

SF Bay Watershed in Your Hands

What is a watershed?

What land features surround the SF Bay?

Do you live in a watershed?

Objective

Students will be able to describe the major geographical features of San Francisco Bay's Watershed and be able to define the term "watershed." Students will understand that everyone lives within a watershed and that watersheds can be big and include multiple cities, and small and include just their neighborhood.

Preparation

You'll need to do the Activity 1 in a place that can get wet. Each student will need one sheet of printer paper and 3 different colored markers. (green, blue and red)

Delivery

Activity 1: Tell students they're going to make a landscape with their sheet of paper. Ball up the sheet and then lightly unfold it (not totally flat). Students will notice that when laying the paper down on a surface there will be natural high and low points—just like a natural landscape has mountains and valleys.

Students use **green** markers to mark the ridgelines: the highest points that separate two low points. Students use **blue** markers to represent bodies of water. They'll have to guess where they think water will flow and collect. Finally, students use **red** to mark human development: roads, homes, factories etc.

Now go around and spray each "landscape" generously and prompt a discussion with these questions:

- What path does the rain take on your landscape?
- How does this landscape represent the idea of a watershed?
- What happened to human settlements? Was there erosion or urban runoff?
- Should the flow of water affect our choice of building sites within a watershed? How?

Activity 2: Students will now make the SF Bay Watershed with their hands. Have the SF Bay watershed available to reference as a group or in small groups.

Students start by making a bowl shape with both hands. Imagine the tips of your fingers are the peaks of the Sierra Nevada. Your left thumb is Mnt Shasta and your right thumb is the Tehachapi Mnt Range. The fleshy parts below your thumbs are the Coastal Range. The cracks between your fingers are creeks and small rivers trickling down from the Sierras. The large crease in your left palm is the Sacramento River and the large crease in your right palm is the San Joaquin River. The crack between your hands is the delta and the opening between you arms is the Bay! *Notice how the smaller creeks and rivers lead to larger rivers that eventually flow into the delta and the Bay.

Debrief

What is a watershed?

How does human development affect watersheds?

How does water flow at your school? (think about when it's raining)

What's another metaphor for a watershed? (bathtub, sink)

How would you teach someone else what a watershed is?



Theme

SF Bay Watershed

Age

4-6th Grade

Duration

30-45 mins

Materials

One sheet of printer paper per student; Water soluble markers; Spray bottle
SF Bay Watershed Doc.

Standards

NGSS:
EP&C's: P2-CA,C, D P4-CA, B, C

Vocab

Watershed—land through which water flows over, or under, to reach a body of water

Ridgeline—The highest point of land that separates two valleys or watersheds

Delta—Land where rivers empty their water and sediment. Usually create wetlands

Erosion—the gradual destruction of land by water, wind, or ice

Urban runoff—water that flows over urban landscapes, usually associated with pollution or flood-









