

Virginia Department of Education Standards

V. Human impact, global climate change, and civic responsibility

The student will investigate and understand the human impact on our environment. Key content includes

- Population ecology, carrying capacity, human population dynamics, impacts of population growth advantages and disadvantages of balancing short term interests with long term welfare of society;
- individual activities and decisions can have an impact on the environment;
- people impact their environment through the use of natural resources to include how agriculture, forestry, ranching, mining, urbanization, transportation, and fishing impact the land, water, air, and organisms; and
- the allocation of state and federal lands.

The student will investigate and understand pollution and waste management. Key content includes

- the effects and potential implications of pollution and resource depletion on the environment at the local and global levels to include air and water pollution, solid waste disposal, depletion of the stratospheric ozone, global warming, and land uses;
- the mechanisms of bioaccumulation and biomagnification;
- pest management; and
- methods used for remediation of land, air, and water pollution.

The student will investigate and understand global climate change. Key content includes

- the use of scientific evidence in reporting changes in average global temperature, greenhouse gases, quantities of arctic and land ice, ocean temperature, ocean acidification, and sea level rise;
- the relationship of global climate change on the frequency or magnitude of extreme weather events; and
- actual and potential effects of habitat destruction, erosion, and depletion of soil fertility associated with human activities.

The student will investigate and understand civic responsibility and environmental policies. Key content includes

- consumer choices in Virginia impacts jobs, resources, pollution, and waste here and around the world;
- political, legal, social, and economic decisions may affect global and local ecosystems;
- the impact of media on public opinion and public policy;
- individuals and interest groups influence public policy;
- cost-benefit analysis and trade-offs in conservation policy; and
- compare methods used to protect the environment by local, state, national, and international governments and organizations

