



WATER WARRIORS, SAFETY FIRST

Middle School; 6th-8th Grade
Discussion Guide

UNIT THEME

Water Safety

TIMEFRAME

Four to five 45 minute sessions

MATERIALS

Computer paper for Frayer Model, Copies of AIS research table graphic organizer, Copies of Boaters to Launch and Boat Launch Safety Site Officers planning document, Access to Float Plan (either virtual or hard copy)

VIDEOS

Full Video: <https://vimeo.com/intotheoutdoors/review/1089226883/54a1642e43>

Short Curriculum Video: <https://vimeo.com/intotheoutdoors/review/1089226883/54a1642e43>

KEY WORDS

Buoyancy, Archimedes Principle, PFDs (Personal Flotation Device), momentum, density, invasive species, zebra mussels, milfoil, physics



LEARNING OBJECTIVES

Students will be able to:

- Explain the impact of aquatic invasive species (AIS) and how boaters can prevent their spread.
- Analyze the components of a U.S. Coast Guard float plan and apply them to real-world boating scenarios.

PROCESS OBJECTIVES

- Collaborate in teams to develop a custom boating safety or inspection plan that integrates AIS prevention practices.
- Present and defend their plans through role-play, using evidence and reasoning to simulate real-world decision-making at a boat launch site.

ENDURING UNDERSTANDING

Smart and safe boating protects people, lakes, and wildlife. By combining responsible boating practices with actions that prevent the spread of aquatic invasive species, individuals play a critical role in keeping our waterways healthy, enjoyable, and safe for everyone.



VOCABULARY

BUOYANCY - The force that allows things to float in water or other fluids. It pushes up on objects, helping them stay above the surface instead of sinking.

ARCHIMEDE'S PRINCIPLE - A science rule that says when something is placed in water, it pushes some of the water out of the way. The water pushes back with a force equal to the weight of the water that was moved —this is what makes things float.

PFDs (PERSONAL FLOTATION DEVICE) - A safety device designed to help a person stay afloat in the water, preventing drowning. PFDs are available in various types, including life jackets, vests, and throwable devices, each designed for specific activities and water conditions.

MOMENTUM - The force or speed of movement something has. It depends on how much something weighs and how fast it's going.

DENSITY - The amount of stuff (mass) packed into a certain amount of space (volume).

INVASIVE SPECIES - Plants or animals that are not originally from an area and cause harm to the environment, economy, or other living things when they spread.

ZEBRA MUSSELS - A small, striped invasive species that sticks to boats and underwater surfaces, blocking pipes and harming ecosystems.

MILFOIL - A type of fast-growing aquatic plant that becomes invasive when it spreads out of control, making it hard to swim or boat.

PHYSICS - The science of how things move, interact, and work in the world around us.

ACTIVITY SUMMARY

In this interactive, team-based lesson, students explore how smart boaters can combine Responsible Boating Safety (RBS) with protecting lakes from Aquatic Invasive Species (AIS). After watching a playful video filled with quirky characters and important tips, students will dive into real-world applications by assuming roles as either Boaters to Launch or Boat Launch Site Safety Officers. Both groups will research invasive species and boating safety, then create either a detailed float plan and AIS prevention strategy or a thorough inspection checklist for boaters. The critical question guiding their work: How can smart boaters combine RBS with AIS? Through teamwork, research, role-play, and debate, students will deepen their understanding of environmental stewardship, safety gear, and the responsibilities of recreational boating.



OVERVIEW

Spending time on the water can be fun and exciting, but it also comes with responsibilities. The two biggest priorities are staying safe and protecting the environment. Boaters must always wear a properly fitting PFD (Personal Flotation Device) and make sure their watercraft isn't overloaded to avoid tipping over. It's also essential to be aware of your surroundings—this is called situational awareness. Stay alert to what's ahead, behind, and beside you, and always keep at least 100 feet away from other boats and swimmers.

Weather can change quickly, so check the forecast before heading out and watch for signs like dark clouds, rising winds, or sudden drops in temperature. Always have a float plan that lets someone know when and where you're going, and bring safety tools like a first aid kit, waterproof flashlight, airhorn or whistle, radio, compass, and flares.

Protecting lakes means being aware of invasive species; organisms that don't belong and harm the ecosystem. Zebra mussels stick to anything underwater and are almost impossible to remove. Sea lampreys latch onto fish and drain their energy. Fast-growing plants like milfoil and curly leaf pondweed choke out native species, and some algae blooms can even become toxic. To prevent spreading these invaders, always clean, drain, and dry your gear and boat before moving to another lake.

Finally, learn the navigation signs: red buoys mark the right side and green the left when returning to shore, while yellow markers show special zones like "no wake" areas. Follow right-of-way rules, give others plenty of space, and adjust your course as needed. With the right preparation and awareness, you can have a great day on the water while keeping yourself, and your lake, safe.





LEARNING PROCEDURE

SESSION 1:

Begin the lesson by asking students to think about a time they've spent near or on a lake. What kinds of activities do people enjoy on the water? What risks might come with boating or spending time on a lake? Invite them to share ideas about how boaters can keep themselves, and the environment, safe. Then, write the critical question on the board: *How can smart boaters combine boating safety with preventing the spread of aquatic invasive species (AIS)?*

Guide a short discussion around what students already know about boating safety and invasive species. Ask: *Why might it be important to keep invasive species out of our lakes? How do things like life jackets and weather checks connect with keeping people safe?* Encourage them to make connections between human safety and environmental health. Let them know that they'll soon become "boating pros" by learning how to do both stay safe on the water and protect the ecosystem.

Teachers print the provided vocabulary list and cut the words into individual strips—one word per strip. Make enough so that each student receives one word (it's okay if some words are used more than once). Walk around the room and have each student randomly select one vocabulary word. Give each student a blank sheet of printer paper. Instruct them to fold or divide the paper into four equal sections and write their vocabulary word in the center. Let students know they will use the Frayer Model to complete their graphic organizer. Based on their assigned word (and its provided definition), they will fill in the four sections:

1. **Definition** – What does the word mean?
2. **Characteristics** – What are important facts or features of the word?
3. **Examples** – What are some real-life examples of this word?
4. **Non-Examples** – What are things that are not this word (to help clarify)?

Consider hanging the graphics around the room as students complete the next task outlined.

After completing the introductory lesson as students to open their notebooks and provide them with the following sentence stems:

One important safety detail I heard was. . .

A fact that surprised me about invasive species is. . .

This reminds me of. . .

Tell students to finish each statement as they are viewing the video: US Coast Guard and Wildlife Forever <https://vimeo.com/intotheoutdoors/review/1088775839/ada4ccf21b>. The video runs just short of 26 minutes. After viewing the video instruct students to write a short paragraph reflecting on what the video made them think or feel about boating safety or protecting lakes. Provide a few minutes to share in trios.



SESSION 2:

This interactive, role-based lesson helps students synthesize their understanding of Responsible Boating Safety (RBS) and Aquatic Invasive Species (AIS) prevention. Over the course of 3 to 4 class periods (45 minutes each), students will work in teams, conduct research, develop safety protocols, and participate in a debate-style role-play activity simulating a real boat launch site.

To prepare for the lesson, the educator should present the guiding question to the class: *How can smart boaters combine Responsible Boating Safety (RBS) with stopping the spread of Aquatic Invasive Species (AIS)?* Play the short curriculum video clip, about six minutes: <https://vimeo.com/intotheoutdoors/review/1089226883/54a1642e43>. Engage in a brief whole class discussion to activate prior learning from session 1. Following the quick review, divide the class into four teams (try for 4-6 students per group) and assign roles: two teams as Boaters to Launch and two teams of Boat Launch Site Safety Officers.

Both groups should have access to the U.S. Coast Guard Float Plan: <https://uscgboating.org/recreational-boaters/floating-plan.php>. Briefly review the key parts of the plan together full class.

Additionally, all teams will should research 2-3 AIS that can spread to inland lakes in their state before engaging in the primary task. Provide students with the graphic organizer table to complete their research.

Aquatic Invasive Species Research Graphic

Type of Species	Impact on Ecosystem	Impact on Recreation	Prevention Strategies



SESSIONS 3-4:

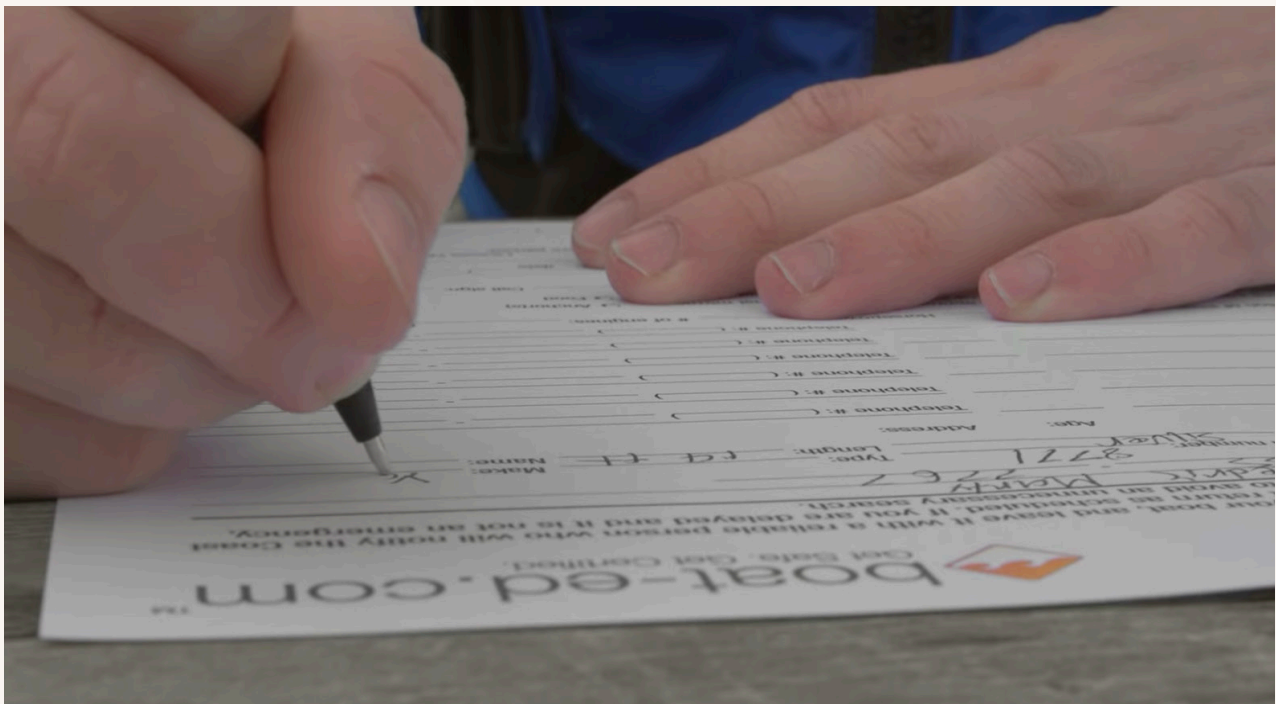
Depending on the amount of time available, provide students with 1-2 sessions to collaboratively plan and develop their float plan or inspection checklist, respective to their assigned groups. Below, there is an outline for each group. Provide each team with a copy of their specific planning document.

Boaters to Launch: Use the planning document to create a custom float-safely plan. Be sure to include:

- A list of required boating safety gear.
- 4-5 key parts of the U.S. Coast Guard Float Plan that would pertain to the mock boating trip.
- A detailed AIS prevention strategy

Boat Launch Site Safety Officers: Use the planning document to create an inspection checklist to be used at the launch site. Be sure to include:

- Water safety gear that must be present.
- Required components of a float plan to approve launch.
- Specific AIS prevention steps expected of boaters to have completed before launching.





Boaters to Launch Planning Guide

<p>List of Required safety gear</p>	<ul style="list-style-type: none"> • • • • • •
<p>Key parts of the Float Plan</p>	<ol style="list-style-type: none"> 1. 2. 3. 4. 5.
<p>Detailed AIS Preventiosn Strategy</p>	



Boat Launch Site Safety Officer Planning Guide

List of required safety gear	<ul style="list-style-type: none"> • • • • • •
Required parts of the Float Plan	<ol style="list-style-type: none"> 1. 2. 3. 4. 5.
Required components of AIS Preventiosn Strategy	



SESSION 4 OR 5 - PRESENTATION:

Educator creates a simple layout in the classroom to simulate a boat launch checkpoint. Each Boaters to Launch team presents their float-safely plan to the Safety Officers. The Safety Officers should listen, ask questions and then decide if the Boaters to Launch team is allowed to launch or denied the launch with an explanation. Encourage students from both teams to challenge, question or defend their plans; relying on evidence from their learning.

ASSESSMENT:

Students will be informally assessed based on their participation within their groups as well as during whole group simulation. Students can be formally assessed via the, Frayer Model vocabulary sheet, video reflection, AIS Research Table and team planning document. Additionally, students may engage in self assessment of how they participated individually and as a team. Teachers wanting a more formal assessment of group presentations may consider developing a rubric. You may also pose the following reflection questions based on the team project:

What worked well?

What could real boaters miss?

Why is this important for our lakes and community?

EXTENDING THE LESSON:

AIS Ecosystem Dominoes: Students diagram or create skits showing how one invasive species (e.g., zebra mussels) can disrupt an entire aquatic ecosystem. Projects should include how it affects native species. Additionally, students should demonstrate chain reactions to food webs, tourism, recreation, etc. Encourage students to use poster board, diagrams or dramatizations to visualize the ripple effects.

Debate: Should all Lakes have Mandatory Boat Inspections? Students are given the option (or assigned) a position and given time to prepare arguments using evidence from their learning. One side will argue for mandatory inspections to prevent AIS and the other against it.

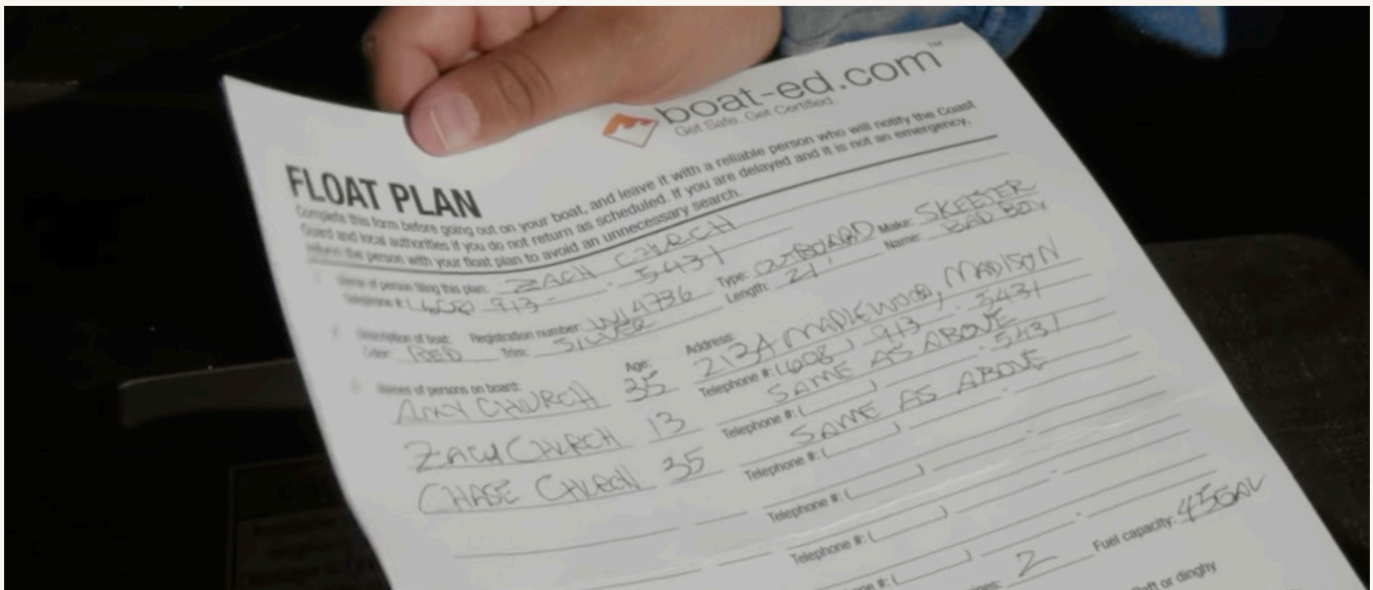
Interview: Students interview someone who works in lake preservation, safe, or outdoor education (e.g. DNR, Coast Guard, Local non-profit organization member).

Comic or Story: Students create a short comic, illustrated story or choose your-own adventure where the character(s) prepare for a safe boating trip, deal with an unexpected change in weather, or prevent the spread of an invasive species.



RELATED LINKS

- **The National Boating Safety Advisory Council (NBSAC):** The Council has consistently provided invaluable advice to the Coast Guard on a broad range of boating safety matters. <https://www.uscgboating.org/NBSAC/index.php>
- **SafeAfloat:** Variety of tools and resources to assist boat manufactures and recreational boat builders meet compliance with Federal Code and Regulation. <https://safeafloat.com/>
- **Wear It:** National Boating Safety site with free online boating education resources. safeboatingcampaign.com/
- **Sober Skipper Campaign:** A site with a video series exploring how boating under the influence accidents and fatalities are 100% preventable. <https://www.boatingsafety.com/page/sober-skipper-program>
- **Rental Boat Safety:** A resource for learning about rental boat safety. Watch training videos regarding general boating safely and the individual type of boat you are renting as well as downloadable safety checklists for use when renting a boat. <https://www.rentalboatsafety.com/>
- **US Coast Guard Statistic Site:** Detailed statistics on all reported recreational boating safety accidents and incidents throughout the United States and its territories. <https://www.uscgboating.org/statistics/index.php>
- **The Strategic Plan of the National Recreational Boating Safety Program:** Describes the U.S. Coast Guard's goals and strategies to ensure the public has a safe, secure, and enjoyable recreational boating experience by implementing programs that minimize the loss of life, personal injury, and property damage while cooperating with environmental and national security efforts. <https://www.uscgboating.org/content/strategic-plan.php>
- **National Invasive Species Information Center:** The gateway to invasive species information; covering federal, state, local, and international sources. Invasive species are plants, animals, or pathogens that are non-native (or alien) to the ecosystem under consideration, and whose introduction causes or is likely to cause harm. <https://www.invasivespeciesinfo.gov/>





The following National Common Core Standards can be met teaching:

WATER WARRIORS, SAFETY FIRST

COMMON CORE ELA STANDARDS:

6TH GRADE

- CCSS.ELA-LITERACY.RI.8.1** Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.
- CCSS.ELA-LITERACY.RI.6.1** Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
- CCSS.ELA-LITERACY.RI.6.2** Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.
- CCSS.ELA-LITERACY.RI.6.3** Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g., through examples or anecdotes).
- CCSS.ELA-LITERACY.RI.6.4** Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings.
- CCSS.ELA-LITERACY.RI.6.6** Determine an author's point of view or purpose in a text and explain how it is conveyed in the text.
- CCSS.ELA-LITERACY.RI.6.7** Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.
- CCSS.ELA-LITERACY.RI.6.10** By the end of the year, read and comprehend literary nonfiction in the grades 6-8 text complexity band proficiently, with scaffolding as needed at the high end of the range.
- 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. (Grade-specific expectations for writing types are defined in standards 1-3 above.)
- 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.W.6.8** Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources.
- CCSS.ELA-LITERACY.W.6.9** Draw evidence from literary or informational texts to support analysis, reflection, and research.
- CCSS.ELA-LITERACY.W.6.10** Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.
- CCSS.ELA-LITERACY.SL.6.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacherled) 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. (See grade 6 Language standards 1 and 3 for specific expectations.)
- 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.6.4** 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.6.6** 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.

7TH GRADE

- CCSS.ELA-LITERACY.RI.7.1** Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
- CCSS.ELA-LITERACY.RI.7.2** Determine two or more central ideas in a text and analyze their development over the course of the text; provide an objective summary of the text.
- CCSS.ELA-LITERACY.RI.7.3** Analyze the interactions between individuals, events, and ideas in a text (e.g., how ideas influence individuals or events, or how individuals influence ideas or events).
- CCSS.ELA-LITERACY.RI.7.4** Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of a specific word choice on meaning and tone.
- CCSS.ELA-LITERACY.RI.7.6** Determine an author's point of view or purpose in a text and analyze how the author distinguishes his or her position from that of others.
- CCSS.ELA-LITERACY.RI.7.10** By the end of the year, read and comprehend literary nonfiction in the grades 6-8 text complexity band proficiently, with scaffolding as needed at the high end of the range.
- 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. (Grade-specific expectations for writing types are defined in standards 1-3 above.)
- 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.W.7.8** Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.
- CCSS.ELA-LITERACY.W.7.9** Draw evidence from literary or informational texts to support analysis, reflection, and research.
- CCSS.ELA-LITERACY.W.7.10** Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.



- 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. (See grade 7 Language standards 1 and 3 here for specific expectations.)
- 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.7.3** 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.7.6** 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.

8TH GRADE

- CCSS.ELA-LITERACY.RI.8.1** Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.
- CCSS.ELA-LITERACY.RI.8.2** Determine a central idea of a text and analyze its development over the course of the text, including its relationship to supporting ideas; provide an objective summary of the text.
- CCSS.ELA-LITERACY.RI.8.3** Analyze how a text makes connections among and distinctions between individuals, ideas, or events (e.g., through comparisons, analogies, or categories).
- CCSS.ELA-LITERACY.RI.8.4** Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts.
- CCSS.ELA-LITERACY.RI.8.6** Determine an author's point of view or purpose in a text and analyze how the author acknowledges and responds to conflicting evidence or viewpoints.
- CCSS.ELA-LITERACY.RI.8.10** By the end of the year, read and comprehend literary nonfiction at the high end of the grades 6-8 text complexity band independently and proficiently.
- 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. (Grade-specific expectations for writing types are defined in standards 1-3 above.)



- 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.W.8.8** Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.
- CCSS.ELA-LITERACY.W.8.9** Draw evidence from literary or informational texts to support analysis, reflection, and research.
- CCSS.ELA-LITERACY.W.8.10** Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.
- 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. (See grade 8 Language standards 1 and 3 here for specific expectations.)
- 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.8.3** 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.8.6** 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.

NEXT GENERATION SCIENCE MIDDLE SCHOOL STANDARDS:

- MS-LS2-2.** Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.
- MS-LS2-5.** Evaluate competing design solutions for maintaining biodiversity and ecosystem services.