

Federal Web Resources for High School Teachers and Students

by Nancy Kolenbrander and Linda Reida

The purpose of this article is to provide high school librarians with information about federal Web sites that they may find useful in providing information to teachers and students. The main criterion for inclusion was information which supports the North Carolina high school curriculum. Identifying sites that matched this criterion was not a difficult task.

There are numerous federal Web sites that list resources for teachers, including lesson plans and learning activities. Several sites, including the National Aeronautics and Space Administration and the Peace Corps, also offer videos and a speakers bureau. Curricular information is most readily available in the fields of social studies and science. Teachers of other disciplines, however, will find Web sites of interest listed below, particularly in the General category. It is hoped this list with specific addresses will save time for users of the information. Special attention was given to sites with lesson plans and learning activities. The following information demonstrates the breadth of federal information available on the Web for teachers to integrate into their teaching.

Education

Department of Education (<http://www.ed.gov>)

From the main page, click on FAQs & Guides to locate *A Teacher's Guide to the Department of Education*. This leads to information on grants, department services, and resources.

Publications for Parents (<http://www.ed.gov/pubs/parents.html>) offers many publications. Scroll down the page to find "Preparing Your Child for College," which covers types of colleges, how to choose, financing, and links to other useful resources. "The Student Guide: Financial Aid From the U.S. Department of Education" is available from http://www.ed.gov/prog_info/SFA/StudentGuide. The stated purpose of the guide is to make financial aid easier to understand.

And then there's ERIC: Educational Resources Information Center (<http://www.apsedsys.com/eric>) with hot links to the 16 Clearinghouses. ERIC lesson plans for teachers are available from Ask ERIC Virtual Library (<http://eric.syr.edu>). Click on Virtual Library to reach Ask ERIC Lesson Plans. Lesson plans range in grade level from K-12 and are listed by title.

General

National Park Service (<http://www.nps.gov>)

There is much in this Web site to support both science and social studies courses. Each national park, monument, and historical site is detailed with photos and descriptions; often links to individual Web pages are provided as well. Air and water quality at natural sites is examined in text and graphs and cogent essays on causes of pollution are provided. The geologic explanations are sometimes thin, but could serve as steppingstones to deeper research. Historical and archeological information on historic sites can be accessed by name or place; some are also arranged thematically. This site contains learning pages for science and social studies as well as information on grants.

Occupational Outlook Handbook (<http://stats.bls.gov/80/ocohome.htm>)

This address takes the user directly to the complete handbook prepared by the Bureau of Labor Statistics. The page may be searched by keyword(s); Boolean searching is available. Entries for occupations include nature of work, working conditions, employment, training, job outlook, earnings, and related occupations. English and vocational students are likely to find this Web site very useful.

Peace Corps (<http://www.peacecorps.gov>)

This is, of course, the page for any student considering entering the Peace Corps, but it

includes lesson plans that are designed for high school students of geography as well. Maps and Country Fact Files provide the basic information. Interviews, Letters from the Field, and Volunteer Views provide human interest. Foreign language students studying various cultures will find items of interest as well.

Smithsonian Institution (<http://www.si.edu>)

A clickable map of the Mall takes the user to home pages for each of the 16 constituent museums of the Smithsonian. The biggest appeal will be for art students and teachers, but other subject areas are supported as well. Foreign language students can find welcome messages in French, Spanish, and German. The National Zoo, the Natural History Museum, and the Air and Space Museum have good science information; American History Museum is a natural for social studies. Depending on what exhibits are current, English students may find information at the National Portrait Gallery. For example, an essay on Rebel Poets of the 1950s accompanies their portraits. Art students will enjoy visits to the National Gallery, the Freer and Sackler Galleries, the African Art Museum, the Hirshhorn Museum, the American Art Gallery, and the Renwick Gallery. Most include pictures of the art accompanied by biographical sketches of the artists or information about the school of art.

United States Information Agency (<http://www.usia.gov>)

This site is a source of information concerning American history, politics, and international diplomacy. USIA has two home pages, one for the United States and a second for international information. Through the home page for the United States (<http://www.usia.gov/usa/usa.htm>), you can click on Fundamental Documents that provides full-text access to the *U.S. Constitution*, *Bill of Rights*, and *Declaration of Independence* in English, French, and Spanish. It also offers "Basic Readings in U.S. Democracy," an incredible source of primary material on American history. This main menu links to multiple databases on the topics of U.S. History, U.S. Politics, U.S. Economic System, Geography, and Weather. Under U.S. Culture there is an extensive Outline of American Literature. A second home page (<http://www.usia.gov/usis.html>) is the International home page. Click on Index to this Site for access to U.S. Agency's Foreign Press Centers, further linking you to documents on upcoming international conferences.

The White House (<http://www.whitehouse.gov>)

Students interested in current events will find press releases and Presidential statements here. A tour of the White House and its art is available. American history students will find brief biographies and portraits of Presidents and First Ladies. Select Briefing Room from the main menu and then scroll down to Latest Federal Government Statistics to find links to economic and social statistics, which include such items as crime, health, employment, transportation, and demographics. Select Commonly Requested Federal Services from the main menu, then select Education to find student financial aid information and to download an application form. From Education scroll down to find a "Social Security Teacher's Kit," which may be downloaded. It contains a six-lesson unit for high school students.

Health

National Institutes of Health (<http://www.nih.gov>)

At the main menu click on Institutes and Offices to retrieve hot links to the Institute's 24 divisions. At one division, the National Institute on Drug Abuse, click on Information on Drugs of Abuse to retrieve full-text access to publications on that topic. Scroll down the page to Marijuana to find "Marijuana, Facts for Teens" as one of its full-text documents. Another division of NIH, the National Institute of Mental Health, offers information on Depression and Panic Disorder through Quick Time Videos. To locate, select Public Information from the main menu, then scroll down to Educational Programs. Health Information, at the main menu, leads to resources such as "Cancer Net," a searchable bibliography with treatment information for patents and physicians. Reach this by scrolling down from Health Information Cancer Information. Health Information also provides access to NIH Information Index, a subject-word guide to diseases and conditions under study by NIH.

Science

Environmental Protection Agency (<http://www.epa.gov>)

The Students and Teachers section of this site includes many documents designated as teaching aids, with classroom activities, rationale, and suggestions for teaching about the environment. There is also an extensive list of documents with facts about environmental problems. Very readable information on such subjects as ozone depletion, pesticides, acid rain, clean air, clean water, and other related topics are available here. This page is not as glitzy as some, but the information will be valuable to students of environmental science.

Forest Service (<http://www.fs.fed.us>)

Retrieve a clickable map of United States National Forests by selecting Enjoy the Outdoors from the main menu and then select A Graphical Guide to Your National Forests. Click on a forest

and you will receive information on the forest, the land, recreation opportunities, ecosystem management, and names and addresses for additional information. Some forests give more information such as planning a trip to that forest.

GLOBE Program (<http://www.globe.gov>)

The GLOBE Program, sponsored by several cooperating government agencies, invites students from all around the world to collect data and report it via the Internet. Areas of research include weather, hydrology and water chemistry, land cover, soil moisture, and other measures that will aid scientists in painting a global picture of our planet and how it may be changing. This Web site will lead teachers through the necessary steps to involve their students in the GLOBE Program.

National Aeronautics and Space Administration (<http://www.nasa.gov>)

There are so many educational resources available from NASA that it is difficult to limit information from this site. Perhaps the richest site for educators is OER Online Educational Resources (<http://quest.are.nasa.gov/OER/EDRC22.html>). OER's main page lists links to NASA K-12 Internet Project Home Page, Space Colony Design Contest for Grades 6-12, PLUMAS: The On-line Journal of Math and Science Examples for Pre-College Education, and The Star Child Page of K-12 Astrophysics Images/Text. For the science fiction fan there's Just for Fun (http://www.gsfc.nasa.gov/education/just_for_fun/startrek.html). This site discusses warp drives and transporters, the scientific reality versus science fiction.

Additional educational resources can be linked to from Space Science Data Operations Office's page, which is dedicated to space science education (<http://www.gsfc.nasa.gov/education>). The stated purpose of the site is using its knowledge and discoveries about the sun, the solar system, the galaxy, and the universe to develop education and public outreach opportunities and activities that enhance science, mathematics, and technology education. It provides links to Space Science Lessons and Teacher Curricula Materials. NASA on the Cutting Edge (<http://www.okstate.edu/aviation>) presents the NASA Educational Video Conferencing series that broadcasts live video conferences via satellite to schools. Also worth checking is Resources for Learning (<http://quest.are.nasa.gov:80/hst/lounge/learning.html>) and the Hubble Space Telescope (<http://www.stsci.edu>) or Views of the Solar system (<http://www.hawastoc.org/solar/homepage.htm>) for images of the sun, planets, moons, asteroids, comets, and meteoroids.

U.S. Geological Survey (<http://www.usgs.gov>)

An excellent source for earth science and environmental science, this page is filled with buttons linking the user to images and fairly in-depth information on Geology, Water, the Environment, Natural Resources, Mapping, and Hazards such as volcanoes, earthquakes, and floods. The Learning Web is particularly well designed, with entire lessons to help teachers integrate the information into their classrooms. Some of the lessons include online tutorials (the one on volcanoes is excellent); others have important graphics. This is a rich and complex site. The Biology link is described below.

U.S. Geological Survey, Biological Resources Division (<http://www.nbs.gov>)

Biology students and teachers will find state-by-state information on endangered species of plants and animals by clicking on Science by State from the main menu. The Education link takes students to projects like The Whole Frog Project, which enables students to electronically dissect Fluffy the Frog, to Wild Wings North, which tracks the migration of specific snow geese in real time, and to several other pages. Students will find an inspiring article on North Carolina native F. Eugene Hester under Special Interest Stories from the main page. This page also can be accessed from the USGS page described above.

Social Studies

Census Bureau (<http://www.census.gov>)

Reach a clickable map of the United States by first selecting Subjects A-Z from the main menu and then scrolling down to select County Profiles. At the map site, you can select a state and a county to retrieve data on the 1990 Population Census, County Business Patterns Economic Profile, and USA Counties General Profile. The 1990 population data is offered for STF1A and STF3A tables. The former is brief population and housing information. The latter is more detailed, containing additional factors such as income levels and educational attainment. For current data on U.S. population, click on Current U.S. Population Count from the main menu. To retrieve the number of the resident population of the United States, select United States for estimated population counts updated every second.

Department of State (<http://www.state.gov>)

With the whole world as its bailiwick, the State Department should have a large and complex site. This Web page will not disappoint its users. What is the federal government's position on global warming? chemical weapons? women's issues? Tibet? Taiwan? Students selecting the Hot Topics or International Policy buttons from the main menu will find U.S. foreign policy positions arranged thematically and geographically. Extensive links to speeches and statements

made by State Department officials abound in all categories.

The ever-popular Country Background Notes can be found under International Policy, and additional information about current situations in many countries appears in the Travel section. The Careers section is particularly good, with extensive descriptions of foreign service careers, educational requirements, and opportunities for student employment, including complete instructions for application. Teachers interested in American-sponsored schools overseas will find excellent links by selecting About State.

Federal Bureau of Investigation (<http://www.fbi.gov>)

The main menu provides access to Major Investigations such as "TWA Flight 800 Investigations" and "Centennial Olympic Park Bombing." Under FBI Publications there are several sources on crime statistics, including the *Uniform Crime Reports* and *Crime in the United States*. Both of these publications require Adobe Acrobat Reader, a software program to access the files. From the main menu there is access to History, What's New, the FBI's Most Wanted, and additional information on FBI programs and services. The Acrobat Reader can be downloaded from Adobe's Web Site if you do not have this software on your workstation.

Government Printing Office (<http://www.access.gpo.gov>)

The Government Printing Office produces printed and electronic publications for Congress and the departments and establishments of the Federal Government. It uses GPO Access to provide access to over 70 databases, including the *Budget of the United States Government*. It is an excellent way to search the *Federal Register*, Congressional Bills for the 103rd-105th Congress, *Congressional Record* (same dates), the *Government Manual*, *United States Code* and the Supreme Court decisions 1937-1975. Keyword searching allows you to retrieve data by Congressman and subject. To reach these databases, from the main menu scroll down to Access to Government Information Products and select GPO Access: On-line, On-Demand, & Locator Services. This site is continually adding new databases.

House of Representatives (<http://www.house.gov>)

Trying to encourage students to correspond with their congressman? This site allows you to contact your representative, learn about bills which have been introduced, and retrieve information about the legislative process. Click on Legislative Process for the status of current House bills and current information about what's happening on the House floor. Select House Directory for member phone numbers, addresses, and some e-mail addresses. Choose Educational Resources for full-text of the *Constitution*, *Bill of Rights*, and the *Declaration of Independence*. The Internet Law Library has information on international law and treaties plus searchable versions of the *U.S. Code* and the *Code of Federal Regulations*.

The Senate (<http://www.senate.gov>)

Click on Senators to select Directory of Senators for listings of senators alphabetically and by state. For each senator there is a picture, biography, address, and a list of committee assignments. At the home page, click on Learning about the Senate to select A Virtual Tour of the U.S. Senate. This site does not have as much information as the House of Representatives, such as bills introduced and international law.

Library of Congress (<http://lcweb.loc.gov>)

The American Memory collection of documents, photographs, movies, and sound recordings contains excellent sources for the study of political and cultural American history. Today in History makes use of these sources in daily updates. The Learning Page enables the user to access the collection fairly easily by providing options to search on events, people, places, times, or topics. This page also includes an Educator's Page with a sample teaching unit and some cogent tips on using primary sources in teaching and learning. Scrolling down to the Research Tools section takes the user to 71 of the invaluable Country Studies that have the advantage of clickable tables of contents and full text searching. Students will enjoy browsing the Exhibitions, where there is a permanent display of American treasures in the collection.

Resources:

Two books were very helpful in locating federal Web sites. The first, *The Federal Internet Source*, 5th ed. (Washington, D.C.: National Journal, Inc., 1996) provides URLs for federal agencies and a brief description of the types of information available at the site. Graphics of agencies' main Web pages frequently are included. It has an excellent agency index.

A second resource, *The Great American Web Book* by Raphael Sagalyn (New York: Random House, 1997), has extended annotations for federal Web sites that detail educational resources available at each site. The author includes specific URLs for sites with lesson plans and interactive learning activities. This source also has an extensive subject index providing easy access to specific information.