

# Module 3 ~ Why Manage Invasive Plants? (MS/HS)

## Guiding Questions



**Directions:** Use these guiding questions to follow along while viewing the presentation,

**Why Manage Invasive Plants?** [http://plants.ifas.ufl.edu/education/module3/web/why\\_manage.html](http://plants.ifas.ufl.edu/education/module3/web/why_manage.html)

Name: \_\_\_\_\_ Class Period: \_\_\_\_\_ Date: \_\_\_\_\_

1. How long has Florida had a problem with invasive plants?
2. The two worst aquatic plant invaders are: \_\_\_\_\_ and \_\_\_\_\_.
3. Why are water hyacinth and hydrilla so hard to remove once they get started?
4. Define “maintenance control.”
5. Invasive plants are managed to:



IFAS Extension  
Center for Aquatic  
and Invasive Plants



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6. To accomplish maintenance control, Florida water managers use a variety of methods. Name and explain three methods:

7. To accomplish maintenance control, Florida water managers use a variety of strategies. Name and explain two of them:

8. How can increased public awareness about invasive plants affect the cost of maintenance control?

9. Throughout this lesson, there were several examples of a lake or river that had not undergone maintenance control. Name two and explain what happens when invasive plants aren't maintained.



IFAS Extension  
Center for Aquatic  
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Florida Invasive Plant Education Initiative • <http://plants.ifas.ufl.edu/education>  
A Collaboration of the UF/IFAS Center for Aquatic and Invasive Plants  
and the Florida Fish and Wildlife Conservation Commission / Invasive Plant Management Section

## Module 3 ~ Why Manage Invasive Plants? (MS/HS)

### Guiding Questions – Answer Key



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Name: \_\_\_\_\_ Class Period: \_\_\_\_\_ Date: \_\_\_\_\_

1. How long has Florida had a problem with invasive plants? **Since the 1890s.**

2. The two worst aquatic plant invaders are: **hydrilla** and **water hyacinth.**

3. Why are water hyacinth and hydrilla so hard to remove once they get started?

**Water hyacinth produce millions of seeds per plant. Hydrilla can reproduce vegetatively (from buds and shoots).**

4. Define “maintenance control”.

**Maintenance control is the frequent management of small infestations of invasive plants to keep them at the lowest feasible levels.**

5. Invasive plants are managed to:

- **lessen environmental damage the plants can cause if left unchecked;**
- **maintain native plant habitat for wildlife;**
- **prevent flooding from rivers, creeks, and lakes;**
- **stabilize oxygen levels for aquatic environments;**
- **reduce mosquito habitat and help prevent disease;**
- **reduce sedimentation and the need to scrape bottom sediments from lakes;**
- **reduce the amount of herbicides needed;**
- **reduce the long-term cost of managing plants;**
- **provide recreational opportunities.**



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6. To accomplish maintenance control, Florida water managers use a variety of methods. Name and explain three methods:

- a. **biological control – introduction of insects that feed only on the invasive plants;**
- b. **chemical control – the use of herbicides by specially trained personnel;**
- c. **mechanical methods – use of machines to remove invasive plants.**

7. To accomplish maintenance control, Florida water managers use a variety of strategies. Name and explain two of them.

- **provide educational opportunities for the public to become aware of the problem and help solve the problem;**
- **prevent the transport of nuisance species**

8. How can increased public awareness about invasive plants affect the cost of maintenance control?

**If the public is made aware of the problems and processes of maintaining invasive plants, they will possibly be more careful in their behavior. Examples: clean boat propellers and trailers before leaving areas; dispose of invasive plants correctly.**

9. Throughout this lesson, there were several examples of a lake or river that had not undergone maintenance control. Name two and explain what happens when invasive plants aren't maintained.

- **In the late 1890s, the St. Johns River was completely covered by water hyacinth. The river was not able to be used for navigation and transportation of goods and people.**
- **Lake Okeechobee was not maintained and as a result, invasive water hyacinth plants grew rapidly and the cost of restoring it was very large.**



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### Sunshine State Standards

**Note:** Standards listed in *italics* are touched on briefly and can be fully developed by the teacher.

#### 6<sup>th</sup> Grade

LA.6.1.6.1: TSW use vocabulary that is introduced and taught directly.

LA.6.2.2.2: TSW use information from the text to answer questions related to the main idea or relevant details, maintaining chronological or logical order.

LA.6.4.2.1: *TSW write in a variety of informational/expository forms (e.g., summaries, procedures, instructions, experiments, rubrics, how-to manuals, assembly instructions).*

#### 7<sup>th</sup> Grade

LA.7.1.6.1: TSW use new vocabulary that is introduced and taught directly.

LA.7.2.2.2: TSW use information from the text to state the main idea and/or provide relevant details.

LA.7.4.2.1: *TSW write in a variety of informational/expository forms (e.g., summaries, procedures, instructions, experiments, rubrics, how-to manuals, assembly instructions).*

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

SC.7.L.15.3: TSW explore the scientific theory of evolution by relating how the inability of a species to adapt within a changing environment may contribute to the extinction of that species.

#### 8<sup>th</sup> Grade

LA.8.1.6.1: TSW use new vocabulary that is introduced and taught directly.

LA.8.2.2.2: TSW synthesize and use information from the text to state the main idea or provide relevant details.

LA.8.4.2.1: *TSW write in a variety of informational/expository forms (e.g., summaries, procedures, instructions, experiments, rubrics, how-to manuals, assembly instructions).*

SS.8.G.5.2: TSW describe the impact of human modifications on the physical environment and ecosystems of the United States throughout history.

#### 9<sup>th</sup> - 12<sup>th</sup> Grades

LA.910.1.6.1: TSW use new vocabulary that is introduced and taught directly.

LA.1112.1.6.1: TSW use new vocabulary that is introduced and taught directly.

LA.910.2.2.1: TSW analyze and evaluate information from text features (e.g., transitional devices, table of contents, glossary, index, bold or italicized text, headings, charts and graphs, illustrations, subheadings).

LA.1112.2.2.1: TSW analyze and evaluate information from text features (e.g., transitional devices, table of contents, glossary, index, bold or italicized text, headings, charts and graphs, illustrations, subheadings)

LA.910.2.2.2: TSW use information from the text to answer questions or to state the main idea or provide relevant details.

LA.1112.2.2.2: TSW use information from the text to answer questions or to state the main idea or provide relevant details.

LA.910.4.2.1: *TSW write in a variety of informational/expository forms, including a variety of technical documents (e.g., how-to-manuals, procedures, assembly directions).*

LA.1112.4.2.1: *TSW write in a variety of informational/expository forms, including documents using precise technical and scientific vocabulary (e.g., manuals, procedures, directions).*

SC.912.L.17.20: *TSW predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability.*

SS.912.G.5.4: *TSW analyze case studies of how humans impact the diversity and productivity of ecosystems.*

