

Petaluma River Prep. APES

Guiding question, "*Is the Petaluma River watershed ecosystem healthy?*"

Use your research skills to answer the following questions. This work will help provide us with some of the background information we need to better answer our guiding question:

1. What is an Estuary? Why are estuaries important? What are some reasons to protect estuaries?

helpful link: <http://www.epa.gov/nep>

2. What is a salt marsh? How does a salt marsh form? What are some things that make salt marshes special?

helpful link: <http://oceanservice.noaa.gov/facts/saltmarsh.html>

3. Visit the site petalumawetlands.org and explore the “Animals & Plants” tab

<http://petalumawetlands.org/>

3a. List the names of organisms you might see at the Petaluma River.



2 birds:

2 mammals:

2 reptiles:

2 amphibians:

2 fish & invertebrates:

2 plants:

3b. Choose 3 organisms from your lists above to research further. For each one of your three organisms

1. DESCRIBE the organism's needs for survival
2. Sketch each organism in a food chain diagram (don't forget to label each food chain with an arrow showing energy flow). *You may choose to hand sketch the food chain and then take a photo to attach here or use any other digital tool to create your food chain.*

4. Identify and EXPLAIN two density-dependent factors and one density-independent factor that could affect the populations of one organism from question 3b.

5. Explain how the theory of island biogeography (ch 6) could apply to a population of organisms living on the peninsula where the David Yearsley River Heritage Center is located.