

Activity 2: Comparing and contrasting biodiversities

Purpose: Having experienced two field trips, i.e., exploring both wetlands and oceans (Activity 1), students are now in a position to compare and contrast the biodiversity of these two ecosystems using a graphic organizer (Venn diagram). Once students have made this comparison/contrast, they will become aware of how another ecosystem (estuaries), overlap between wetlands and oceans in both biotic and abiotic characteristics. Note: This activity builds from **Lesson 3**.

Key concepts: ecosystems, biodiversity, wetlands, freshwater, oceans, compare (similar), contrast (different), overlap, estuary, biotic, and abiotic characteristics.

Materials: Ecosystem books (wetlands and oceans), revisit Internet web-sites on wetlands and oceans, Venn diagram, Smartboard, whiteboard, or butcher paper, markers, and pencils.

Common Core Standards:

English Language Arts Standards:

Integration of Knowledge and Ideas:

CCSS.ELA-Literacy.RI.3.9 (third) Compare and contrast the most important points and key details presented in two texts on the same topic.

CCSS.ELA-Literacy.RI.4.9 (fourth) Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably.

CCSS.ELA-Literacy.RI.5.9 (fifth) Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably.

Next Generation Science Standards (NGSS):

Disciplinary Core Idea Progression:

Earth Space Science Progression (ESS2.E): Living things can affect the physical characteristics of their environment.

Life Science Progression (LS4.C): Populations of organisms live in a variety of habitats. Change in those habitats affects the organisms living there.

Procedure:

- Ask students if they recall the meaning of the key concepts, many of which were introduced in Lesson 3: ecosystem, biodiversity, biotic, and abiotic.
- Use a Venn diagram (whole class on a Smartboard, whiteboard, or large piece of butcher paper) to compare and contrast the biotic characteristics (animals) of each ecosystem.
- Students can revisit the Internet and/or their Ecosystem books to facilitate their memory.

- They can also reflect on their observations of wetlands and oceans from the field trips at the Watsonville wetlands and Monterey Bay Aquarium (Lesson 4: Activity 1).
- Co-construct the Venn diagram together. Point out to the students that the overlapping circle between each ecosystem is an estuary. Co-construct the meaning of an estuary together and verify the meaning in a dictionary or website such as http://www.elkhornslough.org/education/teachers/teacher_resources.htm (for an Estuary Glossary).
- Have students complete their own Venn diagram (see 3rd-5th Students' work L4).
- These can be showcased in the class for others to see (have fun)! Note: Lots of sharing and dialogue is required for this activity.

Rating Activity 2

Teachers:

Teachers rating Activity 2 for effectiveness in helping students learn _____

1 not helpful! **2 a little bit helpful** **3 helpful** **4 very helpful** **5 Wow!**

Teachers rating Activity 2 for level of enjoyment _____

1 not fun! **2 a little bit fun** **3 fun** **4 very fun** **5 Wow!**

Students:

Students rating Activity 2 for helping you learn _____

1 not helpful! **2 a little bit helpful** **3 helpful** **4 very helpful** **5 Wow!**

Students rating Activity 2 for level of enjoyment _____

1 not fun! **2 a little bit fun** **3 fun** **4 very fun** **5 Wow!**