

Modeling Water Systems

Length	60 minutes
Materials Required	<ul style="list-style-type: none"> • Video of stream table demonstration with Emily Iskin from Colorado State University (see Writing Water website for YouTube link) • San Francisco Bay Delta video from the US Army Core of Engineers (https://www.youtube.com/watch?v=jz5f3pfRJ7k) and website from the Water Education Foundation (https://www.watereducation.org/aquapedia/san-francisco-bay-model)
Lesson Focus	Physical Models: what they get right and what they get wrong. Learning about physical models of hydrologic systems and comparing models to simplifications in our own lives
Learning Goals - Writing	Short form descriptive writing to convey a complex idea in simple terms, long form narrative writing to examine the issues with simplification
Learning Goals – Water	Physical models of water systems, how they are useful and why we have to be careful when we use them. Reflect on how humans simplify our complex natural world and glean useful information from this practice, and thinking about how assumptions affect outcomes.
Target Audience	High school to college-aged writers and beyond
Warm-Up (15 mins)	Watch YouTube videos on the San Francisco Bay Delta (11 mins) and the stream table demonstration (about 5 mins). Note down two things you learned.
Writing Prompt #1 (20 mins)	Quickly write 10 short descriptions of what you saw in the videos, what stuck out to you, and what was new to you. Share with one or two others near you and choose one common theme to share with the group.
Writing Prompt #2 (25 mins)	Write a narrative about a time you felt your thoughts/feelings/actions were simplified by someone else.

	Write about how it made you feel, what they got right and what they got wrong. What were the positive/negative consequences of someone making assumptions about you? How do the assumptions you make about others affect your view of the world?
Wrap-Up	Invite writers to share the most interesting thing they learned Invite speakers to find other examples of physical models and think about them critically.

This lesson plan is free to download and use. The Writing Water Curriculum Project (WWCP) was developed in 2021-2022 with support from The Colorado Water Center at Colorado State University and in collaboration with interns at the Community Literacy Center. Special thanks to Emily Iskin, our graduate research assistant and expert in fluvial geomorphology, who provided essential consultation in water science and created original water-inspired art for the WWCP webpage.