Unit 3/Week 3

Title: Time For Kids: Saving the Sand Dunes

Suggested Time: 3 days (45 minutes per day)

Common Core ELA Standards: RI.3.1, RI.3.2, RI.3.4, RI.3.5, RI.3.7; W.3.2, W.3.4; SL.3.1, SL.3.2; L3.1, L3.2, L3.4

Teacher Instructions

*Refer to the Introduction for further details.*

**Before Teaching**

1. Read the Big Ideas and Key Understandings and the Synopsis. Please do **not** read this to the students. This is a description for teachers, about the big ideas and key understanding that students should take away **after** completing this task.

Big Ideas and Key Understandings

It is important to preserve and protect our environment; anyone can make a difference in their environment, even young adults.

Synopsis

This nonfiction text discusses how a fourth grade class at Union Avenue School worked hard to protect the New Jersey shoreline by planting recycled Christmas trees in the sand. The trees prevent high tides from flooding sand dunes, which serve as animal habitats and also protect people’s homes.

1. Read entire main selection text, keeping in mind the Big Ideas and Key Understandings.
2. Re-read the main selection text while noting the stopping points for the Text Dependent Questions and teaching Vocabulary.

**During Teaching**

1. Students read the entire main selection text independently.
2. Teacher reads the main selection text aloud with students following along. (Depending on how complex the text is and the amount of support needed by students, the teacher may choose to reverse the order of steps 1 and 2.)
3. Students and teacher re-read the text while stopping to respond to and discuss the questions and returning to the text. A variety of methods can be used to structure the reading and discussion (i.e.: whole class discussion, think-pair-share, independent written response, group work, etc.)

Text Dependent Questions

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| **Text-dependent Questions** | **Evidence-based Answers** |
| Re-read the first paragraph. In your own words, summarize who and what is this article about.  | This article is about a fourth grade class at Union Avenue School in New Jersey and their science project.  |
| What does the author mean when he says, “…nothing could topple the science project…”?  | The science project is to reuse trees to prevent the loss of the sand dunes from the local beach. The students “planted" used Christmas trees to protect the sand dunes. Nothing could topple the project because the students were committed to the work and saving the sand dunes. The students did not give up and kept looking for ways to fight erosion. |
| The fourth grade students designed a project to protect their town and the beach. Using evidence from the text, explain why sand dunes are so important.  | The sand dunes act as a windbreaker. They prevent the wind from blowing the beach sand away. Sand dunes also stop ocean water from washing up past the beach.  |
| Explain how the students are reusing trees that are usually thrown away after Christmas. | The students buried the trees. They stood them up in trenches. The trees were buried in three trenches, each 100 feet long.  |
| Using the text, compare and contrast the recycled trees and the trees that were laid sideways on the beach. | Because the recycled trees have been buried, they do not move and they keep the sand dune in place. The dunes hold together because of the buried trees. Laying the trees sideways on the sand didn’t help because the trees were swept out to sea during the winter storms. |
| The students from Brigantine Middle School decided to build sand dunes also. What events led to the middle school students wanting to continue this project?  | The students from the middle school heard about how the sand dune project was a success and their teacher Kevin Burns encouraged his students to take part in this project as well. |
| Why did the town officials decide to support the project? What kind of support did they provide?  | The town officials wanted to support the project because the students had been so successful. The officials provided workers to collect the trees, take them to the beaches, and dig the trenches so the students could then plant them. |
| Explain how the students planted the trees. What purpose did the upper half of the tree serve in protecting the Margate shoreline?  | They buried them 3 feet deep with the lower half in the ground. The upper half of the tree caught the sand that was blown on land. Once the upper half of the tree was filled with sand, it was completely buried to the top. |
| The author mentions that the students tied ribbons to the tops of the trees. What was the purpose of this? | The students tied ribbons to the tops of the tress to check the buildup of sand by measuring the distance between the end of each ribbon and the top of the growing dune.  |
| The students communicated by email to compare results. What information did the students need to share with each other?  | The elementary school students and middle school students needed to share their data about the build-up of sand. The students used ribbons that were tied to the tops of the trees to measure the amount of sand that had accumulated.  |
| In the second paragraph, the author writes, “The roots of the grass grow down and **anchor** the dunes.” What does the word anchor mean in this context? | When the author states that the roots of the grass grow down and anchor the dunes, this means that the grass helps to hold the sand dune in place. The word ‘anchor’ in its verb form means to hold something downwards.  |
| What purpose do sand dunes serve for residents? | Sand dunes protect residents from the effects of high tide, heavy rainfall and large waves. It also keeps sand confined to the beach area and away from their homes. |
| What is the purpose of the text feature of the photograph? | The photograph of the sand dunes is meant to help the reader to understand what a sand dune looks like in real life.  |

Vocabulary

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|  | **KEY WORDS ESSENTIAL TO UNDERSTANDING** | **WORDS WORTH KNOWING** General teaching suggestions are provided in the Introduction  |
| **TEACHER PROVIDES DEFINITION** not enough contextual clues provided in the text | whirledbeachfrontsuffered | erosionecosystemmarine |
| **STUDENTS FIGURE OUT THE MEANING**sufficient context clues are provided in the text | duneswindbreakertoppletrenchesanchorpreserverestore | officialshabitats |

Culminating Task

* Re-Read, Think, Discuss, Write
* *The students in this text were truly invested in their helping and preserving the resources in their community by creating sand dunes. Find evidence in the text that tells why this endeavor was important to their community.*

Answer: The sand dunes serve various functions for the beachfront community, so saving the sand dunes was an important endeavor. First, the sand dunes protect the beach itself by forming a barrier from the harsh winter storms. In addition to this, the dunes also provide respite for the houses that are near the beach. This project provided an opportunity to recycle used Christmas trees that would have otherwise been thrown away, saved the beaches and nearby houses from destruction, and gave students the chance to get involved in a project that could benefit their community. Since the sand dunes serve the community is such a big way, it was important to preserve them and create new ones, as well.

Additional Tasks

* Have students brainstorm, investigate, and act on how they can become more involved in their community regarding preserving natural resources.

Note to Teacher

* Find out about and discuss any recycling initiatives in your school and expose your students to them.