



LESSON PLAN

Mní Wičhóni: Water is Life

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LESSON PLAN

Goals

The goal of this unit is for students to develop a deeper understanding of how fresh water is central to all life. Students will learn about the relationship between humans and fresh water, threats to fresh water, and ways that they can be addressed.

Standards - California

This Unit meets California State Common Core standards for English Language Arts (SL.9-10.1, RST.9-10.7, SL.9-10.4, WHST.9-10.8, WHST.9-10.9), Engineering, Technology and Applications of Science (ESS3.A, ESS3.C, ETS1.A, ETS1.B).

Courses and Grade Level

This Unit is designed for use in all high school classes, Grades 9-12.

Unit Length

This unit takes approximately 5 days of instruction time.

- 225 minutes of classroom time, broken up into five, 45 minute segments
- 2-3 hours homework time
- Extension Activity: Field Trip, 1 additional day

Required Materials

- Internet access to play videos, for classroom activities and homework
- Mní Wičhóni Slide Deck
- Mní Wičhóni Discussion Guide



Objectives and Assessment

Students will be able to:	CA Standards	Learning Activity	Evidenced By
initiate and participate effectively in a range of collaborative discussions.	SL.9-10.1 SL.11-12.1	Video and Class Discussion	Class Discussion
understand and articulate how water shapes societies and cultures.	ESS3.A SL.11-12.1 RST.9-10.7	Opening exercise Video Class Discussion Teacher Presentation Video Worksheet	Quiz Class Discussion
understand and articulate how socio-cultural attitudes towards water affect water management.	ESS3.A ESS3.C SL.11-12.1 HS-LS4-6	Video and Class Discussion Teacher Presentation Worksheet Pair and Share	Quiz Worksheet
understand Key Terms: Mní Wičhóni and Environmental Racism	RST.9-10.4	Teacher Presentation	Quiz Homework 1
know where their water supply comes from, and threats to the local water supply.	ESS3.C WHST.9-10.8 SL.9-10.4 SL.11-12.1 12.3.2	'Water in my Community' Homework Assignment Group Discussion	'Water in my Community' Homework Assignment
know how to address threats to fresh water.	ETS1.B WHST.9-10.8 WHST.9-10.9 SL.11-12.1	Group Activity	Group Activity Worksheet



Required Reading

- 🔗 [Environmental Racism](#)

Handouts

- 🔗 [Environmental Racism Homework](#)
- 🔗 [Mní Wičhóni - Water is Life: In Class Video Worksheet](#)
- 🔗 [Water in My Community](#)
- 🔗 [Addressing a Water Issue Group Project](#)
- 🔗 [Water is Life Quiz](#)

Additional Resources

- 🔗 [What Standing Rock Teaches Us About Environmental Racism](#)
- 🔗 [Winnemum Wintu](#)
- 🔗 [Run4Salmon Curriculum](#)
- 🔗 [Uranium Mining at Grand Canyon](#)
- 🔗 [Tribes Support Uranium Mining Ban](#)
- 🔗 [Oak Flat Environmental Injustice](#)



INSTRUCTIONAL PROCEDURE

DAY 1 Water is Life

Duration	Activity	Steps and Instructions
20 minutes	Opening Exercise: Pair n' Share and Classroom Gallery	<ul style="list-style-type: none"> 5 mins: Have students draw what water means to them. 5 mins: Have students share their drawing with a neighbor, explaining what they drew and why. 10 mins: Ask students to tape their pictures to a wall. Encourage them to look at each others' images.
20 minutes	Teacher Presentation	<ul style="list-style-type: none"> Introduce the idea that "culture" is what gives meaning to water. Define the concept of Mni Wiconi, in the context of the Standing Rock movement. Define the concept of Environmental racism. slides 1-9 Introduce the video resource. slide 10
5 minutes	Review Homework	<ul style="list-style-type: none"> Distribute the homework, "Environmental Racism," assignment and explain the instructions.



DAY 2 Water and People

Duration	Activity	Steps and Instructions
20 minutes	Watch Video	<ul style="list-style-type: none"> ◦ Distribute the <i>Mní Wičhóni: Water is Life Worksheet</i>. ◦ Show the Video, "<i>Mní Wičhóni: Water is Life</i>." ◦ Ask students to fill in the worksheet while watching the video.
20 minutes	Worksheet Review and Teacher Presentation	<ul style="list-style-type: none"> ◦ Introduce humans' spiritual/religious connections to water. ◦ Together with class, review and add to the answers to the worksheet. ◦ Have students hand in their revised and completed worksheets at the end of class. ◦ Review forms of resistance to threats to water and why they are effective. slides 11-16
5 minutes	Review Homework	<ul style="list-style-type: none"> ◦ Review the instructions for homework, "<i>Water In My Community</i>" and answer any questions students may have. slide 17



DAY 3 Water In My Community

Duration	Activity	Steps and Instructions
15 minutes	Review Homework	<ul style="list-style-type: none"> Collect homework, then lead a class discussion reviewing the answers the students came up with to the homework assignment prompts. Responses may vary.
15 minutes	Class Discussion	<ul style="list-style-type: none"> Lead students in a class discussion. slide 18
15 minutes	Teacher Presentation	<ul style="list-style-type: none"> 5 mins: organize students into groups of 3 and pass out the <i>Addressing A Water Issue</i> handout. Demonstrate how to research and address water issues. slides 19-22 5 mins: Have students select the water problem they want to address and give them the option to work on the Addressing a Water Issue activity as homework in advance of class time.



DAY 4 Protecting Water

Duration	Activity	Steps and Instructions
40 minutes	Group Activity	<ul style="list-style-type: none">Have students break into their groups from the day before and conduct independent research to write their letter to address a water issue
5 minutes	Review Homework	<ul style="list-style-type: none">Inform students that their homework is to complete the project, and refine their letters.



DAY 5 Student Presentations and Reflection

Duration	Activity	Steps and Instructions
30 minutes	Group Activity Student Presentations	<ul style="list-style-type: none"> Have each group read their letter out loud to the class. If there is not enough time for this, have each group tape their letter to the wall, gallery style, and encourage students to move around the gallery and read the letters.
10 minutes	Student Reflection	<ul style="list-style-type: none"> Briefly review what the students learned this week. Go around the room and have each student offer a one sentence response to the prompt: "Please share one thing that stood out to you about any of the material we learned this week." slide 23
5 minutes	Take Home Exam	<ul style="list-style-type: none"> Distribute the <i>Take Home Exam</i>.

Optional Extension Activity - Field Trip

Local water field trip

- Start with empirical observation using 4 of 5 senses. What does the water tell you? What can you learn from it?
- Identify the local tribe/language/place names/any related stories
- What animals and plants live here? What is the food web? How do the plants and animals depend on the water? How do people depend on this water?

GRADING	(50 total points)
Homework	10 pts
Participation/In Class Discussion	10 pts
In-class Video Worksheet (Satisfactory/Unsatisfactory)	
Group Project Activity	10 pts
Quiz	20 pts



ENVIRONMENTAL RACISM

Name: _____

Read the following resource, watch the videos, take the practice test, and complete the assignment.

Learning resource:

<https://courses.lumenlearning.com/alamo-sociology/chapter/reading-environmental-racism/>

Instructions: On your own, research an example of environmental racism. Some key words you might use to search for an example include:

- 🔍 Environmental Racism
- 🔍 Environmental Justice
- 🔍 Environmental Discrimination
- 🔍 Water Insecurity

Answer the following short questions for the example you research:

What is the environmental problem?

Where is it located?

What is the population affected? Your answer must include demographic data showing that the population is a minority, or a group with less power, using information about race, ethnicity and/or class and socio-economics (e.g. working class, poor, etc.).



How is the population affected by the environmental problem?

Is anything being done about the problem? Circle 'yes' or 'no.' If 'yes,' what? If 'no,' why do you think nothing is being done?

Please copy and paste the sources you used to find this information below:



ENVIRONMENTAL RACISM HOMEWORK - ANSWER KEY

The assignment is worth 10 points total, to be assessed as described below. Instructor may choose to assess the assignment as satisfactory [6-10 points] /unsatisfactory [0-5 points] or on a grade scale:

- 9-10 points - A**
- 8 points - B**
- 7 points - C**
- 6 points - D**
- 5 points or below - F**

Read the following resource, watch the videos, take the practice test, and complete the assignment.

Learning resource:

<https://courses.lumenlearning.com/alamo-sociology/chapter/reading-environmental-racism/>

Instructions: On your own, research an example of environmental racism. Some key words you might use to search for an example include:

- 🔗 Environmental Racism
- 🔗 Environmental Justice
- 🔗 Environmental Discrimination
- 🔗 Water Insecurity

Answer the following short questions for the example you research:

What is the environmental problem?

2 points total: Assign 1 point for naming and describing the problem, and 1 point for why it is harmful.

Where is it located?

1 point for answering the question

What is the population affected? Your answer must include demographic data showing that the population is a minority, or a group with less power, using information about race, ethnicity and/or class and socio-economics (e.g. working class, poor, etc.).

2 points total: Assign 1 point for naming the population and 1 point for describing demographics.

How is the population affected by the environmental problem?

2 points - Students must include a 'cause and EFFECT'

Is anything being done about the problem? Circle 'yes' or 'no.' If 'yes,' what? If 'no,' why do you think nothing is being done?

2 points for answering the question thoughtfully

Please copy and paste the sources you used to find this information below:

1 point for including source information





VIDEO WORKSHEET

Mní Wičhóni: Water is Life

Name: _____

Fill in the worksheet as you watch the video. For each tribe/speaker, answer the following questions:

Winnemem Wintu:

What is the environmental problem?

How is the tribal community addressing the problem?

Havasupai:

What is the environmental problem?

How is the tribal community addressing the problem?



San Carlos Apache:

What is the environmental problem?

How is the tribal community addressing the problem?



VIDEO WORKSHEET *Mní Wičhóni: Water is Life* - ANSWER KEY

Grade this activity on a satisfactory/unsatisfactory scale. activity is 'satisfactory' if students answered the questions based on watching the video and listening to the teacher presentation.

Students should provide at least one answer among the choices below for both questions asked about each case study.

Winnemem Wintu:

What is the environmental problem?

Shasta dam was created, flooding tribal lands which include hunting and gathering sites, sacred, sites, and burial grounds. The dam and local mines have disrupted the river ecosystem and threatened salmon, steelhead trout, and the animals in the ecosystem that depend on this key species. Erosion has also occurred which affects the plants and animals that depend on them.

How is the tribal community addressing the problem?

Direct action at the state level

Demonstrations - including runs

Informing the public and events including "run for salmon"

Connecting with maori to protect their fish

Prayer

Writing letters to policymakers

Legal process/filing court cases

Testifying at hearings/in front of lawmakers

Havasupai:

What is the environmental problem?

Main problem: Uranium mines have been built along the edge of the Havasupai tribe's ancestral territory along the Grand Canyon. The tailings from these mines have contaminated the Colorado river with radioactive materials, which can cause cancer among people and animals.

Secondary problem discussed in the video: local water supplies being diverted elsewhere in the Phoenix valley and Las Vegas.

How is the tribal community addressing the problem?

Demonstrations - including runs

Prayer

Legal Action

Developing Policy - tribes declaring legal rights to water

Writing letters to policymakers

Legal process/filing court cases

Testifying at hearings/in front of lawmakers





VIDEO WORKSHEET *Mní Wičhóni: Water is Life* - ANSWER KEY *continued*

San Carlos Apache:

What is the environmental problem?

Sacred Springs/Aquifer Faces Contamination

How is the tribal community addressing the problem?

Prayer

Occupations (camping on traditional territory)

Holding ceremonies at site

Writing political representatives

Meeting politicians in Washington DC

Demonstrations and events, including runs

Legal process/filing court cases

Testifying at hearings/in front of lawmakers



WATER IN MY COMMUNITY

Name: _____

The purpose of this assignment is to learn about our local water supply in relation to human beings and ecosystems. Conduct research online, and ask your family members, community members and neighbors to help you respond to the following questions on this sheet of paper or a separate document:

What Native American tribe is from this community? Use the online resource: <https://native-land.ca>

What are some local water sources? Name all salt, fresh and brackish water sources. Use the online resource: <https://www.google.com/maps>

What are your water sources used for? Name 3 things. (Examples could include drinking, irrigation, landscaping, outdoor recreation...)

Where did the local tribe(s) get their drinking water from prior to the colonization of North America?

Where does your drinking water come from? How many sources?



WATER IN MY COMMUNITY *continued*

Is your tap water treated? With what? What are the potential benefits or hazards related to your water treatment (or lack of water treatment)?

Are there any threats to any of the local bodies of water you listed? If so, what are they? If not, why?

Extra Credit:

What is one additional interesting thing you learned about your water supply based on your research?

List your information sources here, include all individuals you consulted, written and online sources. If you spoke with a person or people, name them and how you know them.



WATER IN MY COMMUNITY HOMEWORK - ANSWER KEY

The assignment is worth 10 points total, to be assessed as described below. Instructor may choose to assess the assignment as satisfactory [6-10 points] /unsatisfactory [0-5 points] or on a grade scale:

9-10 points - A
8 points - B
7 points - C
6 points - D
5 points or below - F

The purpose of this assignment is to learn about our local water supply in relation to human beings and ecosystems. Conduct research online, and ask your family members, community members and neighbors to help you respond to the following questions on this sheet of paper or a separate document:

What Native American tribe is from this community? Use the online resource: <https://native-land.ca>

1 point for correct response(s)

What are some local water sources? Name all salt, fresh and brackish water sources. Use the online resource: <https://www.google.com/maps>

1 point for correct response(s)

What are your water sources used for? Name 3 things. (Examples could include drinking, irrigation, landscaping, outdoor recreation...)

1 point for correct response(s)

Where did the local tribe(s) get their drinking water from prior to the colonization of North America?

1 point for correct response(s)

Where does your drinking water come from? How many sources?

1 point for correct response(s)

Is your tap water treated? With what? What are the potential benefits or hazards related to your water treatment (or lack of water treatment)?

1 point for correct response to question about water treatment, yes/no, and what it's treated with.

2 points for response to benefits or hazards question. must reflect critical thinking and accuracy

Are there any threats to any of the local bodies of water you listed? If so, what are they? If not, why?

1 point for correct response(s)



WATER IN MY COMMUNITY HOMEWORK - ANSWER KEY *continued*

List your information sources here, include all individuals you consulted, written and online sources. If you spoke with a person or people, name them and how you know them.

1 point for including source information

Extra Credit: Describe up to 3 additional interesting things you learned about your water supply based on your research?

Earn up to 3 extra credit points



ADDRESSING A WATER ISSUE GROUP PROJECT

Team Members:

Directions:

1. Your team has come together to address a threat to fresh water. Some real life examples you might use can include the following, but you are welcome to identify a different water issue:

- **Unhealthy Drinking Water**

- Flint, Miami, Philadelphia, New Orleans

- **Water Shortages**

- Los Angeles, Miami, Atlanta, San Francisco

- **Pollution of Watersheds**

- Lakes Michigan, Mississippi River, Hudson River

- **Watersheds Disappearing**

- Florida Wetlands,

- Coastal wetlands Eastern United States/Eastern Seaboard, California Coast, Mississippi River Delta

You can research the water issue your team chooses through an online search by typing in the issue + the place. For example: unhealthy drinking water Flint

2. Once your team has researched the water issue, write a letter that is at least two paragraphs to the the local senator or representatives to bring the issue to their attention.

- Find the local Senator here: <https://www.senate.gov/senators/contact>

- Find the local Representative here: <https://www.house.gov/representatives>

Who is the elected official your team will write to, and what is their mailing or email address?



ADDRESSING A WATER ISSUE GROUP PROJECT *continued*

In your letter, include at least the following items:

- What is the problem, and where is it located?
- What kind of body of freshwater is threatened?
- Who or what is affected (examples: humans, neighborhoods, animals, ecosystems, plants, farmlands, etc.)
- Why is the issue important?
- How does it make you/your team feel?
- What can the policy-maker do to address the issue?

Include at least two sources you found in your research below:



ADDRESSING A WATER ISSUE GROUP PROJECT *continued*

Letter Example:

The Honorable Jimmy Panetta
212 Cannon House Office Building
United States House of Representatives
Washington, DC 20515

Dear Representative Panetta:

My name is Alexis Naficy, and I live in Monterey, California. I am writing regarding the water shortage in Monterey, County California.

For decades, the Carmel River was pumped to supply water to Peninsula residents. As a result, it is one of the top 10 most endangered rivers in America. When the dam was removed from the river, plants grew back and fish stocks began to return within 4 years. This was a major victory for our local environment. However, we still have severe water shortage problems, and the most expensive water in America.

Several proposals have been put forward to address our water shortage. A water recycling project, called Pure Water, is almost ready to pump clean, recycled water into the Seaside water basin. However, many of our citizens say this is not enough to address our water needs. Cal Am, our current water provider has a proposal to develop a desalination plant to meet our extra water needs.

I am writing to ask that you support and represent my interests as a voting constituent to oppose the desalination plant. Estimates suggest that water bills will increase up to 50% to pay for the plant. Moreover, the desalination plant also presents grave environmental threats to our citizens. Experts say that the plant's operation could cause saltwater to seep into the Salinas Valley Groundwater Basin, the aquifer that provides freshwater to much of Monterey County. And, the water produced will mostly go to our county's wealthiest residents, while the aquifer at risk provides water to low-income communities, which is a form of environmental racism to low income and people of color.

Thank you for your consideration of my letter, and I urge you to join me to oppose the desalination plant, and to instead support the development of additional water recycling programs, and conservation efforts.

Sincerely,

Alexis Naficy
Monterey Resident

2 Sources:

https://www.montereycountyweekly.com/news/cover/with-the-future-of-the-monterey-peninsula-s-water-supply/article_38d4a2ae-1177-11ea-8bc2-c7a7ec041d91.html

<https://www.thecalifornian.com/story/news/2019/10/23/clean-water-cal-am-desal-plant-plan-faces-pushback-over-cost/4057830002/>



ADDRESSING A WATER ISSUE GROUP PROJECT - ANSWER KEY

The assignment is worth 10 points total, to be assessed as described below. Instructor may choose to assess the assignment as satisfactory [6-10 points] /unsatisfactory [0-5 points] or on a grade scale:

- 9-10 points - A
- 8 points - B
- 7 points - C
- 6 points - D
- 5 points or below - F

Directions:

1. Your team has come together to address a threat to fresh water. Some real life examples you might use can include the following, but you are welcome to identify a different water issue:
 - **Unhealthy Drinking Water**
 - Flint, Miami, Philadelphia, New Orleans
 - **Water Shortages**
 - Los Angeles, Miami, Atlanta, San Francisco
 - **Pollution of Watersheds**
 - Lakes Michigan, Mississippi River, Hudson River
 - **Watersheds Disappearing**
 - Florida Wetlands,
 - Coastal wetlands Eastern United States/Eastern Seaboard, California Coast, Mississippi River Delta
2. Once your team has researched the water issue, write a letter that is at least two paragraphs to the the local senator or representatives to bring the issue to their attention.

Who is the elected official, and what is their mailing or email address?

1 point for the elected official's name and contact

In your letter, include at least the following items: What is the problem, and where is it located? **1 point**

What kind of body of fresh-water is threatened? **1 point**

Who or what is affected (examples: humans, neighborhoods, animals, ecosystems, plants, farmlands, etc.)
1 point

Why is the issue important? **1 point**

How does it make you/your team feel? **2 points**

What is the action you want the elected official to take? **1 point for each suggestion**

Include at least two sources you found in your research below: **2 points**



WATER IS LIFE QUIZ

Name: _____

MATCHING:

Match Keywords to Definitions

Mní Wičhóni:	Translates to “water is life” in the Lakota language.
Oak Flat/Chi’Chil’Ba’Goteel:	A tribe whose territory is along the lower McCloud River above the Shasta Dam near Redding, California.
Havasupai:	A sacred site in Arizona with significant cultural, and archaeological importance.
Winnemum Wintu:	A Native American Tribe whose territory includes the Grand Canyon.

MULTIPLE CHOICE

Select the best answer

- Which is an example of environmental racism? _____
 - The fact that a disproportionate percentage of people of color live in environmentally hazardous areas
 - Greenpeace protests
 - The prevalence of asbestos in formerly “whites only” schools
 - Prejudice similar to racism against people with different environmental views than one’s own
- What types of municipal projects often result in environmental racism? _____
 - Toxic dumps or other objectionable projects
 - The location of schools, libraries, and other cultural institutions
 - Hospitals and other health and safety sites
 - Public transportation options
- Which of the following are ways to address threats to water? _____
 - Write an elected official
 - Occupy a space
 - Pray
 - Organize events
 - All of the above



WATER IS LIFE QUIZ *continued*

Short Answer Questions

Respond to the following prompts in written sentences.

1. What are the main differences and similarities between the way that Native Americans think about water, and “mainstream American” beliefs about water?

2. Why is water “cultural”? Include a definition of “culture” in your response.

Essay Question

A mine has been proposed that could very likely contaminate your local water supply. What are some things you can do to stop this from happening? Please write in full sentences and include a step-by-step plan to address this problem. Your answer should include

1. Who you would try to include in your efforts and why;
2. How you would encourage others to join the fight;
3. 3 things that you and your group would do to try to stop the mine, what order you would do them in, and why you chose those 3 strategies.

Please use a separate sheet of paper to write your answer to this essay question.



WATER IS LIFE QUIZ - ANSWER KEY

This quiz is worth a total of 20 points.

MATCHING

4 points - 1 point for each correct match

Match Keywords to Definitions

Mní Wičhóni - Translates to “water is life” in the Lakota language.

Oak Flat/Chi’Chil’Ba’Goteel - A sacred site in Arizona with significant cultural, and archaeological importance.

Havasupai - A Native American Tribe whose territory includes the Grand Canyon.

Winnemum Wintu - A tribe whose territory is along the lower McCloud River above the Shasta Dam near Redding, California.

MULTIPLE CHOICE

3 points - 1 point for each correct answer

Select the best answer

1. Which is an example of environmental racism?
 - a. The fact that a disproportionate percentage of people of color live in environmentally hazardous areas
 - b. Greenpeace protests
 - c. The prevalence of asbestos in formerly “whites only” schools
 - d. Prejudice similar to racism against people with different environmental views than one’s own
2. What types of municipal projects often result in environmental racism?
 - a. Toxic dumps or other objectionable projects
 - b. The location of schools, libraries, and other cultural institutions
 - c. Hospitals and other health and safety sites
 - d. Public transportation options
3. Which of the following are ways to address threats to water?
 - a. Write an elected official
 - b. Occupy a space
 - c. Pray
 - d. Organize events
 - e. All of the above





WATER IS LIFE QUIZ - ANSWER KEY *continued*

Short Answer Questions

Respond to the following prompts in written sentences.

1. What are the main differences and similarities between the way that Native Americans think about water, and “mainstream American” beliefs about water?

2 points total. The correct response should include the following:

- **1 point:** Differences: water as a commodity in mainstream beliefs vs. water is sacred or cannot be sold in Native American worldviews.
- **1 point:** Similarities: that all life depends on water to survive.

2. Why is water “cultural”? Include a definition of “culture” in your response.

4 points total. Possible points include:

- **1 point:** Water is ‘cultural’ because people give meaning to it.
- **1 point:** This meaning or beliefs about water affect the things that people do with water.
- **1 point:** The definition of ‘cultural’ should include the idea that it’s a set of beliefs shared by a group of people
 - **1 point:** reflected in practices
 - **1 point:** reflected in traditions
 - **1 point:** reflected in customs
 - **1 point:** reflected in language
 - **1 point:** reflected in thinking/thoughts/worldview

Essay Question

7 points total

A mine has been proposed that could very likely contaminate your local water supply. What are some things you can do to stop this from happening? Please write in full sentences and include a step-by-step plan to address this problem. Your answer should include

1. Who you would try to include in your efforts and why; **2 points**
2. How you would encourage others to join the fight; **1 point**
3. 3 things that you and your group would do to try to stop the mine **3 points**, what order you would do them in, and why you chose those 3 strategies. **1 point**



APPENDIX CALIFORNIA STATE STANDARDS

WHST.9-10.8 Gather relevant information from multiple authoritative print and digital sources

WHST.9-10.9 Draw evidence from informational texts to support analysis, reflection and research

RST.9-10.7 translate information expressed visually into words

SL.9-10.4 Present information, findings and supporting evidence clearly, concisely and logically

SL.9-10.1 Initiate and participate effectively in a range of collaborative discussions

ESS3.A: Natural Resources

Resource availability has guided the development of human society. (HS-ESS3-1)

All forms of energy production and other resource extraction have associated economic, social, environmental, and geopolitical costs and risks as well as benefits. New technologies and social regulations can change the balance of these factors. (HS-ESS3-2)

ESS3.C: Human Impacts on Earth Systems

The sustainability of human societies and the biodiversity that supports them requires responsible management of natural resources. (HS-ESS3-3)

Scientists and engineers can make major contributions by developing technologies that produce less pollution and waste and that preclude ecosystem degradation. (HS-ESS3-4)

ETS1.B: Developing Possible Solutions (A and B)

When evaluating solutions, it is important to take into account a range of constraints, including cost, safety, reliability, and aesthetics, and to consider social, cultural, and environmental impacts. (secondary to HS-LS4-6)

SL.11-12.1 initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led)

RST.9-10.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context

12.3.2 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. 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.

SOURCE:

<https://www.cde.ca.gov/sp/el/er/documents/eldstndspublication14.pdf>

<https://www.cde.ca.gov/be/st/ss/documents/finalelaccsstandards.pdf>

