including the principal, paid staff, librarian, volunteers, lunchroom and custodial personnel, and parent/teacher organizations, must be prepared to support any changes that might accompany a new program. For the most part, such changes associated with DOH will not be

burdensome, but might, at times, be different from long-established custom. The principal should be the chief booster of the program because she/he must sell it to the parents and to the community. Parents are reluctant to have their children “experimented on” unless there is confirmation and support for a new program by the school administration. It is to be expected that parents will require a certain amount of reassurance. The principal must be prepared to reassure the parents, sell the program to local groups and businesses, and back the teachers.

**Assumption 4. The school district is supportive.** The principal will need the backing of the superintendent and central staff for the same reasons outlined in Assumption 3.

**Assumption 5. The school community is supportive.** A major element for the success of any school program is community assistance and support. DOH is grounded in a process of school/community collaboration aimed at insuring this support.

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### *Community commitment*

DOH will be most successful in helping improve student performance when there is ample community commitment and support for the program. The Community Collaborative is the DOH name for a structured approach to guide community involvement in adapting and implementing the DOH program. Specific goals of the Collaborative are to familiarize diverse interest groups with the intent and design of the program, and to obtain their support and active participation in conducting the program. Beyond these goals, the Collaborative can also serve the broader roles of: a) increasing community understanding of the realities of public education, b) building consensus for the essential aims and activities of the school, c) strengthening general parent and community involvement with the school, and d) heightening the community sense of “ownership” for insuring the success of local schools.

There are a number of strategies that might be employed to accomplish a successful Collaborative. An important step is to arrange for the help of a meeting facilitator who is appropriately trained.

DOH extends its commitment to Alabama schools and communities by offering assistance in organizing and conducting the Community Collaborative, see Appendix D.

### *Teacher preparation*

DISCOVERING OUR HERITAGE is designed to incorporate a variety of special strategies and materials. Therefore, teachers may benefit from additional training. The DOH program can provide training programs to accommodate particular needs. Assistance is available for all areas related to the implementation of DOH including:

- identifying local resources
- using existing environmental education materials
- developing outdoor classrooms, nature trails, etc.
- maximizing parent involvement
- enhancing critical thinking and problem-solving skills
- conducting studies of the local community
- organizing field trip experiences
- involving local businesses, agencies, and other community organizations
- obtaining environmental information and resources
- examining environmental issues
- working productively with the Community Collaborative

Assistance can be arranged by contacting:

*Doyle Keasal*

*DOH Outreach Coordinator, Alabama Cooperative Extension System, (334) 844-6398, or*

*Alabama Wildlife Federation*

*(800) 822-WILD*

### *Troubleshooting*

DISCOVERING OUR HERITAGE, like any new program, may require a period of assimilation and adjustment at the outset. This is a time when the program might not be fully understood by some in the school or the community, possibly giving rise to a variety of concerns. A sampling of such concerns are addressed below, drawing upon actual questions encountered during program field testing in DOH pilot schools.

*What if some aspects of DOH do not seem sufficiently detailed to meet every expectation for daily lesson planning?*

As stated elsewhere in this guidebook, DOH is intended primarily to provide a framework for organizing the school year. It is not intended to rob teachers of all freedom and flexibility in making personal decisions about learning objectives, teaching methods, and preferred resource materials. In fact, it is hoped that DOH will serve to stimulate thought and discussion about many ways to improve education.

Educators who use DOH often applaud its design and appreciate the conceptual linkage provided in the Yearly Overviews and the Unit Overviews. They also welcome the suggested activities/resources that help incorporate environmental themes as a means of integrating content. Beyond this, many teachers will, of course, prefer to apply their own judgment in crafting specific objectives, identifying additional activities, etc. DOH, while supplying a frame of reference for overall educational improvement, recognizes that various aspects of the program may be altered to suit individual teacher needs.

*What if some in your school or community believe that environmental education is more appropriately taught in science, rather than in social studies?*

The “Program Rationale” of this guidebook explains the emphasis on environmental education to integrate learning under the umbrella of social studies. Certainly, the subject of science and the very process of scientific inquiry are essential to the overall pursuit of interpreting and understanding our world. Furthermore, the subject of science is especially meaningful to students when it is learned in an applied fashion, particularly when applied to real questions and concerns of society, i.e., when applied to social studies. In other words, science is fundamental to the DOH educational aims of whole student development and academic achievement.

*What if school system policy prohibits field trips or other excursions like those identified in DOH Key Experiences?*

Such restrictive policies are often in response to administrative realities. At issue may be questions of liability, transportation access, or insufficient funds. In

any case, this is a prime opportunity to engage the Community Collaborative in working with the school to do strategic problem-solving in the form of providing ample adult supervisors, needed funds, or other solutions. If all such efforts fail, the local community and the school site itself usually include settings for basic hands-on experiences. Indeed, having an “outdoor classroom” on the school site is vital to accessible, hands-on learning. Here again, the Community Collaborative can help in various ways, from developing outdoor learning areas to arranging visits to places of historical or cultural interest in the community.

*What if the school does not have the financial means of providing the array of resources indicated in DOH?*

The happy truth is, DOH can be implemented with a few basic resources and materials that can be obtained from the local community or from DOH sponsors. Sure, some school systems can afford to purchase large supplies of supplemental resources. That’s great, but it’s not essential. Check with DOH staff for guidance, for free materials, and for assistance in developing school site “outdoor classrooms.”

*What if the school already has ties with an environmental education program or environmental organization other than DOH?*

This should pose no problem if timely steps are taken to involve all pertinent parties in a joint discussion about DOH. Remember, DOH was designed to include existing quality environmental programs and resources. Any environmental activity already underway at your school should easily mesh with DOH. Furthermore, it is quite possible that such activity/program has been formally identified as a recommended resource for use with DOH.

*What if DOH seems appropriate for your school, but one or more key teachers are resistant?*

Teacher acceptance of DOH is often a function of administrators’ interest and enthusiasm for DOH, together with sufficient explanation of the program. Teachers who gain an accurate understanding of DOH (from participation in planning meetings, the Community Collaborative meetings, teacher training sessions, etc.) usually welcome the program. This is

particularly the case once they understand that they can incorporate existing lesson plans and any favorite resources and materials they already use. Still, some teachers are committed to other methods and may prefer not to spend time with DOH, in which case, DOH should not be imposed on unwilling teachers. Perhaps such teachers might at least coordinate with DOH teachers to promote subject integration.

*What if your school or classroom situation is such that you are concerned about possible difficulties managing students during DOH activities?*

DOH is a flexible program and can be adjusted for most schools and classroom situations. Of

course, some students who are unaccustomed to field trips and experiential learning outside the classroom might initially exhibit “unruly” behavior. As they become engaged in the appeal of hands-on learning this should diminish. The main thing is to make sure that excursions and Key Experiences are deliberately structured for meaningful discovery (as per DOH resources/activities) and that all students are actively engaged in the planned learning activities. With time, most students, even those who are initially unruly, develop a genuine interest and motivation for active learning. And, of course, with improved interest comes improved motivation and improved performance.

## **Appendix D: Organizing the Community Collaborative**

The Community Collaborative is a guided approach to promoting community involvement in the adoption of the DOH program. Specific goals of the Collaborative are to familiarize community groups with the intent and design of the DOH program and to gain their active support in conducting the program. Beyond these goals, the Community Collaborative can also serve the broader roles of:

- increasing community understanding of the realities of public education,
- building consensus for the essential aims and activities of the school,
- strengthening parent and community involvement with the school, and
- heightening the community sense of “ownership” for insuring the success of local schools.

There are a number of group-process strategies that might be employed to accomplish a successful Collaborative. A relatively simple strategy is offered below.

**1.** Form a Community Collaborative Steering Committee to include the school principal, a teacher who will be using DOH, a parent, and perhaps an appropriate staff member from the system Board of Education. If possible, it would be good to include student representation as well.

**2.** Have the Steering Committee select a representative group of people from the diversity of community “stakeholders” in education. The aim is to establish a group of several dozen people who have an active interest in education, who are willing to serve on the Collaborative, and who include diverse representation, i.e., from business, government, and the general public; from key interest areas such as civic clubs, churches, agriculture, scientific and professional organizations; and from those with active outreach to schools such as environmental organizations, sportsmen groups, parent associations, and possibly other educational assistance programs.

**3.** Prepare handouts or overhead transparencies featuring aspects of DOH, the school, and/or other concerns you deem appropriate for visual presentation to the Collaborative. This could include discussion of ways you wish to invite community participation through instructional or material support. For example, you might develop a list of specific labor, materials, or equipment you determine are needed to assist successful implementation of DOH. Plan and schedule an initial Community Collaborative meeting. Be sure to test your meeting plan with an advance trial run.

**4.** Conduct the initial Community Collaborative meeting as follows:

**a.** Begin the meeting with a welcome from the principal and Steering Committee. Briefly announce school plans to implement DOH, which, at times, will include student exploration/study of the local community. Explain that the program (and the students) will benefit greatly from Collaborative input in adapting the program to best meet common, local concerns and to promote active community participation.

**b.** Briefly relate that many Americans have expressed discontent with public education today and that many people believe the nation’s schools are facing significant “problems.” Acknowledge that similar views likely exist within your community. Explain that any program to improve education should be responsive to local views about the problems/needs confronting our schools. Ask participants to think quietly for a moment and consider what they personally believe are the major problems with schools/education today. Then ask that each person write down a list of those problems. (Be sure to have a supply of paper and pens/pencils available.)



**c.** After allowing several minutes for participants to make their individual lists, arrange small groups of 4–6 people per group and have members of each group compare and discuss their listed problems. Have each group work for 15–20 minutes to reach consensus on 5 priority problems about which all members of the small group agree are among the “most serious.”

**d.** Record each group’s 5 priority problems on a flip easel or blackboard for all to see. Then, if time allows, reduce any duplication by combining similar or repeated items to produce one overall list representing every distinctive priority problem identified.

**e.** Conduct a brainstorming session to generate “solutions” to education’s major problems. Try to elicit everyone’s ideas and be sure to record all suggestions on the blackboard or flip easel. If conducted properly, this will produce suggested “solutions” that are consistent with DOH aims and design.

**f.** Present an overview of the DOH program and explain that its general purpose is to help address needs for *overall educational improvement*.

**g.** Discuss the need for community support

of the program, then spend the final portion of the meeting soliciting ideas for active community support/participation to insure program success. (If sufficient time is available, this is often best accomplished by having participants first work in their small groups, after which each group’s ideas/strategies are compiled into one overall list. A quicker option is to conduct another brainstorm session.)

**h.** After identifying and discussing ways to achieve community support/involvement, ask participants if they will agree to serve as a formal “Community Collaborative” for ongoing assistance to the program. Be sure to get names, addresses, and phone numbers from those who accept.

Established correctly, the Community Collaborative can help the school and the DOH program in a variety of ways, from building general public support to providing specific resources and direct instructional assistance. A key ingredient for ensuring a successful Community Collaborative is the use of a trained meeting facilitator. To request information about a trained facilitator or to arrange facilitator training, contact: Dr. Doug Phillips, DOH Program Director, Alabama Museum of Natural History, Box 870340, Tuscaloosa AL 35487–0340, or telephone: (205) 348–3553 or 348–2039.



## Appendix E: Development of DOH Program for Eleventh Grade

Schools conducting the DOH Tenth Grade Program are encouraged to add a similar treatment of the second half of American history in eleventh grade. Below is offered a suggested Yearly Overview, Key Questions, and Key Experiences for such an eleventh grade program.

### *Yearly Overview for Eleventh Grade*

In eleventh grade, students have an opportunity to continue to explore our American heritage from 1877 to the present, a period roughly synonymous with the time of modern memory. Some Americans who were alive in the early years of the 20th century are still living today. This might include members of local family and community, providing opportunities for a variety of “living history” encounters with individuals who experienced major events in this period of history, a period of alternating upheaval and human progress together with accelerating change.

Prior to the 20th century, conflicts affecting the course of the nation were internal. But as America entered an era of growing assuredness and emerging industrial might, the country saw its freedom challenged by external forces.

The first major external challenge to America, World War I, was also the first major conflict involving the enhanced destructive power of the industrial age. It was a war of big machines and unprecedented killing, suffering, and anguish. Though America did not lose the physical conflict, disillusionment from the experience resulted in a diminished national spirit. Reaching deep into our faith in freedom and democracy, the nation struggled to rebound from the spiritual and economic strain of the 1920s and 30s, only to face another external challenge. World War II was a clash of bigger, better machines, and provided a dramatic hint at what some have suggested is a defining problem for modern technological society: “If we can think of it, we must build it. If we build it, we must use it.”

Following World War II, America’s industrial and technological successes opened up new realms of freedom. In little more than a decade, the attention of our society shifted from combat to television, from war-time rationing to the excited pursuit of new material wealth. But with the booming economic success for part of our society, the disparity experienced by other parts of our society was accentuated. A new wave of social, economic, and environmental discord developed, and again the nation struggled over the democratic ideal of freedom, a struggle compounded by troubles elsewhere in the world. The civil rights and environmental movements of the 1960s and 1970s were affected by American concern over communism, the strain of the Cold War, and the United States’s involvement in Vietnam. By the end of the Vietnam War, many Americans felt a new sense of disillusionment with their government, even as the nation continued into a period of rapidly expanding technology and space exploration. In recent decades, the decline of communistic powers and the increase of global trade and communication have heralded an age of new hope for democratic progress in the world. However, this is also a time of heightened unrest, internally and internationally, as differing economic, social, and religious ideologies find new means of assertiveness through the advancing technologies and communication systems of today.

*Important connections: The continued success of modern America, made possible by abundant natural resources, enabled the transition to the technological age. The combination of American democracy and American industrial and technological growth has, on the one hand, been a profound step forward in the course of human history. On the other hand, it has brought new economic, social, political, and environmental problems. Among the complexities of these new problems, American democracy and freedom are likely to undergo new challenges.*

**ACS Social Studies Yearly Theme:**  
United States Studies: 1877 to the Present

- Unit I** What was life like in the U.S. during the early 20th century? (ACS: 1900–1928)
- Unit II** What happened to affect the nation between the early 20th century and the advance of such modern technology as automobiles and radio? (ACS: 1929–1945)
- Unit III** How did the nation change and develop during the expanding popularity of television, highway systems, air travel, and other conveniences of the mid-20th century? (ACS: 1945–1969)
- Unit IV** How did the nation change and develop during the period of technological advance stemming from the space age? (ACS: 1970–recent decades)
- Unit V** What has happened to affect our nation during the lives of school parents? (ACS: recent decades)
- Unit VI** What is happening to affect our nation during the lives of the students? (ACS: present times)

*DOH Eleventh Grade Key Experiences*

- Unit I** Tour State Capitol, city and county government buildings, cemetery, history museums, historic sites.
- Unit II** Visit a park or national forest with a structure built by the Civilian Conservation Corps (CCC); a lock and dam on a river or a sawmill; visit one of the military museums in Mobile, Montgomery, or Huntsville.
- Unit III** Tour an active military base such as Maxwell AFB or Ft. Rucker; tour civil rights sites in Birmingham, Selma, or Montgomery.
- Unit IV** Visit the Space Center and Science Museums in Mobile and Huntsville, McWane Center in Birmingham, a University research facility.

- Unit V** Invite parents to suggest ideas and help plan field trips/experiences as appropriate for this unit.
- Unit VI** Invite students to suggest ideas and help plan field trips/experiences as appropriate for this unit.

*Suggested Steps for Local Development of a DOH Program Suitable for any Grade Level*

The opportunity to develop your own DOH program can be an enjoyable challenge. Project staff are eager to work with schools that would like to pursue this opportunity. Meanwhile, the following is a simple step-wise approach to serve as a general guide.

**Step 1:** Examine the Alabama Course of Study (ACS) for Social Studies at your grade level and examine the textbook(s) and/or other materials required by your school system. Ask yourself whether these materials are sufficient in delivering learning that is conceptually organized for the school year and that is amply relevant, meaningful, and engaging for students.

**Step 2:** Ask yourself whether the ACS and the textbook(s) sufficiently incorporate such important ingredients as the following:

- parent involvement
- community participation
- genuine problem-solving
- hands-on, real-world experiences
- effectively integrated subject matter
- environmental knowledge and awareness
- the use of available enrichment materials/resources
- a clear sense of educational purpose and whole growth outcomes
- an overall coherent body of knowledge grounded in conceptual understanding

**Step 3:** Assess your school's situation and related program requirements (including existing teaching methods and lesson plans) and check to see whether these adequately address the full scope of important educational concerns/needs.

**Step 4:** Pretend for a moment that you can ignore existing problems, constraints, and demands that interfere with effective teaching/learning. Imagine you are free to organize your year into a comprehensive unit-by-unit teacher's roadmap, an overall plan that integrates content, experiences, and resources so as to make the program more relevant, more meaningful, and more coherent for students, for parents, and for you, the teacher. And imagine you are able to obtain whatever school or community assistance that may be needed to implement this ideal program/plan. Sketch an outline of how you would design/structure this ideal curriculum across the full year.

**Step 5:** Imagine that you can obtain the assistance of a support team from the community to work with you and your school in problem-solving the various needs, difficulties, and constraints that might hinder the implementation of your ideal program. And imagine you and your support team can find innovative solutions to overcome just about any barrier, from resource and funding needs to personnel and logistical support.

**Step 6:** After completing Steps 1–5, consider whether your present teaching situation meets the various features/aspects of an ideal program. If so, stop here. You're probably already teaching from a conceptually-organized approach that incorporates environmental education to augment such important factors as hands-on experiences, content integration, real-world relevance, and local community connections. However, if you determine that there is room for improvement in your existing program, then you might wish to examine DOH as a possible guide in helping design an integrated program suitable for your situation. For consultation in program design, contact: Dr. Doug Phillips, DOH Program Director, Alabama Museum of Natural History, P.O. Box 870340, Tuscaloosa AL 35487-0340; telephone: (205) 348-3553 or 348-2039; fax: (205) 348-4219. For assistance in locating funding resources, establishment of the Community Collaborative, and/or for special in-service training, contact: Doyle Keasal, DOH Outreach Coordinator, Alabama Cooperative Extension System, (334) 844-6398, or Alabama Wildlife Federation, (800) 822-WILD.

# Grade 11 Sample Social Studies Correlations to ACS

Week	Unit I	Unit II	Unit III	Unit IV	Unit V	Unit VI
	<i>What was life like in the U.S. during post-Reconstruction and the early 20th century?</i>	<i>What happened to affect the nation between the early 20th century and the advance of such modern technology as automobiles and radio?</i>	<i>How did the nation change and develop during the expanding popularity of television, highway systems, air travel, and other conveniences of the mid-20th century?</i>	<i>How did the nation change and develop during the period of technological advance stemming from the space age?</i>	<i>What has happened to affect our nation during the lives of school parents?</i>	<i>What is happening to affect our nation during the lives of the students?</i>
1	End of the frontier <b>1</b>	Warfare <b>9</b> Great Depression <b>6</b>	Changes after WWII <b>8</b>	Recent Presidents <b>10, 14</b>	Warfare <b>14</b>	Warfare <b>14</b>
2	WWI <b>4</b>	Automobiles <b>11</b> Disasters and conflict <b>5</b>	1950s culture <b>8, 9</b>	The New Frontier <b>14</b>	Automobiles and rapid transit <b>14</b>	Automobiles and rapid transit <b>14</b>
3	Leaders and significant people <b>2</b>	Communication <b>11</b> The New Deal <b>6</b>	The Cold War <b>8, 9</b>	Economic decision-making <b>14</b>	Communication <b>14</b>	Communication <b>14</b>
4	Amendments and political geography <b>3</b>	Business <b>6</b> WWII begins <b>7</b>	Presidential domestic policies <b>9</b>	Humans changing the environment <b>13</b>	Business <b>14</b>	Business <b>14</b>
5	Cities, industry, and natural resources <b>1</b>	Aviation <b>11</b> WWII military strategies <b>8</b>	Civil Rights <b>12</b>	Immigration <b>14</b>	Aviation <b>14</b>	Aviation <b>14</b>
6	Populations and movement <b>1, 2</b>	Households <b>11</b> WWII impact on U.S. <b>7</b>	Vietnam <b>11</b>	Social issues <b>13, 14</b>	Environmental <b>14</b>	Environmental <b>14</b>

\*The numbers in bold correspond to the current (2004) Alabama Course of Study for the respective grade and subject.



