

DCR Parks as Classrooms

Virtual Edition



Waquoit Bay National Estuarine Research Reserve

Title: Horseshoe Crabs: Shoreline Survivors

Overview:

Horseshoe crabs are one of the most ancient creatures found within our oceans. The horseshoe crab has a different body shape than true crabs that makes it more closely related to spiders. Students will learn about the adaptations, life cycle, and value of the horseshoe crab. They will also learn the horseshoe crabs' position within the ocean's food web.

Format:

A video which is divided into timestamps for corresponding topics: adaptations (time stamp), life cycle (timestamp) and food web (timestamp). Teachers can choose to play the whole video or only the section about the standard they need to cover. Access the video at [Adaptations & Lifecycle of the Horseshoe Crab - YouTube](#).

Curriculum Connections:

Grade 3: Use simple graphical representations to show that species have unique and diverse life cycles. Describe that all organisms have birth, growth, reproduction, and death in common but there are a variety of ways these happen. (3-LS1-1)

Grade 4: Construct an argument that animals and plants have internal and external structures that support their survival, growth, behavior, and reproduction. (4-LS1-1)

Grade 5: Develop a model of a food web to describe the movement of matter among producers, primary and secondary consumers, decomposers, and the air and soil in the environment: (5-LS2)

Assessments:

For all: Bring in molts or project a photo of a horseshoe crab. Ask students to draw it and make observations about what they notice. Have the students share their observations and collect them on newsprint or white board. Next ask students what questions they have about what they have observed. Share and collect those questions. To introduce the video, ask students if they have seen these creatures before and where. Then explain they will be watching a video that may answer some of their questions about horseshoe crabs.

Grade 3:

Pre-Assessment Activity: Have students try to draw the life cycle of a horseshoe crab based on prior knowledge.

Post-Assessment Activity: Have students draw the life cycle of the horseshoe crab after having viewed the video.

Grade 4:

Pre-Assessment Activity: Do general intro activity above.

Post-Assessment Activity: Create a scenario where the horseshoe crab has lost one of its' adaptation features (ex. no tail, etc.). What would happen to this horseshoe crab? Create a mini story based on this storyline.

Grade 5:

Pre-Assessment Activity: Have students try to create a food web diagram that includes horseshoe crabs.

Post-Assessment Activity: Construct/Draw your own food web diagram using the information learned from the video. Where are the horseshoe crabs on your diagram? What does it eat? Who are its predators?

Revisit the students' questions from the pre assessment to see which ones they can answer now.

Extend the Experience:

- Students research to answer any questions that weren't answered by the video.
- Visit Waquoit Bay National Estuarine Research Reserve or a salt marsh near the school and observe these species in their natural habitat or visit a saltwater beach and look for molts.

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Educator Resources:

- <https://coast.noaa.gov/estuaries/curriculum/hooray-for-horseshoe-crabs.html>
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- <http://www.asmfc.org/species/horseshoe-crab>
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- <https://www.horseshoecrab.org/misc/erdg.html>
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For more information : www.waquoitbayreserve.org