

Project WILD - Science and Civics Correlations to the Virginia Standards of Learning

History and Social Sciences Standards

Key concepts are bolded

Civics & Economics

- CE.3 The student will demonstrate knowledge of citizenship and the rights, duties, and responsibilities of citizens by
- describing the processes by which an individual becomes a citizen of the United States;
 - describing the First Amendment freedoms of religion, speech, press, assembly, and petition, and the rights guaranteed by due process and equal protection of the laws;
 - describing the duties of citizenship, including obeying the laws, paying taxes, defending the nation, and serving in court;
 - examining the responsibilities of citizenship, including registering and voting, communicating with government officials, participating in political campaigns, keeping informed about current issues, and respecting differing opinions in a diverse society;**
 - evaluating how civic and social duties address community needs and serve the public good.**

Science and Civics Activities
<ul style="list-style-type: none">• Defining Action - page 251• Who Cares? - page 131• Legal Eagles - page 128

- CE.4 The student will demonstrate knowledge of personal character traits that facilitate thoughtful and effective participation in civic life by
- practicing trustworthiness and honesty;
 - practicing courtesy and respect for the rights of others;
 - practicing responsibility, accountability, and self-reliance;**
 - practicing respect for the law;
 - practicing patriotism;
 - practicing decision making;**
 - practicing service to the school and/or local community.**

Science and Civics Activities
<ul style="list-style-type: none">• What Do People Think? - page 258• What Did They Do Over There? - page 262

Government:

- GOVT.1 The student will demonstrate mastery of the social studies skills responsible citizenship requires, including the ability to
- analyze primary and secondary source documents;
 - create and interpret maps, diagrams, tables, charts, graphs, and spreadsheets;
 - analyze political cartoons, political advertisements, pictures, and other graphic media;
 - distinguish between relevant and irrelevant information;
 - evaluate information for accuracy, separating fact from opinion;
 - identify a problem, weigh the expected costs and benefits and possible consequences of proposed solutions, and recommend solutions, using a decision-making model;**
 - select and defend positions in writing, discussion, and debate.

Science and Civics Activities
<ul style="list-style-type: none">• What Do People Think? - page 262• Give Wildlife a Break - page 81• Do You Hear What I Hear? - page 117

- GOVT.6 The student will demonstrate knowledge of local, state, and national elections by
- describing the organization, role, and constituencies of political parties;
 - describing the nomination and election process;
 - examining campaign funding and spending;
 - analyzing the influence of media coverage, campaign advertising, public opinion polls, and Internet-based communications on elections;**
 - examining the impact of reapportionment and redistricting on elections;
 - identifying how amendments extend the right to vote;
 - analyzing voter turnout;
 - evaluating the degree to which interest groups influence political life;**
 - participating in simulations of local, state, and/or national elections.

Science and Civics Activities
<ul style="list-style-type: none"> Do you Hear What I Hear? – page 117 What’s Their Difference? – page 122

- GOVT.7 The student will demonstrate knowledge of the organization and powers of the national government by
- examining the legislative, executive, and judicial branches;**
 - analyzing the relationships among the three branches in a system of checks and balances;**
 - examining the ways individuals and groups exert influence on the national government.**

Science and Civics Activities
<ul style="list-style-type: none"> Executive Influence - page 94 Structure Review - page 67

- GOVT.9 The student will demonstrate knowledge of the process by which public policy is made by
- examining different perspectives on the role of government;
 - explaining how local, state, and national governments formulate public policy;
 - describing the process by which policy is implemented by the bureaucracy at each level;**
 - analyzing how individuals, interest groups, and the media influence public policy.**

Science and Civics Activities
<ul style="list-style-type: none"> Presidential Prerogatives - page 98 Is There a Feather in My Cap? – page 125 What’s Their Difference? - page 123

- GOVT.10 The student will demonstrate knowledge of the operation of the federal judiciary by
- describing the organization, jurisdiction, and proceedings of federal courts;
 - examining how John Marshall established the Supreme Court as an independent, co-equal branch of government through his opinion in *Marbury v. Madison*;
 - describing how the Supreme Court decides cases;
 - comparing the philosophies of judicial activism and judicial restraint;
 - evaluating how the judiciary influences public policy by delineating the power of government and safeguarding the rights of the individual.

Science and Civics Activities
<ul style="list-style-type: none"> Testing the Law: TVA vs. Hill - page 109

- GOVT.16 The student will demonstrate knowledge of the role of government in the Virginia and United States economies by
- analyzing the impact of fiscal and monetary policies on the economy;
 - describing the creation of government-provided goods and services that are not readily produced by the market;
 - examining environmental issues, property rights, contracts, consumer rights, labor-management relations, and competition in the marketplace;
 - understanding the types and purposes of taxation.

Science and Civics Activities
<ul style="list-style-type: none"> • Testing the Law: TVA vs. Hill - page 109

- GOVT.17 The student will demonstrate knowledge of personal character traits that facilitate thoughtful and effective participation in civic life by
- practicing trustworthiness and honesty;**
 - practicing courtesy and respect for the rights of others;**
 - practicing responsibility, accountability, and self-reliance;
 - practicing respect for the law;
 - practicing patriotism;
 - practicing financial responsibility

Science and Civics Activities
<ul style="list-style-type: none"> • What Do People Think? - page 258 • What Did They Do Over There? - page 262

- GOVT.18 The student will understand that thoughtful and effective participation in civic life is characterized by
- obeying the law and paying taxes;
 - serving as a juror;
 - participating in the political process;
 - performing public service;
 - keeping informed about current issues;**
 - respecting differing opinions in a diverse society;**
 - practicing personal and fiscal responsibility**

Science and Civics Activities
<ul style="list-style-type: none"> • Who Cares? - page 131 • Legal Eagles - page 128

Science Standards

Key concepts are bolded

Life Science

- LS.6 The student will investigate and understand that organisms within an ecosystem are dependent on one another and on nonliving components of the environment. Key concepts include
- the carbon, water, and nitrogen cycles;
 - interactions resulting in a flow of energy and matter throughout the system;**
 - complex relationships within terrestrial, freshwater, and marine ecosystems;** and
 - energy flow in food webs and energy pyramids.

Science and Civics Activities
<ul style="list-style-type: none"> • Limits to Living Here - page 210 • Who Lives in Soil? – page 215

- LS.7 The student will investigate and understand that interactions exist among members of a population. Key concepts include
- competition, cooperation, social hierarchy, territorial imperative; and**
 - influence of behavior on a population.**

Science and Civics Activities
<ul style="list-style-type: none"> • Limits to Living Here – page 210

LS.10 The student will investigate and understand that ecosystems, communities, populations, and organisms are dynamic, change over time, and respond to daily, seasonal, and long-term changes in their environment. Key concepts include

- a) **phototropism, hibernation, and dormancy;**
- b) **factors that increase or decrease population size; and**
- c) **eutrophication, climate changes, and catastrophic disturbances.**

Science and Civics Activities
<ul style="list-style-type: none">• Color me a Watershed -page 30• Change My pH and I'll Change Yours – page 196• Limits to Living Here – page 210

LS.11 The student will investigate and understand the relationships between ecosystem dynamics and human activity. Key concepts include

- a) food production and harvest;
- b) **change in habitat size, quality, or structure;**
- c) **change in species competition;**
- d) population disturbances and factors that threaten or enhance species survival; and
- e) **environmental issues.**

Science and Civics Activities
<ul style="list-style-type: none">• Ecology Begins at Home page 49<ul style="list-style-type: none">• Close to Home page 136• Where Does Water Run? page 148• Change My pH and I'll Change Yours page 196• A Place of Every Living Thing – page 228

Biology

BIO.1 The student will demonstrate an understanding of scientific reasoning, logic, and the nature of science by planning and conducting investigations in which

- a) **observations of living organisms are recorded in the lab and in the field;**
- b) **hypotheses are formulated based on direct observations and information from scientific literature;**
- c) **variables are defined and investigations are designed to test hypotheses;**
- d) **graphing and arithmetic calculations are used as tools in data analysis;**
- e) conclusions are formed based on recorded quantitative and qualitative data;
- f) sources of error inherent in experimental design are identified and discussed;
- g) validity of data is determined;
- h) chemicals and equipment are used in a safe manner;
- i) **appropriate technology including computers, graphing calculators, and probeware, is used for gathering and analyzing data, communicating results, modeling concepts, and simulating experimental conditions;**
- j) research utilizes scientific literature;
- k) differentiation is made between a scientific hypothesis, theory, and law;
- l) alternative scientific explanations and models are recognized and analyzed; and
- m) current applications of biological concepts are used.

Science and Civics Activities
<ul style="list-style-type: none">• To Breathe or Not To Breathe – page 189• Who Lives in the Soil? – page 215• A Place For Every Living Thing – page 228• How to Evaluate Habitats – page 238

- BIO.2 The student will investigate and understand the chemical and biochemical principles essential for life. Key concepts include
- a) **water chemistry and its impact on life processes;**
 - b) the structure and function of macromolecules;
 - c) the nature of enzymes; and
 - d) the capture, storage, transformation, and flow of energy through the processes of photosynthesis and respiration.

Science and Civics Activities
<ul style="list-style-type: none">• Change my pH and I'll Change Yours – page 196

- BIO.8 The student will investigate and understand dynamic equilibria within populations, communities, and ecosystems. Key concepts include
- a) **interactions within and among populations including carrying capacities, limiting factors, and growth curves;**
 - b) nutrient cycling with energy flow through ecosystems;
 - c) succession patterns in ecosystems;
 - d) **the effects of natural events and human activities on ecosystems; and**
 - e) **analysis of the flora, fauna, and microorganisms of Virginia ecosystems.**

Science and Civics Activities
<ul style="list-style-type: none">• Ecology Begins at Home page 49• Limits to Living Here – page 210• A Place for Every Living Thing – page 228<ul style="list-style-type: none">• How to Evaluate Habitats – page 238

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January 2016