

MORE TO THE COASTGUARD THAN YOU'D THINK

6th-8th Grade Discussion Guide

Developed by: Joseph Kanke

SCIENCE CATEGORIES

Life Science

TIMEFRAME

Three to five lessons

MATERIALS

Scenarios (linked within)

KEYWORDS

Personal Flotation Device (PFDs), Flare, Strobe, Maritime, Bilge Pump



LEARNING OBJECTIVES

- Understand the role the Auxiliary Coastguard plays in boating safety.
- Explore different types of water safety equipment and how they are used.

ACTIVITY SUMMARY

This lesson considers the Auxiliary Coastguard's role in inspecting watercraft to ensure they have all the advanced technology required to keep boaters safe.

As an introduction, students will work with a partner to consider one of the technologies mentioned in the video to create a mini-poster which includes a visual, a description of the technology and why it is important to safety.

With a new partner, students will assume the role of the Auxiliary Coastguard. They will inspect a boat (written scenario) and collaboratively write a report outlining how they were in compliance and how they were not.

BACKGROUND INFORMATION

This episode covers the role of the Coastguard Auxiliary, their role in boat safety inspection, and safety considerations for larger vessels.

The Coastguard Auxiliary performs boat inspections which ensure boaters are safe on the water and in compliance with regulations. The Coastguard Auxiliary is slightly different from the US Coastguard. The US Coastguard is a component of the US armed forces. They are responsible for a variety of maritime duties. For example, they ensure safe and lawful commerce as well as performing rescue missions during severe conditions.

The Coastguard Auxiliary is a component of unpaid volunteer US citizens who assist the US Coastguard in providing resources, personnel facilities to support operations and marine safety, security and environmental protection missions.

One important function of the US Coastguard Auxiliary is supporting the office of boating safety to protect recreational boaters. This includes public education programs, vessel examinations, and distribution of literature and information to the boating public.

Larger boats operate under different requirements which include: boat number displayed, registration, enough PFDs for every aboard the vessel, visual distress signals, fire extinguisher, sound signals and navigation lights. Some non-required, but beneficial, boating safety equipment includes a marine radio, anchor, first aid kit and bilge pump.

VOCABULARY

Personal Flotation Devices (PFDs): a life preserver, life jacket, or other device for keeping a person afloat in the water.

FLARE: a device producing a bright flame, used especially as a signal or marker.

STROBE: a type of specialized lamp that produces a continuous series of short, bright flashes of light.

MARITIME: connected with the sea, especially in relation to seafaring commercial or military activity.

BILGE PUMP: a pump for removing water from the area on the outer surface of a ship's hull where the bottom curves to meet the vertical sides.



LEARNING PROCEDURE

Instructor poses the question: You should be packing a lot more than just sunscreen and a water bottle if you're heading out onto the water. What are the USCG required and recommended items you should have with you to keep you safe in the case of an emergency?

Make a list of all of the safety technologies that were mentioned in the video, including the non-required technology. Write each item on its own index card. Move around the room and let student pairs draw a card from the deck (if your number of pairs is larger than the list, you may have to write some technologies twice).

- PFDs
- visual distress signals
- fire extinguisher
- sound signal
- navigation lights
- marine radio
- anchor
- first aid kit
- bilge pump

Each student is responsible for creating a one pager which includes a visual representation of their technology, a written description of their technology and how it would help keep them safe on a boating vessel.

As students complete their one pager, find a place to post them around the learning space.

ACTIVITY 1:

Tell students that they, along with a partner, will be acting as members of the Auxiliary Coastguard. Partners will be assigned to inspect boats for the necessary and suggested equipment. They will then produce a written report explaining which items are missing and why it is important to have this technology on board a water vessel to be safe.

Provide each student with a scenario ([Linked here](#)). Students should read through the scenarios together and consider what will be included in their report. It may be helpful to provide a scaffold of sentence stems such as the examples below:

One thing required to be on a watercraft is _____. This is important technology because. . .

One suggested technology to have is _____ because it would be useful if. . .

You may also direct students to look at the mini posters they created in the first activity to remind them of boating safety technology.

ACTIVITY 2:

Tell students that they have been contracted by the Auxiliary Coastguard to create a help wanted advertisement. This advertisement should include a description of the Auxiliary Coastguard's role and a description of what a volunteer would need to know and be able to do in their position.

Once students have finished their help wanted advertisement, instruct them to switch with a partner. The partner will write a resume and cover letter that shows they are a good candidate for the position. Remind students that they will be putting themselves in the shoes of someone who is qualified (based on their new-found knowledge) and that parts of their resume and cover letter will be made up.

For many students these writing tasks may be a first and you instructors should consider mini-lessons on the components of help wanted ads, resumes and cover letters.

[How to: Help Wanted Ad](#)

[Cover Letter Pointers](#)

[Resume Examples](#)

CONCLUSION:

Consider removing or covering up the mini-posters from the first activity.

Instructor says, "Next time you head out for a day of fun, check to make sure you have all the safety equipment you need to keep you safe out on the water!"

Individually ask students to make a list of everything they can in one minute that they should have on a boating adventure. After one minute tell students to partner with another student and add anything to their list that their partner had and they didn't. Finally, tell partners to form groups of four to compare lists and add any new items they didn't have after the first two rounds.

EXTENDING THE LESSON

- Read one of the articles from the related links and interact using the NEWS framework: While reading an article, take note of the following: N: An idea in the article that is noteworthy E: A piece of evidence cited in the article W: What does this idea have to do with me? S: What is the science connection?
- Newspaper Article Write a 2-3 paragraph long newspaper article suitable for the school newspaper about the assigned concept or topic. 1. The article must contain the H5W (How, Who, What, When, Where, Why) about the concept. 2. The article must have at least two interesting facts people could use in common day conversations. 3. There must be a graphic or illustration representing the concept being applied. 4. There must be a caption of 2-3 sentences explaining the graphic.
- Concept Mapping When making a concept map, the main theme or concept is the center bubble of the concept map. Branching off the center bubble are related concepts or topics. 1. Use at least 4 different colors and 4 different shapes on the concept map. 2. Each color should represent a different thread of ideas or concepts. If a bubble is related to more than one thread of concepts, use the colors to show this. 3. Each shape of bubble is related to more than one thread of concepts; use all the colors to show this. 4. Each shape of bubble must represent a different thread of ideas or concepts. 5. Include a key identifying what each shape and color represents. 6. An explanation must be written next to the line connecting each set of bubbles.
- Write an email to the Auxiliary Coastguard to see if anyone is available to do a virtual Q&A session.



RELATED LINKS

- Public boating courses people could take: <https://wow.uscgaux.info/peclass.php?unit=054-09>
- USCG Float Plan: <https://floatplancentral.cgaux.org/download/USCGFloatPlan.pdf>
- Required gear for different watercrafts: https://www.usps.org/national/vsc/conductvsc_files/USCGMinReq_2012.pdf or <https://www.skisafe.com/blog/Entry/2/uscg-requirements-for-recreational-vessels#:~:text=Recreational%20vessels%20are%20required%20to,is%20needed%20in%20international%20waters>
- USCG Vessel Checklist: https://www.usps.org/national/vsc/formtool_files/a7012.pdf
- Request to have your boat inspected: <http://cgaux.org/vsc/>
- Statistics on how PFDs save lives <https://www.ul.com/news/statistics-show-personal-flotation-devices-help-save-lives>
- What is an EPIRB: <https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/CG-5PC/CG-CVC/CVC3/notice/flyers/11E-EPIRBs.pdf>
- What is a VHF Radio: <https://portal.ct.gov/DEEP/Boating/Safety/Marine-VHF-Radio--The-Basics>

The following National Common Core Standards can be met teaching:

MORE TO THE COASTGUARD THAN YOU'D THINK

6TH GRADE

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.6.7	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.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.6.2.A	Introduce a topic; organize ideas, concepts, and information, using strategies such as definition, classification, comparison/contrast, and cause/effect; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.
CCSS.ELA-LITERACY.W.6.2.B	Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples.
CCSS.ELA-LITERACY.W.6.2.C	Use appropriate transitions to clarify the relationships among ideas and concepts.
CCSS.ELA-LITERACY.W.6.2.D	Use precise language and domain-specific vocabulary to inform about or explain the topic.
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.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.6.1.A	Come to discussions prepared, having read or studied required material; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.
CCSS.ELA-LITERACY.SL.6.1.B	Follow rules for collegial discussions, set specific goals and deadlines, and define individual roles as needed.
CCSS.ELA-LITERACY.SL.6.1.C	Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text, or issue under discussion.
CCSS.ELA-LITERACY.SL.6.1.D	Review the key ideas expressed and demonstrate understanding of multiple perspectives through reflection and paraphrasing.
CCSS.ELA-LITERACY.SL.6.5	Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information.



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.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.7.2.A** Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information, using strategies such as definition, classification, comparison/contrast, and cause/effect; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.
- CCSS.ELA-LITERACY.W.7.2.B** Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples.
- CCSS.ELA-LITERACY.W.7.2.C** Use appropriate transitions to create cohesion and clarify the relationships among ideas and concepts.
- CCSS.ELA-LITERACY.W.7.2.D** Use precise language and domain-specific vocabulary to inform about or explain the topic.
- CCSS.ELA-LITERACY.W.7.2.E** Establish and maintain a formal style.
- CCSS.ELA-LITERACY.W.7.2.F** Provide a concluding statement or section that follows from and supports the information or explanation presented.
- 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.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.7.1.A** Come to discussions prepared, having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.
- CCSS.ELA-LITERACY.SL.7.1.B** Follow rules for collegial discussions, track progress toward specific goals and deadlines, and define individual roles as needed.
- CCSS.ELA-LITERACY.SL.7.1.C** Pose questions that elicit elaboration and respond to others' questions and comments with relevant observations and ideas that bring the discussion back on topic as needed.
- CCSS.ELA-LITERACY.SL.7.1.D** Acknowledge new information expressed by others and, when warranted, modify their own views.
- CCSS.ELA-LITERACY.SL.7.5** Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points.

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.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.8.2.A** Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.
- CCSS.ELA-LITERACY.W.8.2.B** Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples.
- CCSS.ELA-LITERACY.W.8.2.C** Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts.
- CCSS.ELA-LITERACY.W.8.2.D** Use precise language and domain-specific vocabulary to inform about or explain the topic.
- CCSS.ELA-LITERACY.W.8.2.E** Establish and maintain a formal style.
- CCSS.ELA-LITERACY.W.8.2.F** Provide a concluding statement or section that follows from and supports the information or explanation presented.
- 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.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.8.1.A** Come to discussions prepared, having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.
- CCSS.ELA-LITERACY.SL.8.1.B** Follow rules for collegial discussions and decision-making, track progress toward specific goals and deadlines, and define individual roles as needed.
- CCSS.ELA-LITERACY.SL.8.1.C** Pose questions that connect the ideas of several speakers and respond to others' questions and comments with relevant evidence, observations, and ideas.
- CCSS.ELA-LITERACY.SL.8.1.D** Acknowledge new information expressed by others, and, when warranted, qualify or justify their own views in light of the evidence presented.
- CCSS.ELA-LITERACY.SL.8.5** Integrate multimedia and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest.

9-10th GRADE

- CCSS.ELA-LITERACY.RI.9-10.1** Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
- CCSS.ELA-LITERACY.RI.9-10.2** Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.
- 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.9-10.2.A** Introduce a topic; organize complex ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.
- CCSS.ELA-LITERACY.W.9-10.2.B** Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.



- CCSS.ELA-LITERACY.SL.9-10.1.C** Use appropriate and varied transitions to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts.
- CCSS.ELA-LITERACY.W.9-10.2.D** Use precise language and domain-specific vocabulary to manage the complexity of the topic.
- CCSS.ELA-LITERACY.W.9-10.2.E** Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.
- CCSS.ELA-LITERACY.W.9-10.2.F** Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).
- 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.9-10.1.A** Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.
- CCSS.ELA-LITERACY.SL.9-10.1.B** Work with peers to set rules for collegial discussions and decision-making (e.g., informal consensus, taking votes on key issues, presentation of alternate views), clear goals and deadlines, and individual roles as needed.
- CCSS.ELA-LITERACY.SL.9-10.1.C** Propel conversations by posing and responding to questions that relate the current discussion to broader themes or larger ideas; actively incorporate others into the discussion; and clarify, verify, or challenge ideas and conclusions.
- CCSS.ELA-LITERACY.SL.9-10.1.D** Respond thoughtfully to diverse perspectives, summarize points of agreement and disagreement, and, when warranted, qualify or justify their own views and understanding and make new connections in light of the evidence and reasoning presented.

11-12th GRADE

- CCSS.ELA-LITERACY.RI.11-12.1** Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.
- CCSS.ELA-LITERACY.RI.11-12.2** Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of the text.
- 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.11-12.2.A** Introduce a topic; organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.
- CCSS.ELA-LITERACY.W.11-12.2.B** Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.
- CCSS.ELA-LITERACY.W.11-12.2.C** Use appropriate and varied transitions and syntax to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts.



- CCSS.ELA-LITERACY.W.11-12.2.D** Use precise language, domain-specific vocabulary, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic.
- CCSS.ELA-LITERACY.W.11-12.2.E** Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.
- CCSS.ELA-LITERACY.W.11-12.2.F** Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).
- 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.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.11-12.1.A** Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.
- CCSS.ELA-LITERACY.SL.11-12.1.B** Work with peers to promote civil, democratic discussions and decision-making, set clear goals and deadlines, and establish individual roles as needed.
- CCSS.ELA-LITERACY.SL.11-12.1.C** Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives.
- CCSS.ELA-LITERACY.SL.11-12.1.D** Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task.