## The Challenges — Teacher Resources

## A Paddling Adventure

center.

On the first ring of the alarm, Kelly jumped out of bed. I don't think I've ever been up this early, she thought to herself as she hurried to get ready for the big day. Kelly's older brother, Raymond, who works at a nature center on the seacoast, promised to take her on a paddling trip if she got a good report card. To his surprise, she received all As and Bs! Kelly's reward was to spend the day canoeing with him through the estuary near the nature



In less than an hour, Raymond and Kelly arrived at the nature center and collected their gear. Then they walked down the winding path, which was still covered with early morning dew.

"I hope you remembered to bring your camera, Kelly," said Raymond. "There will be a lot of sights you won't want to forget."

"I sure did," said Kelly. "I want to make an album and take it to school."

Soon they arrived at the beautiful estuary where the freshwater from the land met and mixed with the salty water from the sea. Raymond helped Kelly into the canoe and gave her one of the paddles. The sun glistened on the water as they gently paddled through the black needlerush and cord grass of the saltwater marsh. "These grasses help keep the soil anchored when the tides move in and out," said Raymond. "Oh, look over there," said Raymond as he pointed at a brown pelican and a roseate spoonbill. "They're nesting among those mangroves."

Kelly aimed her camera, took a picture, and then asked, "What are mangroves?"

"They are very unusual trees that grow well in salty water," said Raymond. "They can actually separate and take in freshwater from the salt water. It's pretty cool!" Then he added, "People call them walking trees because the roots sticking out above the surface of the water make them look like they are standing or walking." Kelly took another picture.

"There's a salt marsh snake on that branch," said Raymond as they drifted toward the bank. Raymond explained to Kelly that Florida has more species of snakes than any other state, but that only one species can survive well in salty water. It is the salt marsh snake. Again, Kelly took a picture.

"What else lives in an estuary?" asked Kelly.

"Oh, there are all kinds of things beneath the surface," responded Raymond. "Estuaries are important nursery areas for a variety of fish, shrimp, crabs, and shellfish, which provide food for bigger fish and animals."

They observed several herons, egrets, and other wading birds as they paddled and "clicked" their way along the coast.

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"What's that big shadow floating near the surface?" asked Kelly.

"It could be a Florida manatee," said Raymond. Within a few moments, the manatee approached them. "There are only about 3,000 of these gentle marine mammals left in Florida," said Raymond. "They are often called sea cows because they eat grasses and other plants in the brackish, shallow waters."

"What is brackish water?" asked Kelly as she took another picture.

"It's water that is a mixture of freshwater and salty water, like the water in an estuary. Everything that lives here must be able to survive in this unusual kind of environment."

Just then Raymond looked at his watch. "We better head back to the nature center now. We can have our picnic lunch there."

"Okay, Raymond," said Kelly. "Thanks for the trip. Maybe we can do this again sometime?"

"If you can keep up your grades, I'll bring you back here at the end of next semester," said Raymond.

"That's a deal," said Kelly. "I plan to study extra hard!"

Kelly took several pictures on her canoeing adventure. Describe two of them. Be sure to give each picture a title.

Picture 1			
Picture 2			
Ficture 2			
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