



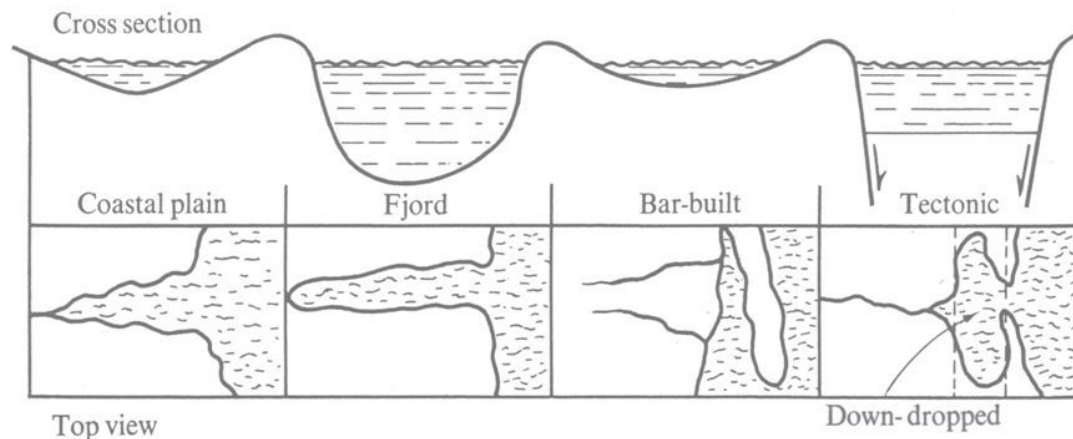
Central Valley Home School  
Partnering with Parents, Keeping it REAL

# Estuaries

An estuary is a body of water where the river meets the sea. Estuaries serve as transition zones between river environments and maritime environments. They are productive ecosystems that many plants and animals rely on for food, migration, and breeding grounds. There are four types of estuaries:

1. **Coastal plain** - formed when the sea level rises and floods existing river valleys. Morro Bay and the Eel River are coastal plain estuaries.
2. **Tectonic** - formed by folding or faulting or when rocks restrict a drowned river valley. San Francisco Bay and Elkhorn Slough are examples.
3. **Bar-built**- are shallow and separated from the open ocean by sand bars that run parallel to the coast. The Russian River in Sonoma County is an example of a bar-built estuary.
4. **Fjord estuaries** - forms as the sea level rises and floods glaciated valleys. Alaska and Canada are examples.

## CLASSIFICATION BASED ON ORIGIN



### Fun Resources:

Check these resources to learn more about estuaries

[Video: Two Minute on the Why and What of an Estuary](#)

[Video: Full episode of Curious Kids on Lakes, Rivers & Estuaries](#)

[Video: Quick facts on what exactly estuaries are](#)

[Games, puzzles, and challenges to explore the Morro Bay Estuary through Science](#)

[Photos and information specific to Morro Bay Estuary](#)

[Game: Do ecology and where the river meets the sea](#)

## **Project:**

Create your own Estuary! Be creative and take the opportunity to research what the different types of Estuaries look like and have to offer. One fan favorite Estuary comes from the movie Frozen! Pop quiz: What type of Estuary was the kingdom built on?

We cannot wait to see what your Estuary looks like. Please bring it to campus so your teacher can display your hard work alongside your classmates project.

Materials:

- 1 Foam board, shoebox, or anything sturdy for a strong base
- 3 pieces of construction paper (1 brown, 1 green, 1 blue)
- Clay (pre-cut)
- 2 pipe cleaners (1 brown, 1 green)
- Coloring preference: Crayons, color pencils, markers, paint
- Various objects: grass, twigs, dirt, rocks, animal life toys, etc.

## **Field Trip:**

Join us for a day at the Estuary. On September 26th at 1PM we will be headed to the Morro Bay Estuary to get an up close look at this coastal plain estuary. Below is some vocabulary that the Central Coast State Park Association suggest participants know before they go.

### Vocabulary

**Photosynthesis** - a process of using sunlight to synthesize foods from carbon dioxide and water.

**Food Chain** - a food chain shows how living things get food as well as how energy and nutrients are passed from creature to creature.

**Producers** - organisms, like plants, that produce their own food.

**Consumer** - organisms, such as animals, that can't produce their own food. They eat plants and/or other animals for food in order to get the energy and nutrients they need to survive.

**Water Cycle** - Precipitation (rain, snow, hail, etc.) falls from the sky and gets collected in an ocean or lake until the water vapor evaporates back into the sky in the form of clouds. Clouds cool the vapor and condensation forms.

[Click here to see an awesome diagram of the water cycle](#)

**Erosion** - Wearing away of land caused by forces such as water, wind, and ice.

**Tides** - The rise and fall of the levels of the ocean. They are caused by the gravitational pull of the sun, moon, and the rotation of the earth.

**Pollution** - occurs when the environment is contaminated by waste. The three main forms of pollution are water, air, and land.

**Plankton** - drifting organisms that live in the surface layer of the ocean. These are the main source of food for almost all fish.