Facing the Future Activities Aligned with California State Science and Social Studies Content Standards

The following charts indicate California State Science and Social Studies Standards that are met by lessons in *Facing the Future*'s Lesson Guide "Engaging Students through Global Issues" and its associated readings. Many lessons can easily be modified to address additional standards.
(Lessons not included in a particular chart do not meet specific standards in the subject area.)

Facing the Future Lessons from *Engaging Students through Global Issues*:

1. Crossword Puzzles
2. Global Issues Trivia
3. Sides Debate
4. Making Global Connections
5. From Issue to Opportunity
6. Is It Sustainable?
7. Systems Are Dynamic
8. Bears in the Air
9. How Big is a Billion?
10. Splash But Don't Crash
11. Seeking Asylum
12. Watch Where You Step!
13. Now Hear This!
14. When the Chips Are Down
15. Farming for the Future
16. Every Drop Counts!
17. Fueling the Future
18. Biodiversity Connections
19. Toil for Oil
20. Fishing for the Future
21. What's Up With the GDP?
22. Livin' the Good Life?
23. What's in the News?
24. Are You Buying This?!
25. Life: The Long and Short of It
26. Partners for Health
27. Three Faces of Governance
28. Taxes: Choices and Trade-offs
29. Take a Step for Equity
30. Shop Till You Drop?
31. Let Them Eat Cake!
32. Everyone Does Better When Women Do Better
33. What's Debt Got to Do With It?
34. Microcredit for Sustainable Development
35. To Fight or Not to Fight?
36. Worldview Mingle
37. Who Are the Nacirema?
38. Metaphors for the Future
39. Deep Space 3000
40. Creating Our Future

Key to Standard Alignment:

X = Activity and Assessment
W= Writing Connection
A = Action Project
T = Technology Connection
M = Math Connection
L = Lesson Extension

Science
Grade Six – Focus on Earth Science

Ecology (Life Science)

5. Organisms in ecosystems exchange energy and nutrients among themselves and with the environment. As a basis for understanding this concept:

a. Students know energy entering ecosystems as sunlight is transferred by producers into chemical energy through photosynthesis and then from organism to organism through food webs.

b. Students know matter is transferred over time from one organism to others in the food web and between organisms and the physical environment.

c. Students know populations of organisms can be categorized by the functions they serve in an ecosystem.

d. Students know different kinds of organisms may play similar ecological roles in similar biomes.

e. Students know the number and types of organisms an ecosystem can support depends on the resources available and on abiotic factors, such as quantities of light and water, a range of temperatures, and soil composition.

Resources

6. Sources of energy and materials differ in amounts, distribution, usefulness, and the time required for their formation. As a basis for understanding this concept:

a. Students know the utility of energy sources is determined by factors that are involved in converting these sources to useful forms and the consequences of the conversion process.

b. Students know different natural energy and material resources, including air, soil, rocks, minerals, petroleum, fresh water, wildlife, and forests, and know how to classify them as renewable or nonrenewable.

c. Students know the natural origin of the materials used to make common objects.

Investigation and Experimentation

7. Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:

a. Develop a hypothesis.

b. Select and use appropriate tools and technology (including calculators, computers, balances, spring scales, microscopes, and binoculars) to perform tests, collect data, and display data.

c. Construct appropriate graphs from data and develop qualitative statements about the relationships between variables.

d. Communicate the steps and results from an investigation in written reports and oral presentations.

e. Recognize whether evidence is consistent with a proposed explanation.

f. Read a topographic map and a geologic map for evidence provided on the maps and construct and interpret a simple scale map.

g. Interpret events by sequence and time from natural phenomena (e.g., the relative ages of rocks and intrusions).

h. Identify changes in natural phenomena over time without manipulating the phenomena (e.g., a tree limb, a grove of trees, a stream, a hillslope).

Science Grade 6 – Focus On Earth Science

FTF Lesson #	5a	5b	5c	5d	5e	6a	6b	6c	7a	7b	7c	7d	7e
6			X		X	X	X				X		
9					X								
10				X									
11					X								
12					X								
13					X								
14					X	X	X		X	X	X	X	X
15					X	X	X				X		
16					X		X					T	
17						X	X	X	X	X	T	X	X
18	X	X	X	X	X								
19						X	X						
20			X		X		X						
21			X			X	X		W	W	W	W	W
22									X	X	X	X	X
25													X
27						X	X		X		X	X	X
28									X	X	X		
29			X										
30					X	X	X						
31					X	X	X						
32			X							X	T	W	X
34									X	X		X	X
39	X	X	X	X	X	X	X						
40						X	X						

Science
Grades Nine-Twelve Biology/Life Sciences

Standards that all students are expected to achieve in the course of their studies are unmarked. Standards that all students should have the opportunity to learn are marked with an asterisk (*).

Ecology

6. Stability in an ecosystem is a balance between competing effects. As a basis for understanding this concept:

a. Students know biodiversity is the sum total of different kinds of organisms and is affected by alterations of habitats.

b. Students know how to analyze changes in an ecosystem resulting from changes in climate, human activity, introduction of nonnative species, or changes in population size.

c. Students know how fluctuations in population size in an ecosystem are determined by the relative rates of birth, immigration, emigration, and death.

d. Students know how water, carbon, and nitrogen cycle between abiotic resources and organic matter in the ecosystem and how oxygen cycles through photosynthesis and respiration.

e. Students know a vital part of an ecosystem is the stability of its producers and decomposers.

f. Students know at each link in a food web some energy is stored in newly made structures but much energy is dissipated into the environment as heat. This dissipation may be represented in an energy pyramid.

g.* Students know how to distinguish between the accommodation of an individual organism to its environment and the gradual adaptation of a lineage of organisms through genetic change.

FTF Lesson #	6a	6b	6c	6d	6e	6f	6g
6	X	X	X		X		
9			X				
10		X	X				
11			X				
12		X	X		X		
13		X			X		
14		X			X		
15	X	X			X		
16		X			X		
17		X			X		
18	X	X	X		X		
19		X					
25			X				
27		X			X		
29			X				
31		X			X		
33					X		
39	X	X	X		X		X
40	X	X	X		X		X

Social Studies Grades Six-Eight
Historical and Social Sciences Analysis Skills

1. Chronological and Spatial Thinking

a. Students explain how major events are related to one another in time.

b. Students construct various time lines of key events, people, and periods of the historical era they are studying.

c. Students use a variety of maps and documents to identify physical and cultural features of neighborhoods, cities, states, and countries and to explain the historical migration of people, expansion and disintegration of empires, and the growth of economic systems.

2. Research, Evidence, and Point of View

a. Students frame questions that can be answered by historical study and research.

b. Students distinguish fact from opinion in historical narratives and stories.

c. Students distinguish relevant from irrelevant information, essential from incidental information, and verifiable from unverifiable information in historical narratives and stories.

d. Students assess the credibility of primary and secondary sources and draw sound conclusions from them.

e. Students detect the different historical points of view on historical events and determine the context in which the historical statements were made (the questions asked, sources used, author's perspectives).

3. Historical Interpretation

a. Students explain the central issues and problems from the past, placing people and events in a matrix of time and place.

b. Students understand and distinguish cause, effect, sequence, and correlation in historical events, including the long-and short-term causal relations.

c. Students explain the sources of historical continuity and how the combination of ideas and events explains the emergence of new patterns.

d. Students recognize the role of chance, oversight, and error in history.

e. Students recognize that interpretations of history are subject to change as new information is uncovered.

f. Students interpret basic indicators of economic performance and conduct cost-benefit analyses of economic and political issues.

Grade 6-8 – Historical & Social Sciences Analysis Skills

FTF Lesson #	1a	1b	1c	2a	2b	2c	2d	2e	3a	3b	3c	3d	3e	3f
2				X			X							
4	X								X	X	X			
5	X			X			W		X	X	X			
6	X		X	X					X	X	X	X		X
7	X			X					X	X	X	X		
8											X	X		
9										X				
10	X			X					X	X	X			
11	X	X	X	X					X	X	X	X		X
12	X			X					X	X	X			X
13				X					X	X	X			X
14	X			X			W		X	X	X			X
15	X			X					X	X	X	X		X
16	X			X					X	X	X	X		T
17				X					X	X	X	X		X
18									X	X	X	X		
19	X			X					X	X	X	X		X
20				X					X	X	X	X		X
21	X		X	X					X	X	X			X
22				X					X	X	X			X
23	X	X		X					X	X	X	X		
24				X			X		X	X		X		
25				X					X	X	X			X
26	X			X			W		X	X	X			X
27	X			X					X	X	X			X
28	X			X					X	X	X			X
29	X			X			A		X	X	X			X
30					L	L				X	X			X
31				X					X	X	X			X
32				X					X	X	X	X		X
33	X						T		X	X	X			X
34	X			X			X		X	X	X			X
35	X		X	X					X	X	X	X		X
36														
37				X	X	X	X		X		X			
38	X			X		W	W	W	X	X	X			
39	X		X	X			A		X	X	X	X		X
40	X		X	X			A		X	X	X	X		X

Social Studies Grades 9-12
Historical and Social Sciences Analysis Skills

1. Chronological and Spatial Thinking

a. Students compare the present with the past, evaluating the consequences of past events and decisions and determining the lessons that were learned.

b. Students analyze how change happens at different rates at different times; understand that some aspects can change while others remain the same; and understand that change is complicated and affects not only technology and politics but also values and beliefs.

c. Students use a variety of maps and documents to interpret human movement, including major patterns of domestic and international migration, changing environmental preferences and settlement patterns, the frictions that develop between population groups, and the diffusion of ideas, technological innovations, and goods.

d. Students relate current events to the physical and human characteristics of places and regions.

2. Historical Research, Evidence, and Point of View

a. Students distinguish valid arguments from fallacious arguments in historical interpretations.

b. Students identify bias and prejudice in historical interpretations.

c. Students evaluate major debates among historians concerning alternative interpretations of the past, including an analysis of authors' use of evidence and the distinctions between sound generalizations and misleading oversimplifications.

d. Students construct and test hypotheses; collect, evaluate, and employ information from multiple primary and secondary sources; and apply it in oral and written presentations.

3. Historical Interpretation

a. Students show the connections, causal and otherwise, between particular historical events and larger social, economic, and political trends and developments.

b. Students recognize the complexity of historical causes and effects, including the limitations on determining cause and effect.

c. Students interpret past events and issues within the context in which an event unfolded rather than solely in terms of present-day norms and values.

d. Students understand the meaning, implication, and impact of historical events and recognize that events could have taken other directions.

e. Students analyze human modifications of landscapes and examine the resulting environmental policy issues.

f. Students conduct cost-benefit analyses and apply basic economic indicators to analyze the aggregate economic behavior of the U.S. economy.

Social Studies Grades 9-12
Historical & Social Sciences Analysis Skills

FTF Lesson #	1a	1b	1c	1d	2a	2b	2c	2d	3a	3b	3c	3d	3e	3 f
4		X							X	X			X	
5	X	X			W	W	W	W	X	X			X	
6	X	X								X			X	
7		X												
8	A								A	A				
9				X										
10	X	X		X										
11	X		X	X						X	X			
12	X			X						X			X	
13	X			X									X	
14	X	X		W									X	
15	X	X											X	
17	X			X				X					X	X
18		X		X									X	
19	X	X							X				X	X
20	X			X				W	X				X	X
21				X				W	X					X
22			X	X				X			X		X	X
23				X					X	X	X	X		
24				X										X
25				X					X	X				X
26	X	X		X										
27		X		X									X	X
28	X	X		X										X
29				X										
30				X										X
31				X										X
32		X		X										
33	X	X							X					
34								X						
35	X								X	X	X	X		
39		X	X					X	X				X	
40	X	X		X					X	X			X	

Social Studies Grade 10
History-Social Science Content Standards
World History, Culture, and Geography: The Modern World

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.
2. Describe the recent history of the regions, including political divisions and systems, key leaders, religious issues, natural features, resources, and population patterns.
3. Discuss the important trends in the regions today and whether they appear to serve the cause of individual freedom and democracy.

10.11 Students analyze the integration of countries into the world economy and the information, technological, and communications revolutions (e.g., television, satellites, computers).

FTF Lesson #	10.10-1	10.10-2	10.10-3	10.11
17		X		
23				X
24				X
27	X			
30				X
31				X
32				X
33				X
34				X
35	X			

Social Studies Grade 12
History-Social Science Content Standards
Principles of American Democracy and Economics

12.3 Students evaluate and take and defend positions on what the fundamental values and principles of civil society are (i.e., the autonomous sphere of voluntary personal, social, and economic relations that are not part of government), their interdependence, and the meaning and importance of those values and principles for a free society.

1. Explain how civil society provides opportunities for individuals to associate for social, cultural, religious, economic, and political purposes.
2. Explain how civil society makes it possible for people, individually or in association with others, to bring their influence to bear on government in ways other than voting and elections.
3. Compare the relationship of government and civil society in constitutional democracies to the relationship of government and civil society in authoritarian and totalitarian regimes.

12.8 Students evaluate and take and defend positions on the influence of the media on American political life.

1. Discuss the meaning and importance of a free and responsible press.
2. Describe the roles of broadcast, print, and electronic media, including the Internet, as means of communication in American politics.
3. Explain how public officials use the media to communicate with the citizenry and to shape public opinion.

FTF Lesson #	12.3-1	12.3-2	12.3-3	12.8-1	12.8-2	12.8-3
23				X	X	X
24				X	X	X
27	X	X				
32		X	X			

Social Studies Grade 12
History-Social Science Content Standards
Principles of Economics

12.1 Students understand common economic terms and concepts and economic reasoning.

1. Examine the causal relationship between scarcity and the need for choices.
2. Identify the difference between monetary and nonmonetary incentives and how changes in incentives cause changes in behavior.
3. Evaluate the role of private property as an incentive in conserving and improving scarce resources, including renewable and nonrenewable natural resources.

12.3 Students analyze the influence of the federal government on the American economy.

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.
2. Identify the factors that may cause the costs of government actions to outweigh the benefits.
3. Describe the aims of government fiscal policies (taxation, borrowing, spending) and their influence on production, employment, and price levels.
4. Understand the aims and tools of monetary policy and their influence on economic activity (e.g., the Federal Reserve).

FTF Lesson #	12.1-1	12.1-2	12.1-3	12.3-1	12.3-2	12.3-3	12.3-4
19			X				
20			X				
21		X					X
28	X	X		X	X	X	X
29	X						
30	X						
31	X						
32	X						
33	X	X		X	X	X	X