



## Module 3 ~ Why Manage Invasive Plants?

### Summary of Sunshine State Standards (Grades 4 - 12)

This is a summary of all the linked standards for Module 3. See the individual activities for the specific correlated standards. Note: Standards in **black** font are explicitly addressed by the material. Those in **blue** are touched on briefly and can be more fully developed by the teacher.

#### 4<sup>th</sup> Grade

- LA.4.1.5.1: TSW demonstrate the ability to read grade level text.
- LA.4.1.6.1: TSW use vocabulary that is introduced and taught directly.
- LA.4.1.6.2: TSW listen to, read, and discuss familiar and conceptually challenging text.
- LA.4.1.7.3: TSW determine explicit ideas and information in grade-level text, including but not limited to main idea, relevant supporting details, implied message, inferences, chronological order of events, summarizing, and paraphrasing.
- LA.4.2.2.1: TSW locate, explain, and use information from text features (e.g., table of contents, glossary, headings, charts, graphs, diagrams, illustrations).
- LA.4.2.2.2: TSW use information from the text to answer questions related to explicitly stated main ideas or relevant details.
- LA.4.4.2.1: TSW write in a variety of informational/expository forms (e.g., summaries, procedures, recipes, instructions, graphs/tables, experiments, rubrics, how-to manuals).
- LA.4.5.2.1: TSW listen to information presented orally and show an understanding of key points.
- LA.4.5.2.2: TSW plan, organize, and give an oral presentation and use appropriate voice, eye, and body movements for the topic, audience, and occasion.
- SC.4.E.6.3: TSW recognize that humans need resources found on Earth and that these are either renewable or nonrenewable.
- SC.4.E.6.6: TSW identify resources available in Florida (water, phosphate, oil, limestone, silicon, wind, and solar energy).
- SC.4.L.16.1: TSW identify processes of sexual reproduction in flowering plants, including pollination, fertilization (seed production), seed dispersal, and germination.
- SC.4.L.16.4: TSW compare and contrast the major stages in the life cycles of Florida plants and animals, such as those that undergo incomplete and complete metamorphosis, and flowering and nonflowering seed-bearing plants.
- SC.4.N.1.4: TSW recognize ways plants and animals, including humans, can impact the environment.
- SS.4.A.4.1: TSW explain the effects of technological advances on Florida.
- SS.4.C.2.1: TSW discuss public issues in Florida that impact the daily lives of its citizens.
- SS.4.C.2.2: TSW identify ways citizens work together to influence government and help solve community and state problems.
- SS.4.C.2.3: TSW explain the importance of public service, voting, and volunteerism.
- SS.4.E.1.2: TSW explain Florida's role in the national and international economy and conditions that attract businesses to the state.
- SS.4.G.1.1: TSW identify physical features of Florida.
- SS.4.G.1.4: TSW interpret political and physical maps using map elements (title, compass rose, cardinal directions, intermediate directions, symbols, legend, scale, longitude, latitude).
- SS.4.C.2.1: TSW discuss public issues in Florida that impact the daily lives of its citizens.
- SS.4.G.1.1: TSW identify physical features of Florida.

#### 5<sup>th</sup> Grade

- LA.5.1.5.1: TSW demonstrate the ability to read grade level text.
- LA.5.1.6.1: TSW use vocabulary that is introduced and taught directly.
- LA.5.1.6.2: TSW listen to, read, and discuss familiar and conceptually challenging text.
- LA.5.1.7.3: TSW determine the main idea or essential message in grade-level text through inferring, paraphrasing, summarizing, and identifying relevant details.
- LA.5.2.2.1: TSW locate, explain, and use information from text features (e.g., table of contents, glossary, index, transition words/phrases, headings, subheadings, charts, graphs, illustrations).
- LA.5.2.2.2: TSW use information from the text to answer questions related to explicitly stated main ideas or relevant details.
- LA.5.4.2.1: TSW write in a variety of informational/expository forms (e.g., summaries, procedures, instructions, experiments, rubrics, how-to manuals, assembly instructions).
- LA.5.5.2.1: TSW listen and speak to gain and share information for a variety of purposes, including personal interviews, dramatic and poetic recitations, and formal presentations.
- LA.5.5.2.2: TSW make formal oral presentations for a variety of purposes and occasions, demonstrating appropriate language choices, body language, eye contact and the use of gestures, the use of supporting graphics (charts, illustrations, images, props), and available technologies.
- 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.
- SS.5.C.2.5: TSW identify ways good citizens go beyond basic civic and political responsibilities to improve government and society.
- SS.5.G.4.1: TSW use geographic knowledge and skills when discussing current events.



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

- LA.6.1.6.1: TSW use vocabulary that is introduced and taught directly.
- LA.6.1.6.2: TSW listen to, read, and discuss familiar and conceptually challenging text.
- LA.6.1.7.3: TSW determine the main idea or essential message in grade-level text through inferring, paraphrasing, summarizing, and identifying relevant details.
- 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.6.3.5.1: TSW prepare writing using technology in a format appropriate to audience and purpose (e.g., manuscript, multimedia).
- LA.6.3.5.2: TSW use elements of spacing and design for graphics (e.g., tables, drawings, charts, graphs) when applicable to enhance the appearance of the document.
- LA.6.3.5.3: TSW share the writing with the intended audience.
- 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).
- LA.6.5.2.1: TSW listen and gain information for a variety of purposes, (e.g., clarifying, elaborating, summarizing main ideas and supporting details).
- LA.6.5.2.2: TSW deliver narrative and informative presentations, including oral responses to literature, and adjust oral language, body language, eye contact, gestures, technology and supporting graphics appropriate to the situation.
- LA.6.6.4.1: TSW use appropriate available technologies to enhance communication and achieve a purpose (e.g., video, online).
- LA.6.6.4.2: TSW determine and apply digital tools (e.g., word processing, multimedia authoring, web tools, graphic organizers) to publications and presentations.
- SC.6.E.6.1: TSW describe and give examples of ways in which Earth's surface is built up and torn down by physical and chemical weathering, erosion, and deposition.
- SC.6.E.6.2: TSW recognize that there are a variety of different landforms on Earth's surface such as coastlines, dunes, rivers, mountains, glaciers, deltas, and lakes and relate these landforms as they apply to Florida.
- SS.6.E.1.1: TSW identify the factors (new resources, increased productivity, education, technology, slave economy, territorial expansion) that increase economic growth.
- SS.6.G.1.4: TSW utilize tools geographers use to study the world.

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

- LA.7.1.6.1: TSW use new vocabulary that is introduced and taught directly.
- LA.7.1.6.2: TSW listen to, read, and discuss familiar and conceptually challenging text.
- LA.7.1.7.3: TSW determine the main idea or essential message in grade-level or higher texts through inferring, paraphrasing, summarizing, and identifying relevant details.
- LA.7.2.2.2: TSW use information from the text to state the main idea and/or provide relevant details.
- LA.7.3.5.1: TSW prepare writing using technology in a format appropriate to audience and purpose (e.g., manuscript, multimedia).
- LA.7.3.5.2: TSW use elements of spacing and design for graphics (e.g., tables, drawings, charts, graphs) when applicable to enhance the appearance of the document.
- LA.7.3.5.3: TSW share the writing with the intended audience.
- 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).
- LA.7.5.2.1: TSW use effective listening strategies for informal and formal discussions, connecting to and building on the ideas of a previous speaker and respecting the viewpoints of others when identifying bias or faulty logic.
- LA.7.5.2.3: TSW organize and effectively deliver speeches to entertain, inform and persuade, demonstrating appropriate language choices, body language, eye contact, gestures, and the use of supporting graphics and technology.
- LA.7.6.4.1: TSW select and use appropriate available technologies (e.g., computer, digital camera) to enhance communication and achieve a purpose (e.g., video, presentations).
- LA.7.6.4.2: TSW evaluate and apply digital tools (e.g., word processing, multimedia authoring, web tools, graphic organizers) to publications and presentations.
- 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.



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#### 7<sup>th</sup> Grade (continued)

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

SC.7.L.17.3: TSW describe and investigate various limiting factors in the local ecosystem and their impact on native populations, including food, shelter, water, space, disease, parasitism, predation, and nesting sites.

SS.7.C.2.2: TSW value the obligations citizens have to obey laws, pay taxes, defend the nation, and serve on juries.

SS.7.C.2.13: TSW examine multiple perspectives on public and current issues.

SS.7.C.3.4: TSW identify the relationship and division of powers between the federal government and state governments.

SS.7.G.5.1: TSW use a choropleth or other map to geographically represent current information about issues of conservation or ecology in the local community.

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

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

LA.8.1.6.2: TSW listen to, read, and discuss familiar and conceptually challenging text.

LA.8.1.7.3: TSW determine the main idea or essential message in grade-level or higher texts through inferring, paraphrasing, summarizing, and identifying relevant details.

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

LA.8.3.5.1: TSW prepare writing using technology in a format appropriate to audience and purpose (e.g., manuscript, multimedia).

LA.8.3.5.2: TSW use elements of spacing and design for graphics (e.g., tables, drawings, charts, graphs) when applicable to enhance the appearance of the document.

LA.8.3.5.3: TSW share the writing with the intended audience.

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).

LA.8.5.2.1: TSW demonstrate effective listening skills and behaviors for a variety of purposes, and demonstrate understanding by paraphrasing and/or summarizing.

LA.8.5.2.2: TSW use effective listening and speaking strategies for informal and formal discussions, connecting to and building on the ideas of a previous speaker and respecting the viewpoints of others when identifying bias or faulty logic.

LA.8.5.2.4: TSW research, organize, and effectively deliver speeches to entertain, inform, and persuade.

LA.8.6.4.1: TSW use appropriate available technologies to enhance communication and achieve a purpose (e.g., video, digital technology).

LA.8.6.4.2: TSW evaluate and apply digital tools (e.g., word, processing, multimedia authoring, web tools, graphic organizers) to publications and presentations.

SC.8.N.1.5: TSW analyze the methods used to develop a scientific explanation as seen in different fields of science.

SC.8.N.4.1: TSW explain that science is one of the processes that can be used to inform decision making at the community, state, national, and international levels.

SC.8.N.4.2: TSW explain how political, social, and economic concerns can affect science, and vice versa.

SS.8.A.1.2: TSW analyze charts, graphs, maps, photographs and timelines; analyze political cartoons; determine cause and effect.

SS.8.G.2.3: TSW use geographic terms and tools to analyze case studies of how selected regions of the United States have changed over time.

SS.8.G.3.2: TSW use geographic terms and tools to explain differing perspectives on the use of renewable and non-renewable resources in the United States and Florida over time.

SS.8.G.5.1: TSW describe human dependence on the physical environment and natural resources to satisfy basic needs in local environments in the United States.

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

SS.8.G.6.1: TSW use appropriate maps and other graphic representations to analyze geographic problems and changes over time throughout American history.



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

- LA.910.1.7.3: TSW determine the main idea or essential message in grade-level or higher texts through inferring, paraphrasing, summarizing, and identifying relevant details.
- LA.1112.1.7.3: TSW determine the main idea or essential message in grade-level or higher texts through inferring, paraphrasing, summarizing, and identifying relevant details and facts.
- 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.910.3.5.1: TSW prepare writing using technology in a format appropriate to the purpose (e.g., for display, multimedia).
- LA.1112.3.5.1: TSW prepare writing using technology in a format appropriate to the purpose (e.g., for display, multimedia).
- LA.910.3.5.2: TSW include such techniques as principle of design (e.g., margins, tabs, spacing, columns) and graphics (e.g., drawings, charts, graphs).
- LA.1112.3.5.2: TSW include such techniques as principle of design (e.g., margins, tabs, spacing, and columns) and graphics (e.g., drawings, charts, graphs).
- LA.910.3.5.3: TSW share writing with others, or submitting for publication.
- 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).
- LA.910.4.2.2: TSW record information and ideas from primary and/or secondary sources accurately and coherently, noting the validity and reliability of these sources and attributing sources of information.
- LA.1112.4.2.2: TSW record information and ideas from primary and/or secondary sources accurately and coherently, noting the validity and reliability of these sources and attributing sources of information.
- LA.910.5.2.1: TSW select and use appropriate listening strategies according to the intended purpose (e.g., solving problems, interpreting and evaluating the techniques and intent of a presentation).
- LA.1112.5.2.1: TSW demonstrate effective listening skills and behaviors for a variety of purposes, and demonstrate understanding by critically evaluating and analyzing oral presentations.
- LA.910.5.2.2: TSW research and organize information for oral communication appropriate for the occasion, audience, and purpose (e.g., class discussions, entertaining, informative, persuasive, or technical presentations).
- LA.1112.5.2.3: TSW use research and visual aids to deliver oral presentations that inform, persuade, or entertain, and evaluates ones own and others oral presentations according to designed rubric criteria.
- LA.910.6.4.1: TSW use appropriate available technologies to enhance communication and achieve a purpose (e.g., video, digital technology).
- LA.1112.6.4.1: TSW select and use appropriate available technologies (e.g., computer, digital camera) to enhance communication and achieve a purpose (e.g., video, presentations).
- LA.910.6.4.2: TSW routinely use digital tools for publication, communication and productivity.
- LA.1112.6.4.2: TSW routinely use digital tools for publication, communication and productivity.
- SC.912.E.7.8: TSW Explain how various atmospheric, oceanic, and hydrologic conditions in Florida have influenced and can influence human behavior, both individually and collectively.
- SC.912.L.14.7: TSW relate the structure of each of the major plant organs and tissues to physiological processes.
- SC.912.L.14.53: TSW discuss basic classification and characteristics of plants. Identify bryophytes, pteridophytes, gymnosperms, and angiosperms.
- SC.912.L.17.1: TSW discuss the characteristics of populations, such as number of individuals, age structure, density, and pattern of distribution.
- SC.912.L.17.2: TSW explain the general distribution of life in aquatic systems as a function of chemistry, geography, light, depth, salinity, and temperature.





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#### 9<sup>th</sup> - 12<sup>th</sup> Grades (continued)

- SC.912.L.17.5: TSW analyze how population size is determined by births, deaths, immigration, emigration, and limiting factors (biotic and abiotic) that determine carrying capacity.
- SC.912.L.17.6: TSW compare and contrast the relationships among organisms, including predation, parasitism, competition, commensalism, and mutualism.
- SC.912.L.17.7: TSW characterize the biotic and abiotic components that define freshwater systems, marine systems and terrestrial systems.
- SC.912.L.17.8: TSW 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.17.10: TSW diagram and explain the biogeochemical cycles of an ecosystem, including water, carbon, and nitrogen cycle.
- SC.912.L.17.13: TSW discuss the need for adequate monitoring of environmental parameters when making policy decisions.
- SC.912.L.17.14: TSW assess the need for adequate waste management strategies.
- SC.912.L.17.15: TSW discuss the effects of technology on environmental quality.
- SC.912.L.17.16: TSW discuss the large-scale environmental impacts resulting from human activity, including waste spills, oil spills, runoff, greenhouse gases, ozone depletion, and surface and groundwater pollution.
- SC.912.L.17.17: TSW assess the effectiveness of innovative methods of protecting the environment.
- SC.912.L.17.20: TSW predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability.
- SC.912.N.4.1: TSW explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
- SC.912.N.4.2: TSW weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.
- SS.912.A.1.4: TSW analyze how images, symbols, objects, cartoons, graphs, charts, maps, and artwork may be used to interpret the significance of time periods and events from the past.
- SS.912.C.2.4: TSW evaluate, take, and defend positions on issues that cause the government to balance the interests of individuals with the public good.
- SS.912.C.2.10: TSW monitor current public issues in Florida.
- SS.912.C.2.11: TSW analyze public policy solutions or courses of action to resolve a local, state, or federal issue.
- SS.912.C.3.13: TSW illustrate examples of how government affects the daily lives of citizens at the local, state, and national levels.
- SS.912.E.2.2: TSW use a decision-making model to analyze a public policy issue affecting the student's community that incorporates defining a problem, analyzing the potential consequences, and considering the alternatives.
- SS.912.G.2.1: TSW identify the physical characteristics and the human characteristics that define and differentiate regions.
- SS.912.G.2.4: TSW use geographic terms and tools to analyze case studies of how selected regions change over time.
- SS.912.G.3.1: TSW use geographic terms to locate and describe major ecosystems of Earth.
- SS.912.G.3.3: TSW use geographic terms and tools to explain differing perspectives on the use of renewable and non-renewable resources in Florida, the United States, and the world.
- SS.912.G.5.3: TSW analyze case studies of the effects of human use of technology on the environment of places.
- SS.912.G.5.4: TSW analyze case studies of how humans impact the diversity and productivity of ecosystems.
- SS.912.G.5.5: TSW use geographic terms and tools to analyze case studies of policies and programs for resource use and management.
- SS.912.G.5.6: TSW analyze case studies to predict how a change to an environmental factor can affect an ecosystem.
- SS.912.G.6.1: TSW use appropriate maps and other graphic representations to analyze geographic problems and changes over time.
- MA.912.A.2.1: TSW create a graph to represent a real-world situation.
- MA.912.A.2.2: TSW interpret a graph representing a real-world situation.
- MA.912.G.6.5: TSW solve real-world problems using measures of circumference, arc length, and areas of circles and sectors.
- MA.912.G.7.3: TSW identify, sketch, find areas and/or perimeters of cross sections of solid objects.
- MA.912.G.7.5: TSW explain and use formulas for lateral area, surface area, and volume of solids.
- MA.912.G.8.2: TSW use a variety of problem-solving strategies, such as drawing a diagram, guess-and-check, solving a simpler problem, examining simpler problems, and working backwards, using technology when appropriate.
- MA.912.S.3.3: TSW calculate and interpret measures of the center of a set of data, including mean, median, and weighted mean, and use these measures to make comparisons among sets of data.



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