

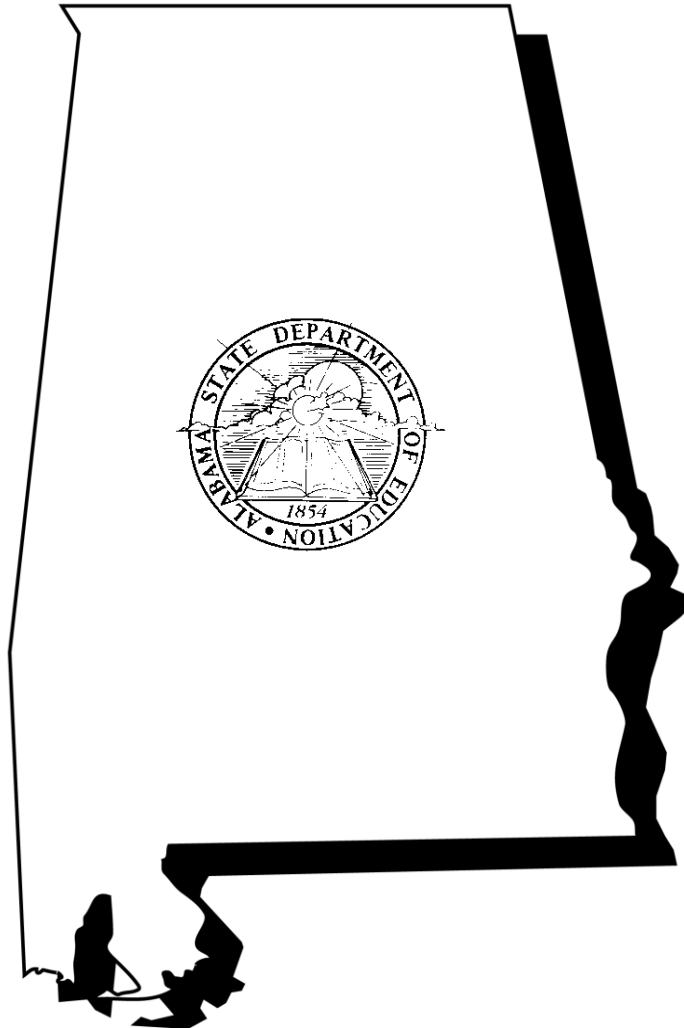
- ALABAMA DEPARTMENT OF EDUCATION
- ENVIRONMENTAL EDUCATION ASSOCIATION OF ALABAMA

# ALABAMA ALIVE!

A STATE ENVIRONMENTAL LITERACY PLAN  
*DRAFT*

2013

**ALABAMA ALIVE!  
A STATE ENVIRONMENTAL LITERACY PLAN**



**Thomas R. Bice  
State Superintendent of Education  
ALABAMA DEPARTMENT OF EDUCATION**

**STATE SUPERINTENDENT  
OF EDUCATION'S MESSAGE**

Dear Educator:

The protection of our natural environment and resources is essential to the well-being of society. Therefore, it is incumbent upon us to provide Alabama students with the knowledge and skills to interact responsibly with the environment and understand how ecological and human systems connect.

The 2013 *Alabama Alive! A State Environmental Literacy Plan* provides the framework for establishing an environmental education program in Alabama. The plan is designed to help students achieve knowledge and skills regarding current environmental challenges, including making informed decisions and finding solutions; identify their roles as engaged and responsible citizens who are stewards of the environment; and realize how local and state environmental issues in Alabama relate to environmental issues in the nation and in the world.

As students grow in their awareness of the importance of preserving the natural environment and its resources, they can better understand the necessity for establishing a balance regarding economic and societal needs with respect to the needs of the natural world. Wise decisions about the use and preservation of the environment will lead to a prosperous future for Alabamians. The Alabama State Board of Education and I believe this plan provides students, teachers, and others with the tools and resources vital to building environmental literacy in our state.

**Thomas R. Bice**  
**State Superintendent of Education**

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## PREFACE

During the summer of 2010, Dr. Joseph B. Morton, former State Superintendent of Education, requested the Environmental Education Association of Alabama (EEAA) work in conjunction with the Alabama Department of Education to establish a task force for the purpose of developing an environmental literacy plan for Alabama. As a result, the Alabama Environmental Literacy Plan Task Force was formed, consisting of Alabama Department of Education personnel and EEAA members as well as representatives from other organizations throughout the state. The 2013 *Alabama Alive! A State Environmental Literacy Plan* is the result of this effort. The plan outlines best practice environmental education program guidelines and strategies to be supported and utilized by the Alabama Department of Education, local school systems, the EEAA, other environmental education organizations, and the general public for achieving the goal of environmental literacy.

The Task Force made extensive use of the 2008 North American Association for Environmental Education publication, *Developing a State Environmental Literacy Plan*, in designing a plan for Alabama. In addition, Task Force members reviewed information from several other professional publications, including similar documents from other states.

Task Force members attended state, regional, and national conferences; listened to and read statements from interested individuals and groups from throughout the state; used each member's academic and experiential knowledge; and discussed issues among themselves and with colleagues. Using these sources, the Task Force developed what they believe to be the best practices for an environmental literacy plan for Alabama.

# ACKNOWLEDGMENTS

This document was developed by the 2010 – 2013 Alabama Environmental Literacy Plan Task Force composed of educators and business and professional persons having responsibility for providing instruction and information regarding Alabama’s natural environment and resources. The Task Force began work in the summer of 2010 and submitted the document to the Alabama State Board of Education for adoption at the February 2013 meeting.

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# INTRODUCTION

## ENVIRONMENTAL LITERACY

Environmental literacy is the primary goal of an environmental education program. Environmental literacy can be defined as the understanding of how one's actions and decisions affect the environment. With this understanding, an individual is able to think and act responsibly and effectively regarding the protection and improvement of the environment. In order for students in Alabama to achieve environmental literacy, they must be provided with a balanced and academically sound program of environmental education.

Environmental education programs challenge students with high standards for maintaining environmental quality for both now and for the future. Programs offer students opportunities to increase knowledge and awareness of the environment, develop skills necessary for addressing environmental challenges, and become dedicated to the protection of the environment. Characteristically, environmental education programs are designed to:

- Relate to an environmental topic.
- Integrate learning across the disciplines.
- Encourage critical thinking and problem solving.
- Offer hands-on, field-based experiences.
- Include instructional content based on facts.
- Provide a balanced variety of perspectives regarding environmental challenges.

Although environmental education is often considered a subcomponent of science education, it is much broader in scope in that it is connected to a variety of other content areas ranging from science, world history, literature, and civics, to name a few. As students become more conscious of these connections, they can better understand the many reasons for protecting and sustaining the natural environment and resources. For example, a study of the 2010 Gulf of Mexico oil spill, would not only be a topic of interest and concern to Alabama students, but would also provide them with opportunities for making important connections to a number of fields of study, including physics; economics; careers; ecology; health; mathematics; and local, state, national, and international government policies and laws.



## NEED FOR ENVIRONMENTAL EDUCATION

Alabama needs informed citizens who make intelligent choices regarding Alabama’s natural environment and its abundance of valuable resources. Alabama ranks fourth in the United States in species diversity and is the state with the highest diversity of crayfish, freshwater mussels, freshwater snails, and freshwater turtles. However, with 117 endangered or threatened species, Alabama ranks third among states with the greatest number of species in peril. The need for environmental education programs is evident. Efforts must be made to educate Alabama citizenry of the importance of managing and protecting the environment, including the wildlife dependent upon it.

Teaching students about Alabama’s environment and resources helps develop “environmentally literate” citizens who have sufficient knowledge to understand the natural world and human dependence on it. It helps them make wise choices about local community resources and develop new patterns of behavior for interacting responsibly with the environment.

## CURRENT STATUS OF ENVIRONMENTAL EDUCATION

The Alabama Math, Science, and Technology Initiative (AMSTI) provides environmental education opportunities for Grades K-12 teachers and administrators. As of the 2012-2013 school year, there are 681 active AMSTI schools. AMSTI training incorporates at all grade levels nationally recognized environmental education curriculum materials such as Global Learning and Observations to Benefit the Environment (GLOBE) and Project Learning Tree. Content addressed in the training programs includes topics such as weather and phenology, soils, hydrology, land cover, erosion, and habitats. Resource providers, including nature centers, residential programs, nonprofit groups, and science museums across the state, currently offer environmental education programs correlated to various Alabama courses of study content. Examples of content areas and courses addressing environmental education topics are shown in the following table.

ALABAMA COURSES OF STUDY WITH ENVIRONMENTAL EDUCATION CONTENT	
CONTENT AREAS OR COURSES	GRADE LEVELS
Science – Physical Science, Life Science, Earth and Space Science	K - 5
Science – Physical Science	6
Science – Life Science	7
Science – Earth and Space Science	8
Social Studies – Geographic and Historical Studies: People, Places, Regions	3
Social Studies – Geography	7
Social Studies – Civics	7
Science – Biology Core	9 - 12
Science – Environmental Science Elective Core	9 - 12
Science – Earth and Space Science Elective Core	9 - 12
Science – Marine Science Elective Core	9 - 12
Career and Technical Education – Health Science Cluster	9 - 12
Career and Technical Education – Agriculture, Food, and Natural Resources Cluster	9 - 12

# OVERVIEW OF THE STATE ENVIRONMENTAL LITERACY PLAN

## GOAL

Nature serves as a valuable tool for learning. With this in mind, the intent of the *Alabama Alive! A State Environmental Literacy Plan* is to introduce environmental education as an integral part of the Alabama courses of study at all grade levels. Positive effects of environmental education such as the development of higher-level critical-thinking skills can enhance course of study content and skill development requirements.

The state plan is designed to identify environmental education best practices for use by local school systems, state environmental organizations, and the general public. The goal is to provide groups in Alabama with a broadly supported, comprehensive plan for environmental education through the continued collaboration of a variety of interest groups. The plan incorporates components for Grades K-12 education programs, professional development opportunities, and effective training programs for pre-service and in-service teachers. It follows the guidelines established by the 2008 North American Association for Environmental Education publication, *Developing a State Environmental Literacy Plan*. The Alabama Environmental Literacy Plan Task Force in conjunction with the Alabama Department of Education will oversee all aspects of the plan.

## IMPLEMENTATION

The Alabama Environmental Literacy Plan Task Force will continue in its role to develop, promote, and support the integration of a viable environmental literacy plan for Alabama. In addition, the Task Force will work with the Alabama Department of Education to:

1. Establish a full-time environmental education specialist position within the Alabama Department of Education to serve as state-wide environmental literacy plan facilitator.
2. Support the development of a comprehensive plan for environmental literacy.
3. Provide a resource list of experts in the areas of ecology, natural resources, environmental management, and other related fields to serve as partners in environmental education programs and activities.
4. Provide a resource list that includes print as well as Internet sources to be used in environmental education teaching and learning.

The Alabama Environmental Literacy Plan Task Force in conjunction with the Alabama Department of Education will support existing environmental education providers in Alabama and support development of additional environmental education centers as needed for regional access by schools and communities. To achieve this goal, it will be necessary to:

1. Develop a list of existing state environmental education programs and centers.
2. Promote the use of environmental education centers through networking and other effective means of communication.
3. Explore the possibility of establishing standards and accreditation for environmental education centers and providers.

## **BENEFITS**

The environmental literacy plan provides uniformity and guidance to local school systems for enhancing existing, or developing new, environmental education programs. In addition, students improve their critical- and creative-thinking skills; develop a greater appreciation and awareness of the natural environment and its resources; and learn to interact responsibly within the environment. The state plan allows local school systems to:

- Align environmental education content and skill requirements with state courses of study mandates for high school graduation.
- Integrate environmental education topics into other content areas as appropriate.
- Provide environmental education professional development opportunities for all teachers.
- Provide effective and relevant opportunities for members of the education community as well as the local community to participate in the school environmental education program.
- Involve education providers, state agencies, community organizations, and other interested stakeholders in the school environmental education program.

# ELEMENTS OF THE STATE ENVIRONMENTAL LITERACY PLAN

## INSTRUCTIONAL PROGRAM

The environmental education instructional program is grounded in the content standards, content areas, and courses designed for the teaching and learning of environmental education concepts. Current Alabama courses of study content standards that address environmental education concepts need to be identified, content standards that may be expanded to include environmental concepts need to be noted, and other content areas and courses where environmental education concepts should be included need to be addressed. In addition, correlation documents and curriculum guides should be developed to help target areas where environmental education content may be integrated into instruction.

Examples of specific content standards, content areas, and courses where environmental education content are currently included in Alabama's curriculum can be found in the table on the following page. Items in the table show correlations between Alabama courses of study content and the content strands found in the *Excellence in Environmental Education: Guidelines for Learning (K-12)* published by the North American Association for Environmental Education. Further development of the environmental education program will require the Alabama Department of Education to achieve the following:

### Content Standards

1. Include a carefully developed and well-articulated environmental education content strand in the Grades K-8 section of the *Alabama Course of Study: Science*.
2. Integrate an environmental education content strand into the science disciplines addressed in the *Alabama Course of Study: Science* in the Grades 9-12 core courses and in all science high school elective core courses.
3. Include an environmental educator or knowledgeable professional in the field of environmental education as a member of the Alabama courses of study committees responsible for reviewing and revising the required content of the science, social studies, and health courses of study.
4. Prepare and make available to all educators a document providing an extensive correlation of Alabama courses of study content standards with the content strands included in the *Excellence in Environmental Education: Guidelines to Learning (K-12)*. In preparing the document, close attention should be given to the following:
  - a) The document should assist educators in correlating school lesson plans with state environmental literacy plan components.
  - b) The document should be useful to the Task Force for identifying content in the Alabama courses of study where environmental education content is evident.
  - c) The document should be useful to potential environmental education partners for identifying professional development topics.
  - d) The document should be reviewed and revised as new state content standards are adopted.
5. A curriculum guide intended to complement the *Alabama Course of Study: Science* will be developed. The guide will highlight standards that address environmental education content, provide sample lesson plans, and include a list of appropriate environmental education providers as well as a list of resources such as Web sites and trade books.

**Content Areas**

1. Environmental education content will be included, as appropriate, across all content areas.
2. On a yearly basis, all students will be involved in outdoor environmental education experiences in one or more content areas.

**Courses**

Currently, the required science courses for the Alabama High School Diploma are the Grades 9-12 biology, a physical science, and two elective science courses. However, to ensure all students are environmentally literate, an environmental science course should be among the science courses required for high school graduation. In addition, environmental education content should be integrated into other courses where justified. The table shown below provides examples of ways in which the environmental education content strands found in the *Excellence in Environmental Education: Guidelines for Learning (K – 12)* are presently addressed in the science course of study required content as well as in content included in other Alabama courses of study.

<b>ENVIRONMENTAL EDUCATION CONTENT CORRELATIONS: NATIONAL CONTENT STRANDS AND STATE CONTENT STANDARDS</b>			
<b><i>Excellence in Environmental Education: Guidelines for Learning (K-12)</i></b>		<b>Alabama Courses of Study</b>	
<b>Strand 1: Questioning, Analysis, and Interpretation Skills</b>	<b>Grades 5 - 8</b>	<b>English Language Arts</b>	<b>Grade 8 Reading Standards for Informational Text</b>
D. Evaluating accuracy and reliability – Learners are able to judge the weaknesses and strengths of the information they are using. <ul style="list-style-type: none"> <li>• Examine evidence, identify faulty reasoning, and apply other basic logic and reasoning skills in evaluating information sources.</li> </ul>		17. Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient; recognize when irrelevant evidence is introduced.	
<b>Strand 2: Knowledge of Environmental Processes and Systems</b>	<b>Grades 5 - 8</b>	<b>Social Studies</b>	<b>Grade 7 Geography</b>
A. Processes that shape the Earth – Learners have a basic understanding of most of the physical processes that shape the Earth.		3. Compare geographic patterns in the environment that result from processes within the atmosphere, biosphere, lithosphere, and hydrosphere of Earth’s physical systems.	
<b>Strand 2.1. The Earth as a Physical System</b>	<b>Grades K - 4</b>	<b>Science</b>	<b>Grade 3 Physical Science</b>
B. Changes in matter – Learners are able to identify basic characteristics of and changes in matter.		2. Identify physical and chemical changes in matter.	
<b>Strand 2.4. Environment and Society</b>	<b>Grades 9 - 12</b>	<b>Science</b>	<b>Grades 9 - 12 Environmental Science Elective Core</b>
A. Human/environment interactions – Learners understand that humans are able to alter the physical environment to meet their needs and that there are limits to the ability of the environment to absorb impacts or meet human needs.		12. Identify positive and negative effects of human activities on biodiversity. <ul style="list-style-type: none"> <li>• Identifying endangered and extinct species locally, regionally, and worldwide</li> </ul>	
<b>Strand 4: Personal and Civic Responsibility</b>	<b>Grades 5 - 8</b>	<b>Social Studies</b>	<b>Grade 7 Civics</b>
B. Recognizing citizens’ rights and responsibilities – Learners understand the rights and responsibilities of citizenship and their importance in promoting the resolution of environmental issues. <ul style="list-style-type: none"> <li>• Identify rights and responsibilities associated with citizenship, including personal and civic responsibilities.</li> </ul>		12. Describe how the United States can be improved by individual and group participation in civic and community activities.	

## HIGH SCHOOL ENVIRONMENTAL EDUCATION REQUIREMENTS

Students seeking an Alabama High School Diploma must complete graduation requirements that mandate students earn four credits in each of the content areas of English language arts, mathematics, science, and social studies in addition to other course requirements. According to the table on the preceding page, sample correlations between content in these areas and environmental education content are currently evident. However, an extensive correlation document is needed to verify where the environmental education content strands found in the *Excellence in Environmental Education: Guidelines for Learning (K-12)* are supported by the required content in the Alabama courses of study. Once the correlation document is complete, areas where environmental education content should be added can be addressed. However, the need still exists for a required environmental education science course for students in Grades 9-12, as well as the need to include an environmental education strand in all grades of the *Alabama Course of Study: Science*. Meanwhile, local school systems can help ensure students achieve the goal of environmental literacy by incorporating environmental education concepts into the local curriculum to the greatest extent possible, including offering opportunities for students to engage in required environmental education service-learning projects.

## TEACHER EDUCATION PROGRAMS

Teacher education programs providing studies in environmental education will be needed across the state at both the undergraduate and graduate level for teachers as well as others having an interest in environmental education. While new teachers will be gaining initial certification in environmental education fields, existing teachers will be able to gain advanced certification such as state Master Naturalist certification. The following information addresses goals regarding undergraduate and graduate studies in environmental education.

### Undergraduate

- Teacher certification in the area of environmental education will be available.
- Colleges and universities will have access to criteria for training all pre-service teachers regarding effective environmental education methodology.
- Emphasis will be placed on integrating environmental education content into all curriculum areas; additional emphasis will be placed on outdoor teaching strategies, including safety issues.
- In-service and pre-service teachers will be provided with current environmental education resource lists and contact information for environmental education providers.
- Environmental education experiences and internships offered by postsecondary institutions, nature centers, and other organizations will be promoted.

### Graduate

Graduate degrees in environmental education will be available to both formal (classroom teacher) and informal (nature center, museum, or park personnel responsible for education programs) environmental educators.

## **PROFESSIONAL DEVELOPMENT OPPORTUNITIES**

Professional development opportunities that emphasize best practices in the field of environmental education will be identified and utilized in the design of programs to help educators enrich and update content knowledge and skills. Professional development programs will address current methodologies, including technology, to be used both within the traditional classroom setting and in field-based settings. In addition, support will be offered to teachers through the provision of a local environmental education liaison.

Environmental education workshop grants will be offered by the Alabama Department of Education. The Task Force will assist in this endeavor that requires the following steps:

1. Develop a priority list of essential environmental education topics.
2. Use the priority list to identify environmental education partners to host teacher workshops, including establishing criteria for partner selection.
3. Design and implement an evaluation instrument for environmental education workshops.
4. Issue requests for grant proposals that address the following criteria:
  - Proposal shows correlation to Alabama courses of study required content.
  - Proposal reinforces environmental education subject matter at each grade level.
  - Proposal introduces creative ideas for environmental education instruction, which may utilize distance learning, the Internet, and mobile devices such as smartphones and tablets.
  - Proposal encourages outdoor experiential learning.
  - Proposal addresses outdoor and indoor instructional settings, with attention to safety.
  - Proposal includes measurable objectives.
  - Proposal includes pedagogical skills relevant to instruction on environmental issues.
  - Proposal promotes instruction that includes interdisciplinary studies and hands-on learning activities.
  - Proposal includes a plan for effective communication to inform educators of available professional development opportunities with special attention to those in remote and generally under-served areas.
5. Review proposals and issue grants.

## **ACHIEVEMENT AWARDS**

Educators who complete the required training, certification, or professional development in environmental education will be recognized and honored for their achievements. In addition, schools and school systems with exceptional environmental education participation will also be recognized. Recognition will be addressed in the following ways:

- Educators who complete a targeted number of contact hours in environmental education will be recognized. Educators may earn credit through a variety of ways, including those managed by Software Technology, Inc.-Professional Development (STI-PD).
- Schools and school systems serving as models for promoting environmental education and having significant teacher participation in professional development programs for environmental education will be recognized.

## **SCHOOL FACILITIES, GROUNDS, AND FIELD EXPERIENCES**

Opportunities for outdoor experiences on school grounds will be provided at all local school systems. School buildings and facilities for these experiences must be environmentally friendly as well as provide for maintenance of proper health and hygiene for all participants. To achieve these criteria, the following areas of concern must be addressed:

- Conservation practices must be identified and implemented.
- Natural habitats on school property must be protected or restored to the greatest extent possible.
- Efforts regarding the design, construction, maintenance, and operations for outdoor sites must be made to minimize any impact on the environment.

Field experiences not only offer students opportunities to engage in hands-on learning activities regarding the natural environment and its resources, but also provide them with activities to achieve healthy lifestyles through outdoor recreation and learning. Experiences that involve environmental education content will be offered to both teachers and students as a regular part of the school curriculum and will address the following concerns:

- A list of suggested off-site locations will be provided; however, other appropriate locations may be used.
- Logistics and travel costs will not limit student participation in environmental education experiences.

## **ASSESSMENT**

The Alabama Environmental Literacy Plan Task Force in conjunction with the Alabama Department of Education will conduct assessments for all program activities, including teacher and student participation. In addition, the Task Force will review test items in current state assessments that may be used to determine student achievement of the goal of environmental literacy. Assessment components may include:

- Administrating pretests and posttests at teacher workshops to determine extent of environmental education learning.
- Administrating pretests and posttests at student workshops to determine extent of environmental education learning.
- Evaluating effectiveness of the pre- and post-field trip packets.
  - ✓ Determining student preparation regarding essential knowledge and skills prior to field trip activities
  - ✓ Determining student extension of learning and skill development following field trip activities



- Monitoring the number of students and teachers participating in environmental education partner activities.
  - ✓ Compiling data regarding numbers of students and teachers participating in environmental education activities, including any changes in the number of participants and reasons for changes
  - ✓ Determining any changes in the number of environmental education activities offered, including reasons for changes
- Monitoring the number of viewers accessing current technology regarding environmental concepts and lesson plans such as podcasts, videos, Alabama Learning Exchange (ALEX), and iTunes.
- Monitoring the number of existing and newly created local school system environmental education classrooms.
- Monitoring the number of teachers receiving environmental education grants.
- Monitoring the number of student state science fair entries having a focus on environmental issues.
- Evaluating standardized assessments administered to public school students for environmental education content.

## FUNDING

The Alabama Environmental Literacy Plan Task Force will coordinate the initial statewide effort to secure necessary funding to successfully implement the *Alabama Alive! A State Environmental Literacy Plan*. Coordination of this effort will involve the following:

- Identify existing educational funding sources and initiatives that support the goals and objectives of *Alabama Alive! A State Environmental Literacy Plan*.
- Identify businesses, agencies, and organizations willing to make financial commitments to implement the plan, including funding for field trips, site visits, internships, administrative support for environmental education centers, curriculum development, dissemination of best practices activities, and professional development opportunities.
- Establish a grant-writing advisory team to identify grant opportunities and help secure necessary funding.

## BIBLIOGRAPHY

- Colorado Alliance for Environmental Education. *Colorado Environmental Education Plan*. Denver, Colorado: Colorado Department of Education, 2012, <<http://www.cde.state.co.us/otl/download/ColoradoEnvironmentalEducationPlan.pdf>> October 30, 2012.
- Developing a State Environmental Literacy Plan*. Washington, D. C.: North American Association for Environmental Education, 2008.
- Excellence in Environmental Education: Guidelines for Learning (K-12)*. Washington, D. C.: North American Association for Environmental Education, 2010.
- Kentucky Environmental Literacy Plan*. Frankfort, Kentucky: Kentucky Department of Education, 2012, <[http://www.keec.ky.gov/NR/rdonlyres/61D57311-67EC-4451-800E-14D7F427AFE1/0/KELP\\_2011.pdf](http://www.keec.ky.gov/NR/rdonlyres/61D57311-67EC-4451-800E-14D7F427AFE1/0/KELP_2011.pdf)> October 30, 2012.
- The North Carolina Environmental Education Plan*. Raleigh, North Carolina: North Carolina Office of Environmental Education and North Carolina Environmental Education Advisory Council, 2009, <[http://www.ee.enr.state.nc.us/ee\\_plan\\_web\\_print.pdf](http://www.ee.enr.state.nc.us/ee_plan_web_print.pdf)> October 30, 2012.
- Paemelaere, Evi, and Adele Balmer. "Endangered Animal Species of Alabama." *Encyclopedia of Alabama*, 2009, <<http://encyclopediaofalabama.org/face/Article.jsp?id=h-1656>> October 29, 2012.