Into the Outdoors

CAPTURING A MOMENT IN THE WILD

3rd Grade-Adult Discussion Guide

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SCIENCE CATEGORIES
Conservation, Wildlife management, Resource management

TIMEFRAME
30-90 minutes

MATERIALS
poster paper, markers, wildlife pictures or name tags, string, ITO@Home video

KEY WORDS
wetland, habitat conservation, diversity, ecosystem, web of life

LEARNING OBJECTIVES

Students will be able to:

- Identify the challenges that wildlife face in a modern world.

- Explore how one person can make a difference.

- Determine how they can participate in helping wildlife to have a better future.

ACTIVITY SUMMARY

In this session, students will contemplate how a moment captured in time from one person's perspective can inspire other people to make the future better. One person can make a difference, if they have vision, passion and motivation. Madison, a young artist, demonstrates her viewpoint and how she has used it to inspire wildlife preservation.

BACKGROUND INFORMATION

Hunting is closely tied to sustainability and conservation efforts. Hunters play a huge role in restoring and protecting habitats for animals who live in an ecosystem, and modern hunters work to help balance wildlife populations. Money spent by hunters goes toward research, law enforcement and other state-run conservation programs. (Hunters collectively pay $796 million per year through licenses and fees!) Although there is a great diversity of wildlife in South Dakota, there was once a great threat to wildlife in the Plains States. Teddy Roosevelt, who was an avid hunter, saw how quickly wildlife were losing their habitat, and were being harvested at alarming rates mostly for sport (not for their meat or skins.) He realized the dire need for conservation when the buffalo, deer, bear, moose, elk and wolves were disappearing almost to the point of extinction. He created laws to control harvests and set aside federal land for wildlife. Although he was only one person, the action he started has shaped the way the United States manages wildlife and wildlands.

BACKGROUND INFORMATION
CONTINUED

Madison is an artist in South Dakota who won the Junior Duck Stamp Art Contest in 2020. The duck stamp raises money for habitat conservation. Madison likes to paint because she can express feelings she cannot express with words, and she can show the birds as she remembers them, in ways others don't usually see them. She has accompanied her family on duck hunts, and now is old enough to also use a gun herself. She has trained her dog to retrieve the birds, and enjoys the satisfaction of working with her dog, watching the beauty of the sunrise and watching the birds with her family. Because of her appreciation of the beauty of the wetlands and the ducks, she inspires others to feel empathy for the ducks and wants to help them stay healthy and protected as well. People will see her painting on the duck stamp, and want to buy the stamps to support the ducks and preserve their wetland habitat.

VOCABULARY

WETLAND – A habitat that is nearly always saturated with water, whereby some water is stored in the ground at the surface and some is seen as surface water.

HABITAT CONSERVATION - The practice of setting aside land that has specific characteristics, plants and animals.

DIVERSITY - Many types of living things with differing attributes living in a community together.

ECOSYSTEM - An interdependent group of non-living and living things that are highly connected and live in the same close region or home.

WEB OF LIFE - A description of the connection between living things, whereby their survival is dependent on one another.

LEARNING PROCEDURE

INTRODUCTION:

In our activities, we will examine the balance needed in ecosystems through the web of life. We will revisit the idea of survival, and how through our hobbies and interests we can make a difference, as an individual and as a group.

ACTIVITY 1: WEB OF LIFE

1. Give each student a unique picture of a plant or animal that might live in the same ecosystem (ocean, lake, grassland, forest) OR a nametag (I.E. "Hello my name is White tailed deer") with the name of the plant or animal on it.

    A. Optional Game: Make the identity of the life form secret to play a "who am I" game with it. The picture can be held to the student's forehead, or name tag stuck on his or her back.

    B. The students must not reveal identities, but may answer "yes or no" questions to help each other guess who they are. For example: if I am a fly, I might ask you if I'm a plant (you'll say "no"), I will ask if I am an animal (you'll say "yes"), I will ask if I can fly (you'll say "yes"), I will ask if I am a bird (you'll say "no"), and so on.

    C. You can tell the students they are only allowed to ask one question to each student in succession in order to get them to circulate around the room. (In other words, I can ask you more than one question, but not two in a row.)

    D. Once all students have guessed their identities, move back to the "web of life" activity.

2. Each student should now be wearing their name badge or holding their picture in front of them where other students can see it. They will be standing in a circle with the facilitator (teacher) having the space to move in and out of the circle.

    A. First, ask the students what living things need to survive. In past lessons we learned that we all need air (oxygen), shelter, water and food of some sort.

    B. Discuss what organisms use for food. This varies from organism to organism. In most food webs, plants are at the bottom as primary producers, but they can also be in the middle, providing oxygen, shelter, a source for water, a place to reproduce, or even a method of decomposing.

C. Ask the students to identify something they think is at the bottom at the food web. I.E. They might choose grass. The student holding the grass would choose who he or she thinks might connect with the grass. The choice could be the deer who eats it, the mouse who hides in it, or the bird that uses it to build its nest. The student chosen next will look around at other student's ecosystem identities, and make the next connection.

D. As each connection is made, use the string to illustrate the connection. The end of the string will start at the first student, and stretch to the second, and third, and so on until a web starts to form.

E. As the facilitator, the teacher must help when the group gets stuck. Ask a student to look around, and see someone who might connect in the role of providing or taking air (oxygen or carbon dioxide), shelter, water or food.

F. When each student is holding a part of the string, have the students look at the pattern that is formed. Ask them what it looks like. If they say it looks like a spider web, connect that thought picture with how organisms in an ecosystem are all interconnected. Each organism plays a role in the ecosystem. If one suffers or disappears, all will be affected.

G. Choose one student to drop the string. The student may represent a plant or animal that is locally threatened, or one that has had a recovery story you could focus on later, such as the wolf in Yellowstone National Park. Point out that if the student drops the string, two other students are affected. If they become unhealthy because they no longer have the connection they need, the two others attached to them will become unhealthy as well, and so on. Eventually the whole ecosystem is suffering from the loss.

H. You could also grab a place where the web intersects and tug on it. Ask how many students felt that. The tugging represents stress introduced into the ecosystem. The stress could be human caused habitat loss, pollution or invasive species. If organisms in an area are already under stress, something like a flood, a drought or a fire could stress them out in a way that jeopardizes their survival. The best way to keep everyone healthy is to ensure the habitat is healthy for everyone, so all populations will naturally balance.

3. If there is time, do one of the extension activities that focuses on ecosystems.

ACTIVITY 2: ACTIVIST POSTERS

In this activity, students will group up to make an activist poster to rally people to their chosen cause.

1. Allow the students to get into groups of 2-5 people.

2. Give each group a large piece of paper for making a poster, and an assortment of colored markers.

3. Using the video and previous activity for inspiration, have students discuss a cause that they feel would be important to raise awareness of. They may have recently heard about issues such as the effect of plastics on ocean wildlife, the effects of deforestation on wildlife, or the effects of farm runoff on water quality. Whatever they have heard of or have studied recently is fair game if the group holds a common interest.

4. Students can take as much time as you have to create their posters, and to present the issue to the rest of the class. Posters can be hung in the classroom or around the school to bring awareness to the issues the students find important.

CONCLUSION:

Hunters often really love wildlife, and are dedicated to helping wild things thrive. They enjoy wild land and want to see habitats improve. Hunters are part of the front lines of protecting and supporting wildlife. You don't have to be a hunter to love wildlife, or be involved in preserving wild things. How can you inspire others to love and help wildlife?

EXTENDING THE LESSON

- The disappearance of wolves in Yellowstone National Park is a well-documented case of how the absence of one species completely changes the ecosystem.

  - Look up a few websites about the problem of the disappearance of wolves in Yellowstone, such as this article in the Yellowstone Insider.

  - View the video "How Wolves Change Rivers". This video shows what happened when wolves were reintroduced to Yellowstone after being absent for 70 years.

  - Make a list of the organisms that benefited from the presence of the wolves.

  - How did the very land itself change because the wolves were again present?

  - After viewing the video, review the question - is any organism in the ecosystem insignificant? If a flower species disappears, what might be affected? (Bees maybe might lose their food - which could affect other flowers, fruits, animals, trees, etc.... in a cascade.)

  - What kind of activism could students get involved in near your community? Are there local conservation groups or international organizations in your community? Is there a project you could do remotely to help wildlife?

- Read the Dr. Suess book The Lorax. Discuss how the writer felt about changes he has seen in the global habitats over his lifetime, and how he put these emotions into the book.

  - After reading the book, how do you feel about habitat loss?

  - Do you think what the Onceler did was meant to be evil? If not, why did it still have a bad effect on the world around him?

  - Did the Onceler's actions eventually have a bad effect on himself? If he had thought about the consequences of his actions, could he have made a plan that would have let him do what he wanted, but still keep the trees and habitat around him?

  - If you had been in the book, how would you have advised the Onceler?

RELATED LINKS

- yellowstonepark.com/things-to-do/wolf-reintroduction-changes-ecosystem
- en.wikipedia.org/wiki/History_of_wolves_in_Yellowstone
- tnc.org
- worldwildlife.org
- ducks.org
- sierraclub.org
- docs.google.com/document/d/1wpQfiYE_-7H5Bz4mnSB1m8M9C46BYhM8KqNPYrFoE10
- Web version of The Lorax: fliphtml5.com/zimk/nlot/basic
- intotheoutdoors.org/topics/capturing-a-moment-in-the-wild/

CAPTURING A MOMENT IN THE WILD:

GRADE 3:

CCSS.ELA-LITERACY.W.3.1	Write opinion pieces on topics or texts, supporting a point of view with reasons.
CCSS.ELA-LITERACY.W.3.2	Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
CCSS.ELA-LITERACY.W.3.4	With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose.
CCSS.ELA-LITERACY.W.3.7	Conduct short research projects that build knowledge about a topic.
CCSS.ELA-LITERACY.W.3.8	Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.
CCSS.ELA-LITERACY.SL.3.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacherled) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.
CCSS.ELA-LITERACY.SL.3.2	Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.
CCSS.ELA-LITERACY.SL.3.3	Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.
CCSS.ELA-LITERACY.SL.3.4	Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.
CCSS.ELA-LITERACY.SL.3.6	Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification.
CCSS.ELA-LITERACY.L.3.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
CCSS.ELA-LITERACY.L.3.2	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
CCSS.ELA-LITERACY.L.3.3	Use knowledge of language and its conventions when writing, speaking, reading, or listening.
CCSS.ELA-LITERACY.L.3.4	Determine or clarify the meaning of unknown and multiple-meaning word and phrases based on grade 3 reading and content, choosing flexibly from a range of strategies.
CCSS.ELA-LITERACY.L.3.6	Acquire and use accurately grade-appropriate conversational, general academic, and domain specific words and phrases, including those that signal spatial and temporal relationships.

GRADE 4:

CCSS.ELA-LITERACY.W.4.1	Write opinion pieces on topics or texts, supporting a point of view with reasons and information.
CCSS.ELA-LITERACY.W.4.2	Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
CCSS.ELA-LITERACY.W.4.4	Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.

CCSS.ELA-LITERACY.W.4.7	Conduct short research projects that build knowledge through investigation of different aspects of a topic.
CCSS.ELA-LITERACY.W.4.8	Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information and provide a list of sources.
CCSS.ELA-LITERACY.SL.4.1	Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups.
CCSS.ELA-LITERACY.SL.4.2	Ask and answer questions about key details in a text read aloud or information presented orally or through other media.
CCSS.ELA-LITERACY.SL.4.3	Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.
CCSS.ELA-LITERACY.SL.4.4	Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.
CCSS.ELA-LITERACY.SL.4.6	Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion); use formal English when appropriate to task and situation.
CCSS.ELA-LITERACY.L.4.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
CCSS.ELA-LITERACY.L.4.2	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
CCSS.ELA-LITERACY.L.4.3	Use knowledge of language and its conventions when writing, speaking, reading, or listening.
CCSS.ELA-LITERACY.L.4.4	Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.
CCSS.ELA-LITERACY.L.4.6	Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being (e.g., quizzed, whined, stammered) and that are basic to a particular topic (e.g., wildlife, conservation, and endangered when discussing animal preservation).

GRADE 5:

CCSS.ELA-LITERACY.W.5.1	Write opinion pieces on topics or texts, supporting a point of view with reasons and information.
CCSS.ELA-LITERACY.W.5.2	Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
CCSS.ELA-LITERACY.W.5.4	Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.
CCSS.ELA-LITERACY.W.5.7	Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic.
CCSS.ELA-LITERACY.W.5.8	Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources.
CCSS.ELA-LITERACY.SL.5.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.

CCSS.ELA-LITERACY.SL.5.2	Summarize a written text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.
CCSS.ELA-LITERACY.SL.5.3	Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence.
CCSS.ELA-LITERACY.SL.5.4	Report on a topic or text or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.
CCSS.ELA-LITERACY.SL.5.6	Adapt speech to a variety of contexts and tasks, using formal English when appropriate to task and situation.
CCSS.ELA-LITERACY.L.5.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
CCSS.ELA-LITERACY.L.5.2	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
CCSS.ELA-LITERACY.L.5.3	Use knowledge of language and its conventions when writing, speaking, reading, or listening.
CCSS.ELA-LITERACY.L.5.4	Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.
CCSS.ELA-LITERACY.L.5.6	Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships (e.g., however, although, nevertheless, similarly, moreover, in addition).

GRADE 6:

CCSS.ELA-LITERACY.W.6.1	Write arguments to support claims with clear reasons and relevant evidence.
CCSS.ELA-LITERACY.W.6.2	Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.
CCSS.ELA-LITERACY.W.6.4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
CCSS.ELA-LITERACY.W.6.7	Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.
CCSS.ELA-LITERACY.SL.6.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.
CCSS.ELA-LITERACY.SL.6.2	Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to a topic, text, or issue under study.
CCSS.ELA-LITERACY.SL.6.3	Delineate a speaker's argument and specific claims, distinguishing claims that are supported by reasons and evidence from claims that are not.
CCSS.ELA-LITERACY.SL.6.4	Present claims and findings, sequencing ideas logically and using pertinent descriptions, facts, and details to accentuate main ideas or themes; use appropriate eye contact, adequate volume, and clear pronunciation.
CCSS.ELA-LITERACY.SL.6.5	Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information.

CCSS.ELA-LITERACY.SL.6.6	Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.
CCSS.ELA-LITERACY.L.6.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
CCSS.ELA-LITERACY.L.6.2	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
CCSS.ELA-LITERACY.L.6.3	Use knowledge of language and its conventions when writing, speaking, reading, or listening.
CCSS.ELA-LITERACY.L.6.4	Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 6 reading and content, choosing flexibly from a range of strategies.
CCSS.ELA-LITERACY.L.6.5	Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
CCSS.ELA-LITERACY.L.6.6	Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.

GRADE 7:

CCSS.ELA-LITERACY.W.7.1	Write arguments to support claims with clear reasons and relevant evidence.
CCSS.ELA-LITERACY.W.7.2	Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.
CCSS.ELA-LITERACY.W.7.4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
CCSS.ELA-LITERACY.W.7.7	Conduct short research projects to answer a question, drawing on several sources and generating additional related, focused questions for further research and investigation.
CCSS.ELA-LITERACY.SL.7.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 7 topics, texts, and issues, building on others' ideas and expressing their own clearly.
CCSS.ELA-LITERACY.SL.7.2	Analyze the main ideas and supporting details presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how the ideas clarify a topic, text, or issue under study.
CCSS.ELA-LITERACY.SL.7.3	Delineate a speaker's argument and specific claims, evaluating the soundness of the reasoning and the relevance and sufficiency of the evidence.
CCSS.ELA-LITERACY.SL.7.4	Present claims and findings, emphasizing salient points in a focused, coherent manner with pertinent descriptions, facts, details, and examples; use appropriate eye contact, adequate volume, and clear pronunciation.
CCSS.ELA-LITERACY.SL.7.5	Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points.
CCSS.ELA-LITERACY.SL.7.6	Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.
CCSS.ELA-LITERACY.L.7.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

CCSS.ELA-LITERACY.L.7.2	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
CCSS.ELA-LITERACY.L.7.3	Use knowledge of language and its conventions when writing, speaking, reading, or listening.
CCSS.ELA-LITERACY.L.7.4	Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 7 reading and content, choosing flexibly from a range of strategies.
CCSS.ELA-LITERACY.L.7.5	Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
CCSS.ELA-LITERACY.L.7.6	Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.

GRADE 8:

CCSS.ELA-LITERACY.W.8.1	Write arguments to support claims with clear reasons and relevant evidence.
CCSS.ELA-LITERACY.W.8.2	Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.
CCSS.ELA-LITERACY.W.8.4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
CCSS.ELA-LITERACY.W.8.7	Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.
CCSS.ELA-LITERACY.SL.8.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 8 topics, texts, and issues, building on others' ideas and expressing their own clearly.
CCSS.ELA-LITERACY.SL.8.2	Analyze the purpose of information presented in diverse media and formats (e.g., visually, quantitatively, orally) and evaluate the motives (e.g., social, commercial, political) behind its presentation.
CCSS.ELA-LITERACY.SL.8.3	Delineate a speaker's argument and specific claims, evaluating the soundness of the reasoning and relevance and sufficiency of the evidence and identifying when irrelevant evidence is introduced.
CCSS.ELA-LITERACY.SL.8.4	Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound valid reasoning, and well-chosen details; use appropriate eye contact, adequate volume, and clear pronunciation.
CCSS.ELA-LITERACY.SL.8.5	Integrate multimedia and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest.
CCSS.ELA-LITERACY.SL.8.6	Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.
CCSS.ELA-LITERACY.L.8.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
CCSS.ELA-LITERACY.L.8.2	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
CCSS.ELA-LITERACY.L.8.3	Use knowledge of language and its conventions when writing, speaking, reading, or listening.

CCSS.ELA-LITERACY.L.8.4	Determine or clarify the meaning of unknown and multiple-meaning words or phrases based on grade 8 reading and content, choosing flexibly from a range of strategies.
CCSS.ELA-LITERACY.L.8.5	Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
CCSS.ELA-LITERACY.L.8.6	Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.

GRADES 9-10:

CCSS.ELA-LITERACY.RI.9-10.7	Analyze various accounts of a subject told in different mediums (e.g., a person's life story in both print and multimedia), determining which details are emphasized in each account.
CCSS.ELA-LITERACY.W.9-10.1	Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
CCSS.ELA-LITERACY.W.9-10.2	Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.
CCSS.ELA-LITERACY.W.9-10.4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
CCSS.ELA-LITERACY.SL.9-10.1	Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9-10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.
CCSS.ELA-LITERACY.SL.9-10.2	Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.
CCSS.ELA-LITERACY.SL.9-10.3	Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, identifying any fallacious reasoning or exaggerated or distorted evidence.
CCSS.ELA-LITERACY.SL.9-10.4	Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.
CCSS.ELA-LITERACY.SL.9-10.5	Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.
CCSS.ELA-LITERACY.SL.9-10.6	Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.
CCSS.ELA-LITERACY.L.9-10.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
CCSS.ELA-LITERACY.L.9-10.2	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
CCSS.ELA-LITERACY.L.9-10.3	Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.
CCSS.ELA-LITERACY.L.9-10.4	Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grades 9-10 reading and content, choosing flexibly from a range of strategies.
CCSS.ELA-LITERACY.L.9-10.5	Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.

CCSS.ELA-LITERACY.L.9-10.6 Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.

GRADES 11-12:

CCSS.ELA-LITERACY.RI.11-12.7 Integrate and evaluate multiple sources of information presented in different media or formats (e.g., visually, quantitatively) as well as in words in order to address a question or solve a problem.

CCSS.ELA-LITERACY.W.11-12.1 Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.

CCSS.ELA-LITERACY.W.11-12.2 Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.

CCSS.ELA-LITERACY.W.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

CCSS.ELA-LITERACY.W.11-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

CCSS.ELA-LITERACY.SL.11-12.1 Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11-12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.

CCSS.ELA-LITERACY.SL.11-12.2 Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally) in order to make informed decisions and solve problems, evaluating the credibility and accuracy of each source and noting any discrepancies among the data.

CCSS.ELA-LITERACY.SL.11-12.3 Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, assessing the stance, premises, links among ideas, word choice, points of emphasis, and tone used.

CCSS.ELA-LITERACY.SL.11-12.4 Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.

CCSS.ELA-LITERACY.SL.11-12.5 Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.

CCSS.ELA-LITERACY.SL.11-12.6 Adapt speech to a variety of contexts and tasks, demonstrating a command of formal English when indicated or appropriate.

CCSS.ELA-LITERACY.L.11-12.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

CCSS.ELA-LITERACY.L.11-12.3 Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.

CCSS.ELA-LITERACY.L.11-12.4 Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grades 11-12 reading and content, choosing flexibly from a range of strategies.

CCSS.ELA-LITERACY.L.11-12.5 Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.

CCSS.ELA-LITERACY.L.11-12.6   Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.

NEXT GENERATION SCIENCE STANDARDS:

GRADE 3:

3-LS4-3.   Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all. [Clarification Statement: Examples of evidence could include needs and characteristics of the organisms and habitats involved. The organisms and their habitat make up a system in which the parts depend on each other.]

3-LS4-4.   Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.* [Clarification Statement: Examples of environmental changes could include changes in land characteristics, water distribution, temperature, food, and other organisms.]

GRADE 4:

N/A

GRADE 5:

5-PS3-1.   Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun. [Clarification Statement: Examples of models could include diagrams, and flow charts.]

5-LS2-1.   Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment. [Clarification Statement: Emphasis is on the idea that matter that is not food (air, water, decomposed materials in soil) is changed by plants into matter that is food. Examples of systems could include organisms, ecosystems, and the Earth.]

5-ESS3-1.   Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

GRADES 6-8:

MS-LS2-3.   Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem. [Clarification Statement: Emphasis is on describing the conservation of matter and flow of energy into and out of various ecosystems, and on defining the boundaries of the system.]

MS-LS2-4.   Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations. [Clarification Statement: Emphasis is on recognizing patterns in data and making warranted inferences about changes in populations, and on evaluating empirical evidence supporting arguments about changes to ecosystems.]

[GRADES 9-12:

HS-LS2-6.   Evaluate claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions but changing conditions may result in a new ecosystem. [Clarification Statement: Examples of changes in ecosystem conditions could include modest biological or physical changes, such as moderate hunting or a seasonal flood; and extreme changes, such as volcanic eruption or sea level rise.]