

Understanding Invasive Aquatic Weeds – Answer Key w/SSS

A Collaboration of the Aquatic Plant Management Society <http://www.apms.org/> and the UF/IFAS Center for Aquatic and Invasive Plants <http://plants.ifas.ufl.edu/education>

QUESTION 1 -- Standards

LA.4.1.6.5, LA.5.1.6.5, LA.6.1.6.5, LA.7.1.6.5, LA.8.1.6.5, LA.910.1.6.5, LA.1112.1.6.5: The student will relate new vocabulary to familiar words.

Sample Top Score Response:

Floating: Jellyfish float in the water with tentacles that hang down but don't reach the ocean bottom. I think of floating plants the same way. They float along the top with roots that hang down but don't reach the bottom of the lake.

Emergent: The tops of the plants "emerge" from the water in emergent plants.

Submersed: A submarine can go under the water, and only the periscope sticks up. Submersed plants grow under water and hardly any of the plant sticks up.

QUESTION 2 -- Standards

LA.4.2.2.2, LA.5.2.2.2, LA.6.2.2.2, LA.7.2.2.2, LA.8.2.2.2, LA.910.2.2.2, LA.1112.2.2.2: The student will use information from the text to answer questions related to explicitly stated main ideas or relevant details.

SC.912.L.17.8: The student will recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and the introduction of invasive, non-native species.

Sample Top Score Response:

- 1- Native plants provide food for native animals.
- 2- Native plants provide habitat for the bugs that fish eat.
- 3- Native plants prevent erosion on our shorelines.
- 1- Invasive plants can clog pipes and ditches.
- 2- Invasive plants spread quickly and can block entire waterways so that boats can't pass.
- 3- Invasive plants can grow on top of native plants, blocking out the sun the native plants need.

QUESTION 3 -- Standards

LA.4.2.2.2, LA.5.2.2.2, LA.6.2.2.2, LA.7.2.2.2, LA.8.2.2.2, LA.910.2.2.2, LA.1112.2.2.2: The student will use information from the text to answer questions related to explicitly stated main ideas or relevant details."

SC.5.L.17.1: TSW compare and contrast adaptations displayed by animals and plants that enable them to survive in different environments such as life cycles variations, animal behaviors and physical characteristics.

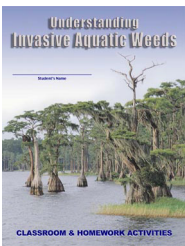
SC.7.L.17.2: TSW compare and contrast the relationships among organisms such as mutualism, predation, parasitism, competition, and commensalism.

SC.912.L.17.6: TSW compare and contrast the relationships among organisms, including predation, parasitism, competition, commensalism, and mutualism.

Sample Top Score Response:

Invasive plants have no natural predators, so they are not held in check like native plants are. Many invasive plants produce large numbers of seeds or break into pieces that can grow into new plants. They can also survive in a wide range of temperatures, soils, and water conditions, so they may be able to spread farther than native plants.





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QUESTION 4 – Standards

LA.4.2.2.2, LA.5.2.2.2, LA.6.2.2.2, LA.7.2.2.2, LA.8.2.2.2, LA.910.2.2.2, LA.1112.2.2.2: The student will use information from the text to answer questions related to explicitly stated main ideas or relevant details.

SC.4.N.1.4: The student will recognize ways plants and animals, including humans, can impact the environment.

SC.7.E.6.6: The student will identify the impact that humans have had on Earth, such as deforestation, urbanization, desertification, erosion, air and water quality, changing the flow of water.

Sample Top Score Response:

Invasive plants have been brought to Florida on purpose to be used in landscaping. Invasive plants are sometimes moved into or around Florida water bodies when they are accidentally tangled in boat engines. Invasive plants that have taken over one Florida water body can be blown into another by hurricane winds

QUESTION 5 – Standards

LA.4.2.2.2, LA.5.2.2.2, LA.6.2.2.2, LA.7.2.2.2, LA.8.2.2.2, LA.910.2.2.2, LA.1112.2.2.2: The student will use information from the text to answer questions related to explicitly stated main ideas or relevant details.

Sample Top Score Response:

- a) Chemical b) Biological c) Mechanical d) Physical

QUESTION 6 – Standards

LA.4.2.2.2, LA.5.2.2.2, LA.6.2.2.2, LA.7.2.2.2, LA.8.2.2.2, LA.910.2.2.2, LA.1112.2.2.2: The student will use information from the text to answer questions related to explicitly stated main ideas or relevant details.

SC.912.L.17.17: The student will assess the effectiveness of innovative methods of protecting the environment.

Sample Top Score Response:

Integrated Plant Management is the best way to battle the invasive weed problem in Florida's waters because it helps to knock back a huge problem when time and money are limited. If habitat managers can find a bug that eats only the invasive plant, that's a good way to go because it saves time and money on machines and workers needed to mechanically or physically remove the plants. If a bug isn't available, they can use a chemical herbicide which can be sprayed from boats or planes. This costs less money and time than using machines or draining the water from a lake. But people want fewer chemicals in their environment, so in some cases using machines or hand methods is better, especially on lakes with small patches of problem plants. Different plant species and different lakes need different methods. Sometimes several methods working together are best.

QUESTION 7 – Standards

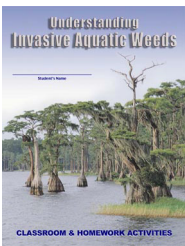
LA.4.1.7.7, LA.5.1.7.7, LA.6.1.7.7, LA.7.1.7.7, LA.8.1.7.7, LA.910.1.7.7, LA.1112.1.7.7: The student will compare and contrast elements in multiple texts.

SC.4.N.1.4: The student will recognize ways plants and animals, including humans, can impact the environment.

SC.5.L.17.1: The student will compare and contrast adaptations displayed by animals and plants that enable them to survive in different environments such as life cycles variations, animal behaviors and physical characteristics.

SC.7.E.6.6: The student will identify the impact that humans have had on Earth, such as deforestation, urbanization, desertification, erosion, air and water quality, changing the flow of water.





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SC.912.L.17.8: The student will recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and the introduction of invasive, non-native species.

SC.912.L.17.17: The student will assess the effectiveness of innovative methods of protecting the environment.

Sample Top Score Response:

Eurasian watermilfoil and giant salvinia are both invasive aquatic plants, but they are actually very different. For example, watermilfoil was introduced from Europe by accident. People brought giant salvinia from South America on purpose (because it looks pretty in lakes and aquariums). These invasive plants also cause different problems. Watermilfoil grows long stems that can fill entire lakes so that people can't boat or swim there.

Salvinia plants, on the other hand, are tiny, as small as your hand. However, they link together into big mats that block sunlight needed by plants below. Both kinds of plants get transported to new lakes on boats, but it's the whole Salvinia plant that gets transported. Watermilfoil spreads by breaking into sections that grow into new plants. These sections tangle very easily on boat engines.

Because watermilfoil reproduces from small sections of the plant, mechanical control methods don't work well. They leave too many plant bits in the water. Herbicides work better for controlling watermilfoil. Mechanical methods don't work well with giant salvinia either, because each plant is small and easy to miss. A combination of herbicides, biological, and mechanical methods are used to control giant salvinia.

QUESTION 8 -- Standards

LA.4.1.7.2, LA.5.1.7.2, LA.6.1.7.2, LA.7.1.7.2, LA.8.1.7.2, LA.910.1.7.2, LA.1112.1.7.2: The student will analyze the author's purpose (to persuade, inform, entertain, explain) and perspective in a variety of texts and understand how they affect meaning.

Sample Top Score Response:

Ducks Unlimited – At first, I wasn't sure how a website about duck hunters supported the goal of educating people about Florida's invasive plant problem. Then I typed "invasive" into the website's search engine. Several hits came up with articles about how Ducks Unlimited members are working to preserve duck habitat by getting rid of the invasive plants. So that's how this website supports the Center's goal.

Invasive.org -- This website supports the Center's goal of educating people about Florida's invasive plant problem by providing information on identification and control of invasive plants. It also talks about bugs that introduce diseases to native plants, how controlled burns affect invasive plants, and other topics relating to invasive plants. It is not limited to wetland species, so it gives a broader view of the invasive plant problem inside and outside Florida.

Florida Fish and Wildlife Conservation Commission (Nonnative species) – This website goes along with the Center's goal of educating people about Florida's invasive plant problem because it is trying to control Florida's invasive animal program. It has good articles on rounding up pythons and how people can turn in their "illegal" invasive pets without getting in trouble.

