CA STANDARDS and THE ECOLOGICAL FOOTPRINT
HIGH SCHOOL

	CALIFORNIA STATE SOCIAL STUDIES/HISTORY STANDARD	CONCEPTUAL TIE-INS TO THE EF and GUIDING QUESTIONS (Use the guiding questions to frame a unit or lesson that leads to students understanding the concepts and related standards.)	ACTIVITY (Chips, Food, Tomato)
10.3	Students analyze the effects of the Industrial Revolution in England, France, Germany, Japan, and the United States		
	2. Examine how scientific and technological changes and new forms of energy brought about massive social, economic, and cultural change (e.g., the inventions and discoveries of James Watt, Eli Whitney, Henry Bessemer, Louis Pasteur, Thomas Edison).	Science and technology allowed mass production, which led to increased consumption of manufactured goods in industrialized countries. The inventions revolved around energy that came from non-renewable sources. • *How has technology contributed to larger Ecological Footprints? Can technology be used to lessen them? What advances have been made in reducing footprint size with renewable energy?*	Food
	3. Describe the growth of population, rural to urban migration, and growth of cities associated with the Industrial Revolution.	Some technologies improved sanitation, which meant longer life spans, increased population, and larger EFs. People moved to cities to find industrial jobs. In poorer countries the sanitation was not as good, which meant more disease and malnutrition. Those who lived in urban areas had larger EFs as they had to rely on agriculture from rural areas. • *How does population play a role in a nation's Ecological Footprint? What other factors contribute to footprint size?*	Food
	5. Understand the connections among natural resources, entrepreneurship, labor, and capital in an industrialized economy.	Economies are a subset of ecosystems. They are dependent on supply of natural resources. We must monitor EF's to ensure that we do not deplete our resources and hurt the economy. In a capitalist system countries must protect natural resources and/or gain rights to other countries' natural resources for economic gain. Non-renewable resources must be monitored in order to insure supply, and renewable resources must be monitored to ensure that our consumption rates do not exceed renewal rates. • *What is the relationship between the economy and the ecosystem?*	Chips
10.4.1	Describe the rise of industrial economies and their link to imperialism and colonial-ism (e.g. the role played by national security and strategic advantage; moral issues raised by the search for national hegemony, Social Darwinism, and the missionary impulse; **material issues such as land, resources, and technology**).	Industrialized economies used imperialism and colonialism to gain access to developing nations' land, resources, and technology (including people). By using other countries' resources, nations could profit by taking advantage of differing climates, agricultural products, and location. • *What significant events throughout history led to differing footprint sizes among nations (ex. slave trade)?*	Food, Tomato
10.4.3	Explain imperialism from the perspective of the colonizers and the colonized and the varied immediate and long-term responses by the people under colonial	The EF discusses contemporary environmental problems as a result of systemic structures set in place through history. Imperialism contributed the unequal distribution of wealth and resources.	Food, Tomato

	rule.	• *What were the belief systems at this time, and how did they differ between the colonizers and the colonized?*	
10.10	**Students analyze instances of nation-building in the contemporary world in at least two of the following regions or countries: the Middle East, Africa, Mexico and other parts of Latin America, and China.**		
	1. Understand the challenges in the regions, including their geopolitical, cultural, military, and economic significance and the international relationships in which they are involved.	The EF shows how different countries' economies depend on the resources of other countries and how the market affects international relationships. • *What other countries and regions depend on the resources of these regions (i.e., the regions listed in the standard)?* • *What are the major trade patterns, economic policies, and political events in these regions? Who have these policies and events served? What countries have had influence over these decisions?*	Chips, Food, Tomato
	2. Describe the recent history of the regions, including political divisions and systems, key leaders, religious issues, natural features, resources, and population patterns.	The EF can be used to compare/contrast how population growth and consumption rates and types have impacted overall consumption in different regions. • *How are these factors balanced in developing countries and developed countries?* • *How are conflicts over resources a factor in recent history?*	Chips, Food, Tomato
	3. Discuss the important trends in the regions today and whether they appear to serve the cause of individual freedom and democracy.	Discuss whether governmental decisions on policies with regard to the country's EF impact individual rights (i.e., population limits in China and policies in Kerala). • *How must responsibility for a nation's footprint size rests on the policy makers, and how much responsibility rests on the individual?*	Chips, Food
10.11	**Students analyze the integration of countries into the world economy and the information, technological, and communications revolutions (e.g., television, satellites, computers).**	Discuss if technological advances have left less developed countries behind and the effects of the distribution of wealth. • *How can technologically advanced nations become leaders in lessening global footprint size?*	Chips
11.2.2	Describe the changing landscape, including the growth of cities linked by industry and trade, and the development of cities divided according to race, ethnicity, and class.	Industry caused more people to move into cities and share resources. Technology allowed for better sanitation and less poverty in industrialized nations. The EF may also be used to demonstrate the effects of more urban lifestyles. People became less involved in their own food production.	Food
11.2.6	Trace the economic development of the United States and its emergence as a major industrial power, including its gains from trade and the advantages of its physical geography.	The US has high consumption and population rates that contribute to the world's largest EF. The EF shows that the sources of these high consumption rates come from other countries and domestic resources. • *What circumstances led to the development of these international relationships over time?*	Chips, Tomato
11.5.7	Discuss the rise of mass production techniques, the	Students can see how mass production techniques and new technologies aided	Chips, Food

	growth of cities, the impact of new technologies (e.g. the automobile, electricity), and the resulting prosperity and effect on the American landscape.	in population growth and development, providing choices for the people but also expanding the reach of resource demands from those who can afford them. • *How did these advances affect employment and skill levels of workers in different countries as assembly line production ensued?*	
11.6.3	Discuss the human toll of the Depression, natural disasters, and unwise agricultural practices and their effects on the depopulation of rural regions and on political movements of the left and right, with particular attention to the Dust Bowl refugees and their social and economic impacts in California.	Students may understand how the economy is a subset of the ecosystem. When a natural disaster hits or unsustainable agricultural practices are used, a country can feel the devastating effects in the economy. • *What human modifications of the environment contributed to the Dust Bowl?* • *How did changes in technology, farm size, and land ownership during the Depression affect farm workers and Dust Bowl refugees?* • *How did these environmental and social factors affect political movements on the left and right?*	Chips, Food, Tomato
11.8.6	Discuss the diverse environmental regions of North America, their relationship to local economies, and the origins and prospects of environmental problems in those regions.	Industrialized nations have large footprints because they have to use resources and natural habitat in order to accommodate their population and consumption rates. The natural beauty of the landscape is sometimes sacrificed in order to meet the people's needs as the local and national economies exploit the land for logging, fishing, oil drilling, etc. • *What is the economic value of ecosystem services, and to what extent are these services accurately accounted for in markets? How does this affect environmental problems?* • *How important are intrinsic value and aestheticism of natural landscapes?*	Chips, Food, Tomato
11.8.7	Describe the effects on society and the economy of technological developments since 1945, including the computer revolution, changes in communication, advances in medicine, and improvements in agricultural technology.	Students can discuss how technology made increased consumption possible, and health advancements increased population rates.	Chips, Food, Tomato
11.11.5	Trace the impact of, need for, and controversies associated with environmental conservation, expansion of the national park system, and the development of environmental protection laws, with particular attention to the interaction between environmental protection advocates and property rights advocates.	The EF shows how we use land for different reasons. Students can discuss how open space conservation and wilderness constitute land uses with legitimate purposes. • *How should those be provided?* • *In what ways can the government play a major role in the environment's stewardship or destruction?*	Chips
12.2.5 (AD)	Describe the reciprocity between rights and obligations; that is, why enjoyment of one's rights entails respect for the rights of others.	One way of viewing this tension is as a comparison between the rights of current and future generations.	Chips
12.1 all (E)	Students understand common economic terms and concepts and economic reasoning	Students can see that a government must decide what to do when resources become scarce.	Chips

		A basic market principle is that all costs are internalized, yet conventional economic models and indicators (including the GDP) do not account for the role ecosystem services and their destruction • *Does privatization of the land or investing in renewable resources improve Footprints or not, and why?* • *If the true costs of ecosystem destruction were accurately accounted for in the economy, what would be the impact on environmental stewardship? How might governments, businesses, and consumers behave differently?*	
12.2 all (E)	Students analyze the elements of America's market economy in a global setting.	The US uses resources not only locally but also from other nations. The strength of the US dollar gives it an advantage in the global economy. • *Where does this leave developing nations?*	Tomato
12.3.1	Understand how the role of government in a market economy often includes providing for national defense, addressing environmental concerns, defining and enforcing property rights, attempting to make markets more competitive, and protecting consumers' rights.	Students may understand that the government acts as the controlling body of natural resource use.	Chips, Food, Tomato
12.6	Students analyze issues of international trade and explain how the U.S. economy affects, and is affected by, economic forces beyond the United States' borders.		Chips, Food, Tomato
	1. Identify the gains in consumption and production efficiency from trade, with emphasis on the main products and changing geographic patterns of twentieth-century trade among countries in the Western Hemisphere.	Ask students where they think the goods that each country is consuming came from and how they got there. They can also trace the sources of particular commodities in differing regions of the world. • *To what extent do definitions of economic 'gain' and 'efficiency' reflect true environmental and social costs?*	Chips, Tomato
	3. Understand the changing role of international political borders and territorial sovereignty in a global economy.	Globalization has led to unequal distribution of resources. Wealthier countries have money to extract natural resources from developing countries. • *How could governments work individually and together to improve the global footprint and standards of living in all nations?*	Chips, Food, Tomato