

Science and Stories: Our Everglades, Our Water Grades 9 - 12

Materials:

Computer or tablet
Internet connection
“Our Everglades, Our Water” fact sheet
“Science and Stories - Our Everglades, Our Water Worksheet - Grades 9 – 12”

Essential Questions:

Where does our water come from?
What is the relationship between the Everglades and our water?
How have humans altered the Everglades ecosystem?
What makes a compelling story?
How does listening to a story feel different from listening to information?
How can science benefit from storytelling?
How do we change the way we speak depending on the audience and context?

Lesson:

1. Ask students to share their favorite science stories.
 - a. Encourage them to share whether they have one or not.
 - i. For students who don't have a favorite science story – Have they heard a science story? If they don't like the science stories they've heard, why not?
 - ii. For students who do have a favorite science story – what about the story makes it interesting or exciting?
 - b. Record the answers on the board or affirm them out loud, drawing attention to what makes an “interesting” story or an “uninteresting” story.
2. Share that today, the class will be learning about how to tell stories about science and that they will be telling a story about the Everglades.
3. Pass out the “Science and Stories - Our Everglades, Our Water Worksheet - Grades 9 – 12” and ask a student volunteer to read the information in the orange box or read the information aloud.
4. Ask students to think about the phrase “science-communicator”. Consider asking: What would a science-communicator do? What kinds of people might be science-communicators? Is a scientist necessarily a science-communicator?
5. Share the “Our Everglades, Our Water” fact sheet. Explain that students will be reading a fact sheet about the Everglades that's going to share information about the Everglades and South Florida's water. The fact sheet is a hyperdoc has links to videos and images that will help them understand the text better.
 - a. After reading individually, students might work in groups or pairs to clarify any questions they had and summarize the information aloud.
6. Guide the students through the rest of the ‘Science and Stories - Our Everglades, Our Water Worksheet - Grades 9 – 12’, scaffolding and providing accommodations as necessary.
 - a. If students need help thinking through the speaker-audience-purpose relationship, model a few examples with ordinary topics
 - i. Ex: Imagine your purpose is to borrow money. How would you talk to a friend vs. your parents? Why?
 - b. If students need help practicing the “ABT framework”, ask them to develop examples using books they've read in class or movies they've seen.

7. After students have finished, offer options for sharing a finalized form of their Everglades story with their chosen audience
 - a. One option is sharing their story with their Congressperson during Earth Week, April 19, 2020 – April 26 2020.
 - b. There are directions and a link on the worksheet that will take students to a page where they can type in their name and address and write a letter that will be sent directly to their Congressperson. The link is: <https://bit.ly/evergladesstory>

Standards:

Grades 9 & 10

LAFS.910.RST.1.2 Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.

LAFS.910.RST.2.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.

LAFS.910.WHST.1.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.

LAFS.910.WHST.2.5 Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.

LAFS.910.WHST.2.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

LAFS.910.WHST.3.9 Draw evidence from informational texts to support analysis, reflection, and research.

LAFS.910.WHST.4.10 Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences

Grades 11 – 12

SC.912.L.17.16 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.E.6.4 Analyze how specific geologic processes and features are expressed in Florida and elsewhere.

SC.912.N.1.7 Recognize the role of creativity in constructing scientific questions, methods and explanations.

SC.912.N.4.1 Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.

LAFS.1112.RST.1.2 Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.

LAFS.1112.RST.2.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

LAFS.1112.RST.3.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

LAFS.1112.WHST.1.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.

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