

WATER FUN STARTS WITH SAFETY

6th-8th Grade Discussion Guide

Developed by: Joseph Kanke

SCIENCE CATEGORIES

Life Science

TIMEFRAME

Two to Three Class Periods

MATERIALS

Access to laptops for research, poster making materials, sticky notes

KEYWORDS

PFDs, Bilge, Throttle, PWC, ECOS



LEARNING OBJECTIVES

- explain the necessary safety steps for engaging in water sports
- research and organize information into a visual representation
- collaboratively synthesize information into key points

ACTIVITY SUMMARY

This lesson is intended to demonstrate that there are a lot of water recreation options and knowing the safety steps and regulations for each is important.

Students will first collectively generate a list of all the different types of water sports they can think of. Then students will work with a partner to determine key requirements and regulations for safety on water recreation vessels.

Finally, students will choose one water sport from the initial list they collaboratively constructed and research it further using a graphic organizer. After researching, students will take the information to create a mini-poster. The lesson will culminate with a whole class gallery walk with opportunities for students to learn and reflect from their peers' mini posters.

BACKGROUND INFORMATION

Personal Water Crafts (PWCs) are another way to enjoy the water. These crafts, also referred to as wave runners or jet skis, are small, jet powered machines meant for individual use.

In considering the safety requirements for PWCs, first check the age requirements and be sure you've taken a boat safety course. Once you are set on these regulations, check to ensure you have a properly fitted and approved PFD. Then, complete a maintenance check of the vehicle: check the battery's connection and charge, status of the engine and controls, visual signs of leaks, a drained and plugged bilge and that you have enough gas.

There are also safety considerations when you are out on the water. If you kill the engine on a PWC this does not mean it will stop. In fact, it will continue to move forward and you will lose control of your steering. The best option is to decrease your speed and steer away. Other considerations on the water include not trying to throw off your passengers, avoiding jumping wakes and maintaining safe speeds.

Falling off a PWC does not mean it will stop moving either. This is why you should always wear an ECOS, or engine cut off switch. This device creates a connection between the engine and some part of your body and kills the engine should you fall off. If your PWC flips over, know that most crafts are self-righting.

Other rules to follow are not attempting to board a PWC when the engine is on and keep items like straps, loose clothing and long hair away from the intake pumps. Finally, don't forget to be polite. PWC engines cause a lot of noise and the vessel creates wakes. Be aware of your surroundings and respect others who are enjoying water recreation.

Large and small watercraft have a lot of similar safety precautions. For all water activities you should wear a PFD, know the area, share a float plan, have the right equipment and refrain from operating a vehicle under the influence of alcohol.

VOCABULARY

PFD: Personal Floatation Device, a life jacket or similar buoyancy aid.

PWC: Personal Watercraft, a fast, jet-powered craft meant for personal use on the water.

BILGE: The area on the outer surface of a water craft's hull where the bottom curves to meet the vertical sides.

Throttle: A device controlling the flow of fuel or power to an engine.

ECOS: (Engine Cut Off Switch) a safety mechanism used to shut off propulsion machinery when the operator is displaced from the helm.





LEARNING PROCEDURE

Tell students, "We've just seen an example of water sports and their individual safety considerations and regulations. Let's collectively generate a list of other water sports we are familiar with that may have their own safety considerations."

Ask students to individually generate a list of sports and then go around the room soliciting and recording responses either on the front board or an anchor chart. Continue to go around the room until all unique examples are exhausted.

ACTIVITY 1:

Example:

Instructor says, "In the video we saw some examples of the safety equipment required for large and personal watercraft. With a partner access this blog on general requirements for other recreational vessels. As you read through the blog, organize your learning using the 3-2-1+1 discussion strategy. You will gather six pieces of information using including:

3 important ideas you want to remember

2 things you would like to know more about

1 idea that you are looking forward to trying

After partners have gathered this information, the instructor should set up the +1 portion of the activity. Allow students to mingle for five minutes and speak with their peers until they can find one additional piece of information to add to their own learning.

ACTIVITY 2:

Students will refer back to the original list of watersports that was generated during the whole class introduction activity. Inform students that they will each choose one watersport from the list and engage in a mini-research project on the safety steps and regulations that are connected to the water sport of their choice.

For the research portion of the project, students will use and complete a KWHL strategy sheet. KWHL stands for Know, Want to Know, How will I find out and Learned. Prior to starting research, students should fill out what they Know and Want to Know and How will I find out (be sure to check out the related links at the end of the lesson) sections of the chart for the water sport of their choice. (Chart linked here).

Then students may begin researching and filling in information as they go on the Learned portion of their chart.

Once the KWHL chart is complete, instruct students to create a mini-informational poster. The poster should include:

- A title
- An image of the water sport they chose
- Safety steps and regulations
- Something interesting they learned that they want to draw their audience's attention to



Once students have completed their posters, hang them around the room. Instruct students they will be doing a gallery walk to learn about other water sports. They should take their writing notebooks and answer the following prompts. Students should be prepared to answer one of their responses whole class.

- One watersport I'm interested in learning more about now is _____ because...
- One thing I learned about water safety is. . .
- One aspect of a poster I appreciated and would like to include in my future work is _____ because. . .
- What are some ways you can practice safe water sport fun?

EXTENDING THE LESSON

- Invite someone who is an athlete for a water sport and engage in a question/answer.
- Ask students to create a video PSA, Public Service Announcement based on the information in their mini-posters.
- Have students complete a boat safety course and write about their experience.
- Develop a visual compare/contrast chart for safety requirements of various water crafts.
- Develop questions and interview someone who enjoys water recreation. Be sure to include questions regarding water safety.

Related Links

- Required gear for different water crafts: https://www.usps.org/national/vsc/conductvsc_files/USCGMinReq_2012.pdf
- License requirements for different types of large vessels: <https://trlmi.com/u-s-coast-guard-captains-license-credential-requirements-oupv-up-to-100-gt/#:~:text=Must%20be%20at%20least%2018,years%20of%20when%20you%20apply.>
- Public boating courses people could take: <https://wow.uscgaux.info/peclass.php?unit=054-09>
- Statistics on how PFDs save lives <https://www.ul.com/news/statistics-show-personal-flotation-devices-help-save-lives>
- USCG Float Plan: <https://floatplancentral.cgaux.org/download/USCGFloatPlan.pdf>

The following National Common Core Standards can be met teaching;

WATER FUN STARTS WITH SAFETY

4TH GRADE

- CCSS.ELA-LITERACY.RI.4.1** Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.
- CCSS.ELA-LITERACY.RI.4.2** Determine the main idea of a text and explain how it is supported by key details; summarize the text.
- CCSS.ELA-LITERACY.RI.4.9** Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably.
- 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.SL.4.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.
- CCSS.ELA-LITERACY.SL.4.1.A** Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.
- CCSS.ELA-LITERACY.SL.4.1.B** Follow agreed-upon rules for discussions and carry out assigned roles.
- CCSS.ELA-LITERACY.SL.4.1.C** Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.
- CCSS.ELA-LITERACY.SL.4.1.D** Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.
- 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.4.5** Add audio recordings and visual displays to presentations when appropriate to enhance the development of main ideas or themes.

5TH GRADE

- CCSS.ELA-LITERACY.RI.5.1** Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.
- CCSS.ELA-LITERACY.RI.5.2** Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text.
- CCSS.ELA-LITERACY.RI.5.7** Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.
- CCSS.ELA-LITERACY.RI.5.9** Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably.
- 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.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.5.1.A** Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.
- CCSS.ELA-LITERACY.SL.5.1.B** Follow agreed-upon rules for discussions and carry out assigned roles.
- CCSS.ELA-LITERACY.SL.5.1.C** Pose and respond to specific questions by making comments that contribute to the discussion and elaborate on the remarks of others.
- CCSS.ELA-LITERACY.SL.5.1.D** Review the key ideas expressed and draw conclusions in light of information and knowledge gained from the discussions.
- 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.5.5** Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes.

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.W.6.6** Use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of three pages in a single sitting.
- 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.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.

7TH 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.



8TH GRADES

- 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.W.9-10.2.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.
- 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.



9TH-10TH GRADES

- 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.
- 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.