

The Tennessee Valley and the War Effort

Oak Ridge, Fontana and the TVA

Introduction

The purpose of these lessons is to introduce students to the role that Oak Ridge, Fontana and the Tennessee Valley Authority played in the World War II efforts. The length of these lessons can be adjusted to meet your time constraints. Student access to a computer lab with Internet connectivity is recommended but not required. Another option is for the teacher to conduct the lessons in a classroom with one computer with Internet connectivity and an LCD projector.

Alabama Curriculum Standards

These lessons help fulfill the following **Alabama Teaching Standards** for:

United States: *Industrial Revolution to the Present*

E	G	H	CG
✓	✓	✓	✓

[Sixth Grade] 5. Explain causes and effects of the Great Depression on the people of the United States.

- Describing the importance of the election of Franklin D. Roosevelt as President of the United States, including the New Deal alphabet agencies
- Locating on a map river systems utilized by the Tennessee Valley Authority (TVA)

E	G	H	CG
✓		✓	✓

[Eleventh Grade] 6. Describe social and economic conditions from the 1920s through the Great Depression regarding factors leading to a deepening crisis, including the collapse of the farming economy and the stock market crash of 1929.

- Analyzing the Great Depression for its impact on the American family

E	G	H	CG
✓	✓	✓	✓

[Eleventh Grade] 7. Explain strengths and weaknesses of the New Deal in managing problems of the Great Depression through relief, recovery, and reform programs, including the Tennessee Valley Authority (TVA).

E	G	H	CG
✓	✓	✓	✓

[Eleventh Grade] 9. Describe the significance of major battles, events, and consequences of World War II campaigns.

- Explaining reasons for and results of dropping atomic bombs on Japan

E	G	H	CG
✓	✓	✓	✓

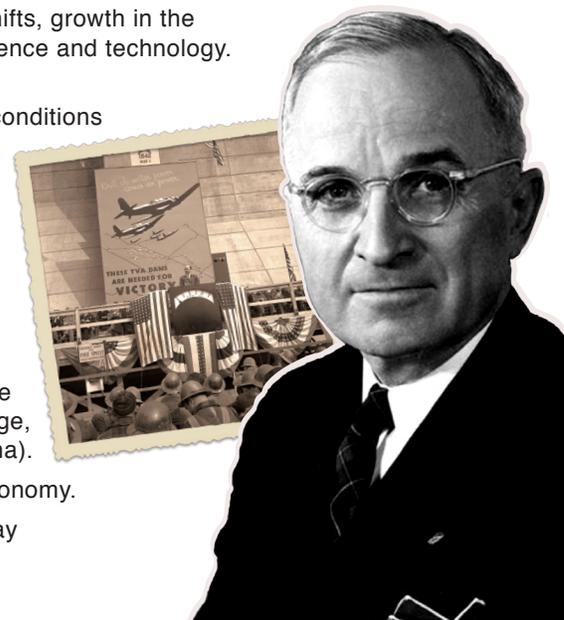
[Eleventh Grade] 10. Describe the impact of World War II on the lives of American citizens, including wartime economic measures, population shifts, growth in the middle class, growth of industrialization, advancements in science and technology.

E	G	H	CG
	✓	✓	✓

[Eleventh Grade] 15. Describe changing social and cultural conditions in the United States during the 1950s, 1960s, and 1970s.

Objectives

- Students will understand the effects of the New Deal and World War II on the Tennessee Valley.
- Students will assess the lasting impact of the New Deal policies.
- Students will analyze the impact of the Manhattan Project (i.e. the creation of Oak Ridge, Tennessee; nuclear proliferation, espionage, ethical debate, medical experimentation, Nagasaki, and Hiroshima).
- Students will analyze how World War II affected the American economy.
- Students will explore how World War II had an impact on everyday American life.



ALABAMA SOCIAL STUDIES LESSON #2

The Tennessee Valley and the War Effort

Mini lessons that meet Alabama Curriculum Standards and can be taught using Currents of Change online resources.

If you want to teach this . . .

Industrial Revolution to Present: *Economics, Geography, History, Civics & Government*

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[Eleventh Grade] 7. Explain strengths and weaknesses of the New Deal in managing problems of the Great Depression through relief, recovery, and reform programs, including the Tennessee Valley Authority (TVA).

[Eleventh Grade] 9. Describe the significance of major battles, events, and consequences of World War II campaigns.

- Explaining reasons for and results of dropping atomic bombs on Japan

Try this . . .

Locate and choose photos of ethnically diverse families and individuals engaged in various activities, especially photos related to the war efforts. Take note of wartime posters and their messages. Engage in Socratic Seminar to compare and contrast photos while making inferences of conditions and lifestyles depicted as a result of war.

If you want to teach this . . .

Industrial Revolution to Present: *Economics, Geography, History, Civics & Government*

[Eleventh Grade] 9. Describe the significance of major battles, events, and consequences of World War II campaigns.

- Explaining reasons for and results of dropping atomic bombs on Japan

Try this . . .

1. Prior to activity, view the video clip *Oak Ridge* found in *Lesson Two: The Tennessee Valley and the War Effort*. Also use the interactive Oak Ridge map found in Lesson Two. Provide students with a graphic organizer or guide them in creating a graphic organizer to outline events of the atomic bomb development and reasons for the choice of Oak Ridge as presented in the video clip. Students will watch the clip again, as well as use the interactive map, as they complete the organizer.

(Consider the following: U.S. discovers Germany is building a bomb; reasons for choosing Tennessee-Oak Ridge and TVA; construction and use of the bomb against Japan; followed by the peace time uses of the atom and advances made during war).

2. Use *The Oak Ridge Petition of 1945* and *The Oak Ridge Petition* found in *Lesson Two: The Tennessee Valley and the War Effort* as a source for Socratic Seminar discussion about the thought and efforts against the development and use of the atomic bomb. After brief and general discussion, divide students into groups for debate. Opposing groups will be those in support of the U.S. efforts to develop and use the bomb and those opposed to bomb development and use.
3. Using the content in *The Oak Ridge Petition of 1945* and *The Oak Ridge Petition* found in *Lesson Two: The Tennessee Valley and the War Effort*, assign some students to role-play signers of the petitions. Prior research may be conducted relative to persons portrayed. Other students will be U.S. government representatives. Have students engage in debate over issues presented in the petitions.

If you want to teach this . . .

Industrial Revolution to Present: *Economics, Geography, History, Civics & Government*

[Sixth Grade] 5. Explain causes and effects of the Great Depression on the people of the United States.

- Describing the importance of the election of Franklin D. Roosevelt as President of the United States, including the New Deal alphabet agencies
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- Analyzing the Great Depression for its impact on the American family

[Eleventh Grade] 7. Explain strengths and weaknesses of the New Deal in managing problems of the Great Depression through relief, recovery, and reform programs, including the Tennessee Valley Authority (TVA).

Try this . . .

This is a primary objective most suitable for the content and resources of Currents of Change. The following are starters to generate instruction ideas:

1. Photo analysis comparing images of people before electricity, during TVA construction, and after the introduction of electricity to the valley.
2. View selected video clip(s) and/or photos. Students will work in predetermined groups to generate brief observation lists in response to questions such as:
 - a. How did TVA contribute to the WWII effort?
 - b. What changes in consumerism did TVA make possible in the Tennessee Valley area?
 - c. List the technologies used in Tennessee Valley homes prior to TVA, and the technologies people gained access to after TVA.
 - d. With construction of the various dams, what geographical changes were made to the region?
 - e. How did geographical changes made by the creation of dams change the lives and lifestyles of the Tennessee Valley people? (loss of farms/small communities; increase in recreational facilities; industrialization; increased river traffic, both recreational and industrial; population shifts—away from the area and to the area; etc).
3. In predetermined groups, have students use the interactive *Power Generation Map* located in *Lesson Two: The Tennessee Valley and the War Effort* to research TVA's five types of power generation facilities. Students will also locate several locations for each type. Extended research may be conducted to determine the positive and negative environmental and economic impact(s) each type of facility has made in its respective communities.
4. View the *Norris Dam* video clip. Have students record several key statements from observations. Engage students in Socratic Seminar to discuss video clip contents in relation to social, socio-economic, and community changes resulting from the construction of Norris Dam. Also taking note of TVA and Roosevelt connections. Teacher should facilitate discussion to include both positive and negative changes. ("We never knew when the Depression came...")
5. Use the resource *Make Your Own News Story* to create a summation article. Consider a cross-curriculum collaboration with a teacher from the English department.

Introductory Activity

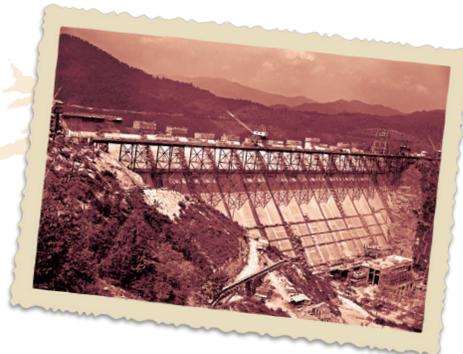
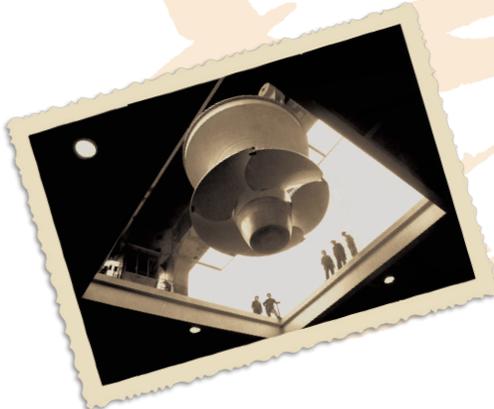
1. Using a TV or DVD player (or) computer with DVD player and an LCD projector, show the *The Tennessee Valley and the War Effort* video (22 minute video available on the DVD or **currentsofchange.net**).
2. Use the following questions to lead the class in a follow-up discussion:
 - a. Why was Oak Ridge, Tennessee established?
 - b. In what part of Tennessee is Oak Ridge located, and why was it not originally marked on any map? Why was this location chosen?
 - c. What role did Oak Ridge play in the United States' World War II effort?
 - d. Why was the work being conducted at Oak Ridge kept so secret?
 - e. What consequences did the work conducted at Oak Ridge have upon the rest of the world?
 - f. How did the secrecy of the work at Oak Ridge affect the people who lived there?
 - g. What role did Fontana Dam play in the war effort?
 - h. Why did Roosevelt ask TVA to build this particular dam?
 - i. How many workers did it take to build the Fontana Dam?
 - j. Today, it would take 10 years to build a dam like Fontana. How long did it take back then?
 - k. What is so special about the materials used to build Fontana and why? How are these materials different from the steel and concrete typically used? Explain.

Discovery Activity

Exploring the CurrentsOfChange.net Website

Note: This class can be conducted in a student computer lab with Internet connectivity where each student has access to his or her own computer. Another option would be for the teacher to lead the class through the exercise using the website and handouts in a classroom using a single computer with Internet connectivity and an LCD projector.

1. Distribute a handout to each student. Students will write answers on notebook paper (see back for handout).
2. Direct students to the website: **currentsofchange.net**.
3. Ask students to use the tools and resources provided by the website to respond to the handout questions for a 100-point grade.
4. As the students complete the activity, be available to answer any questions they might have.



Extension Activities

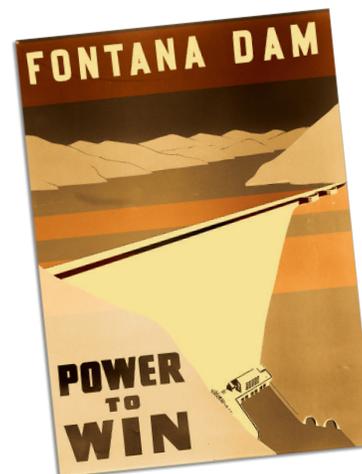
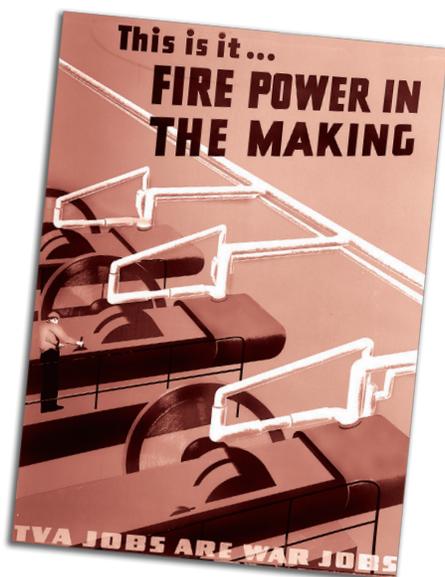
Digging Deeper

Assign students one of the Extension Activities for this lesson, or provide a list of all Extension Activities (provided on currentsofchange.net/teachers) and let students work in groups to decide which Extension Activity they would like to complete.

Answers to the Extension Activities will vary based on student interest and the amount of research they conduct. This is different from the Student Handout answers, which are very specific and are included in this folder.

Background information for the Extension Activities has been included on our website, currentsofchange.net/teachers.

- 1. The Oak Ridge Petition.** Click the link called “The Oak Ridge Petition” located in the Resources page of the website to review the Oak Ridge Petition. Think about the impact this document had upon the decision to drop nuclear weapons. Now imagine you had the opportunity to sign the petition: Would you have chosen to sign it? Write a short essay explaining why you did or did not sign it.
- 2. Life in Oak Ridge.** Imagine you are a teenager whose family is getting ready to move to Oak Ridge, a community you have heard very little about. Watch the *Life in Oak Ridge* video, then think about what your experiences might be like after you move. What would you tell your friends about your future home? What do you think life will be like in Oak Ridge?
- 3. Nuclear Power—Pros and Cons.** Imagine you are employed at Oak Ridge during WWII. You have just discovered that your work is helping to create the atomic bomb, but that the work you are doing will also contribute towards advancements in electric power and medicine. Now you must decide whether or not to continue working on the project. Your class will be divided into two groups for a debate. One group will support the project; one group will oppose the project. On the website, watch the *Oak Ridge* video and review the links under the “Nuclear Power Debate” section; then create a list of arguments that support your position.
- 4. Fontana and WWII.** The building of Fontana Dam was a critical contribution to America’s World War II effort. Pretend you are a news reporter assigned to cover the progress of Fontana. Watch the *Fontana Dam* video then use the website to research additional information and photos. Write a news article announcing the completion of the dam, highlighting its features and explaining its significance to the war effort. Use the website template and photo archive to create your story.



**THE TENNESSEE VALLEY AND
THE WAR EFFORT**

THE TENNESSEE VALLEY AND THE WAR EFFORT: Oak Ridge, Fontana and the TVA

Name _____ Date _____ Class _____

Directions: Use the information, tools and resources provided at currentsofchange.net and in *The Tennessee Valley and the War Effort* video to answer the following questions. Use complete sentences to respond to the short-answer questions.

1. What role did Fontana play in the United States' WWII effort?
2. How many workers built Fontana Dam?
3. How long did TVA have to build Fontana Dam and why?
4. What unique materials were used to build Fontana Dam and why?
5. How long did it take to build Fontana Dam, and how long would it take to build Fontana today?
 - a) 3 years and 1 year
 - b) 10 years and 3 years
 - c) 15 years and 5 years
 - d) 3 years and 10 years
6. How many fighter planes did Fontana help to put in the air just in time to help win the war?
 - a) 10,000
 - b) 5,000
 - c) 100,000
 - d) 50,000
7. What are some of the similarities between the workers who helped build Fontana and today's military?
8. Why did the United States need to rapidly build an atomic bomb in a secret location?
9. How many homes could have been powered using the electricity needed for Oak Ridge?
10. On August 6, 1945, an important event in world history changed the outcome of the war. What was this event, and how did it change the course of World War II? Did foreign leaders view the United States differently after August 6?
11. How many people (approximately) lived in Oak Ridge while the atomic bomb was being created?
12. How is nuclear power used in the medical field? What is the connection between the medical and military uses of nuclear power?
13. What is the historical significance of Douglas Dam? How long did it take to construct the dam and why is it important to the history of TVA?
14. When looking at the map of Oak Ridge on the website, why do you believe Oak Ridge, Tennessee was chosen as the location for a nuclear facility during World War II? What impact did the facility have on the lives of Tennesseans?
15. Do you believe the creation of Oak Ridge had a positive or negative impact on the WWII effort? Explain.