



Library Exhibition

Engagement Guide for Educators



Water and Our Communities

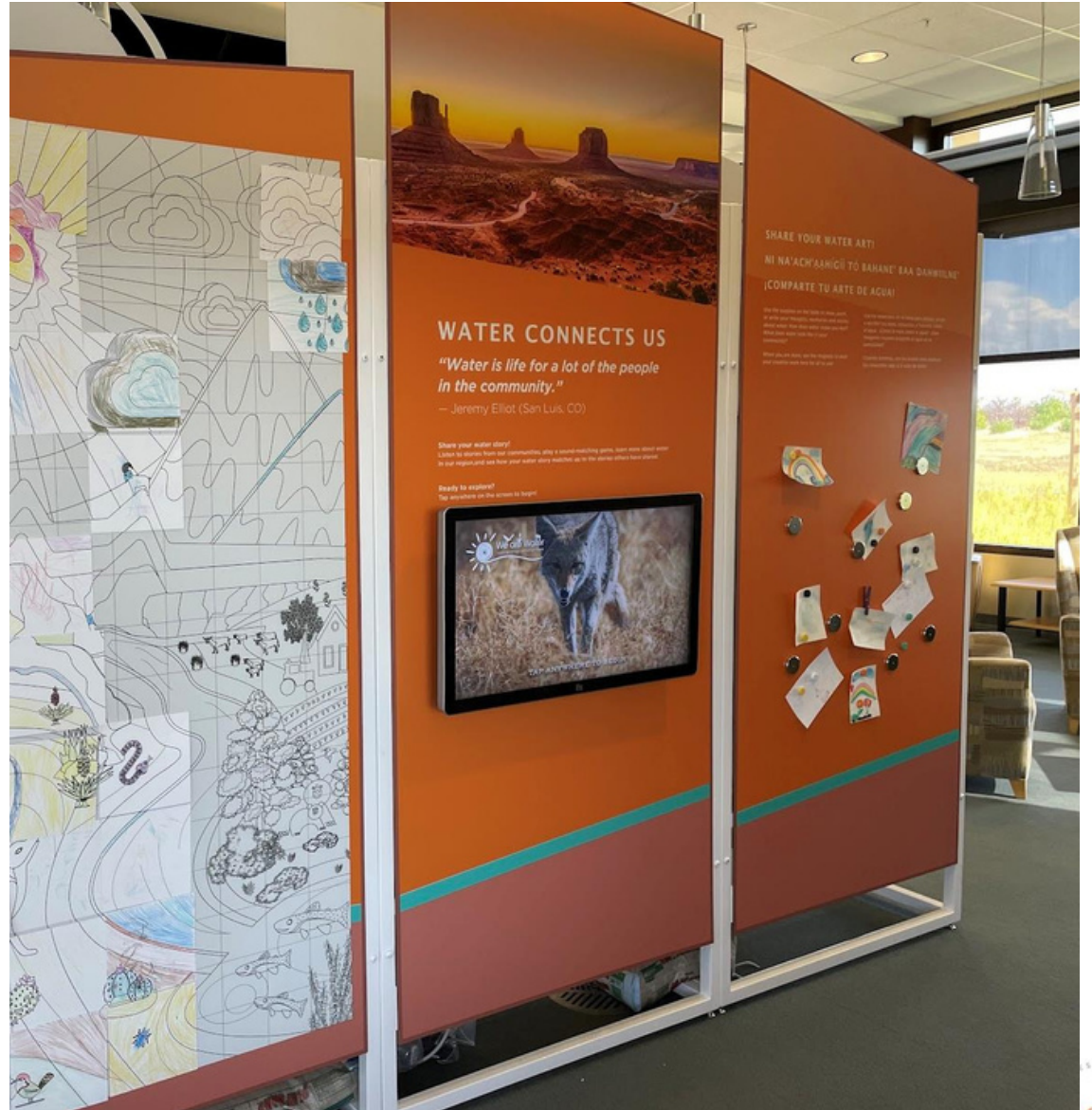
aka Story Wall



Water and Our Communities (aka Story Wall)

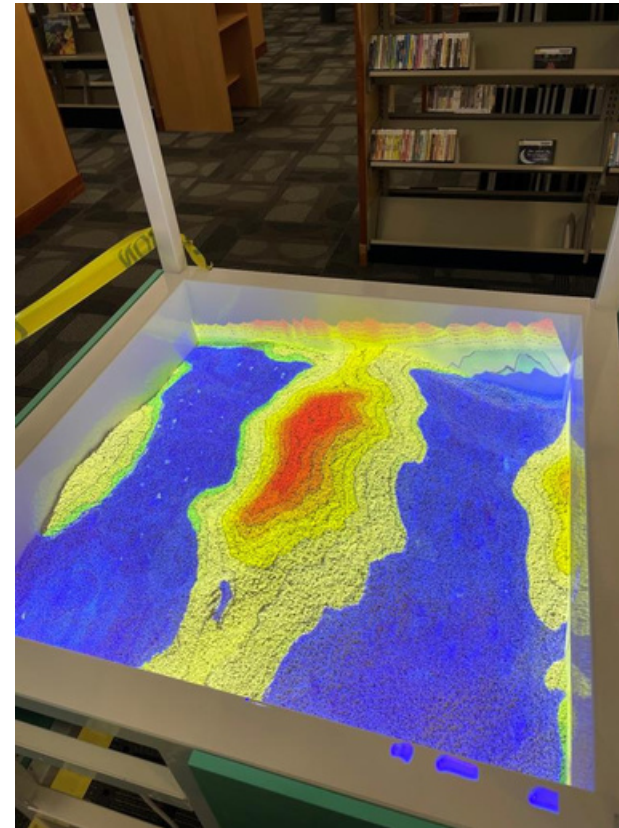
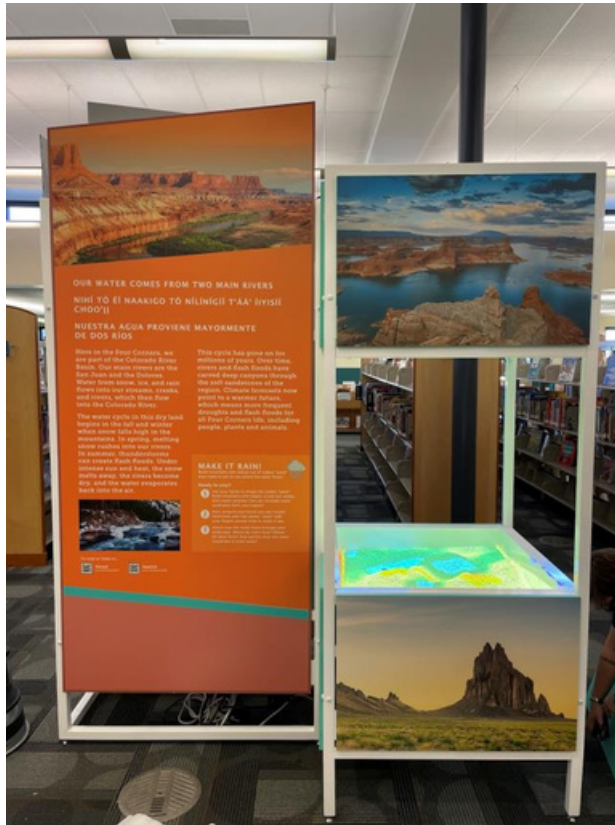
Student Engagement Suggestions:

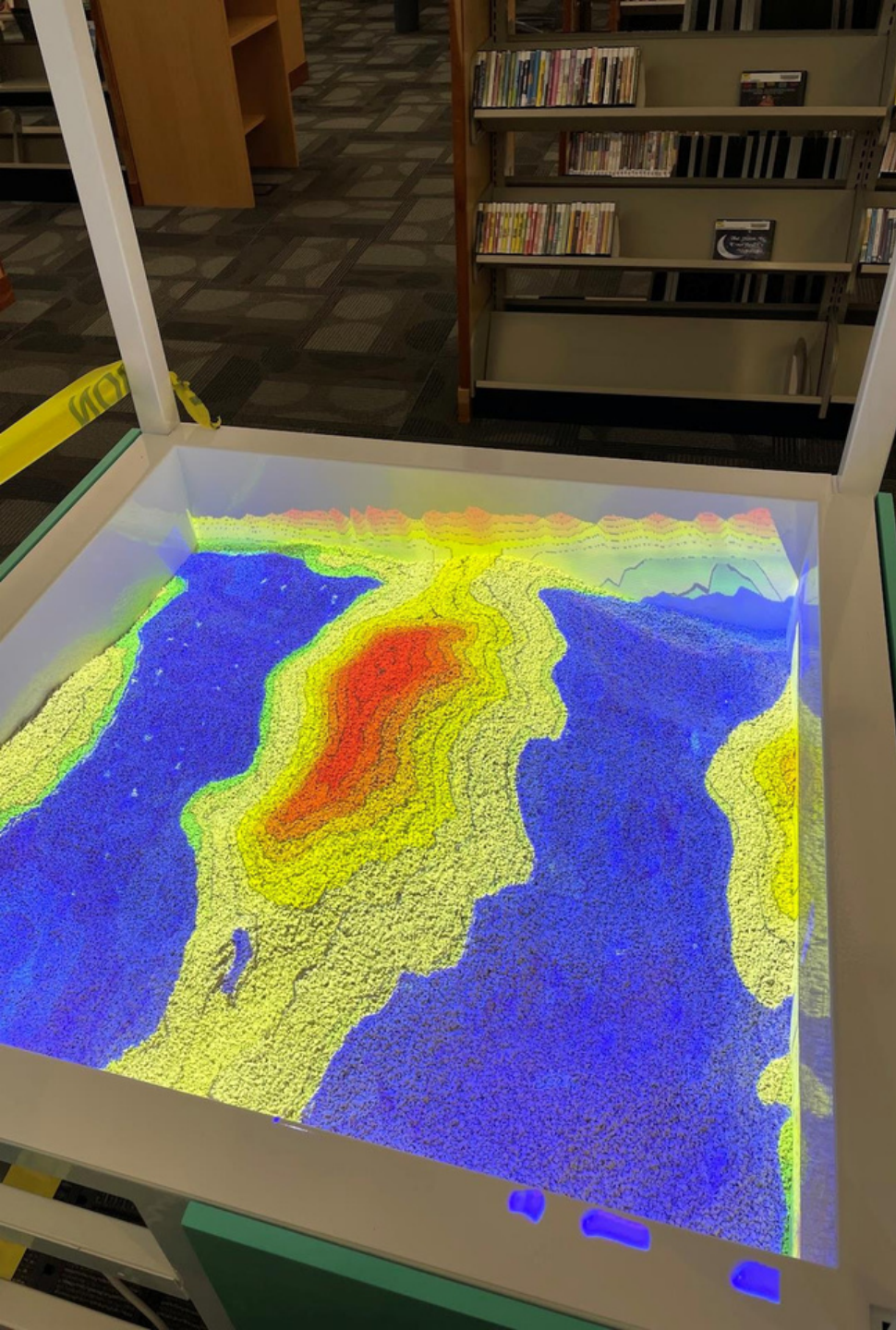
- Click into the touchscreen to show students how to access the story collection. Note that there are many stories in each region.
 - Demonstrate the story index that has the time and subject of each video.
- Share your favorite story from the story collection; say what you like about it. The stories are available at wearewater.colorado.edu/stories
- Encourage students to listen to two or three stories (note that many are quite brief). After listening, students can complete a Story Connection card.
- Before your visit, arrange for the Water Bead Bracelet activity to be available at the library. Students earn a bracelet bead for the personal connections they make with the exhibit content.
- Share the Take and Make Kit: Be a Water Historian.



Water in the Landscape

aka AR Sandbox





Water in the Landscape (aka AR Sandbox)

Student Engagement Suggestions:

- Ask students to name several landforms they can construct in the sandbox. Suggest mountain, butte, valley, plain if they are not mentioned.
 - Ask students to predict where the water will flow in the respective shape.
 - Construct the landform, make it 'rain', discuss where the water flows.
- Crumple a Watershed Activity (next page)
- Play-dough Topo Map

Crumple a Watershed activity - participants explore the way the shape of the land and the pull of gravity influence how water moves over Earth.



Crumple up a piece of paper and gently open it most of the way. It should still show ridges (high points) and valleys (low points).



Choose one of the ridges and color the whole ridgeline with a washable marker. Use lots of ink! Place the paper on an absorbent microfiber towel. Make a prediction. If water fell on the ridge you just colored, where would it go? What would happen to the colored ink?



Now, test your prediction. Use the dropper to place water onto the peak, simulating a rainstorm. Was your prediction correct? Were you surprised by anything? Repeat this experiment with more ridges on your crumpled paper. Do your predictions change as you make and observe more simulated rainstorms?

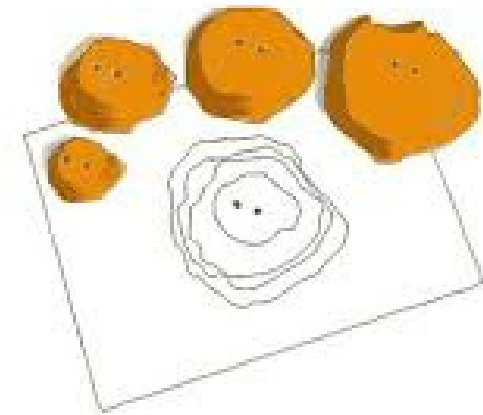
source: <https://www.nisenet.org/catalog/exploring-earth-paper-mountains>



Play-dough Topo Map Activity

Point out to students that the AR sandbox projects elevation lines on to the sand shapes. Ask students if they know what those lines are. To reinforce the concept of showing elevation on a map, make a topographical map in your classroom.

https://pubs.usgs.gov/gip/19/downloads/Chapter_3/Activities/Play-dough_topo.pdf



Topo map example

Water Use, Water Rights, Water Access

aka Plinko



Water Use, Water Rights, Water Access

Student Engagement Suggestions: This is a complicated topic that is worth exploring in depth. The lessons are best conducted in the classroom.

Lesson: How many water users can one river serve? 8-4-1, One for All.

Objective: Students cooperate to move a container of water where it needs to go.

https://www.swc.nd.gov/pdfs/841_activity.pdf

Lesson: Pass the Jug – a water rights activity

Objective: students learn about water scarcity and water apportionment.

<https://bouldercountyopenspace.org/naturalhistory/pdf/water-rights.pdf>

For further background:

Video: *Mni Waconi – The Stand at Standing Rock*. (8 min, 26 sec)

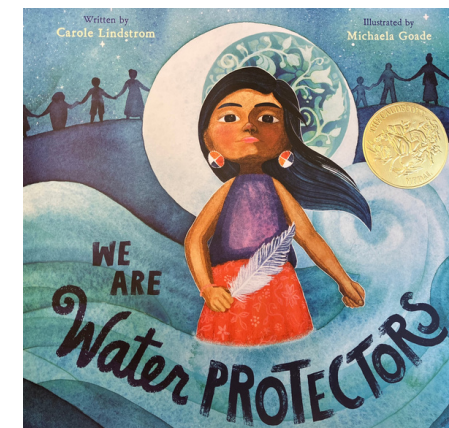
Features water protectors from Standing Rock Sioux tribe and allies in their fight against the Dakota Access Pipeline.

<https://www.youtube.com/watch?v=4FDuqYld8C8>

Tribal Water Issue, Spring 2022 – *Headwaters magazine* (Water Education Colorado)

Read about the current state of Indigenous water rights in the West.

Read aloud the picture book *We are Water Protectors* by Carole Lindstrom, illustrated by Michaela Goade.



Water and Life

aka Connect 4

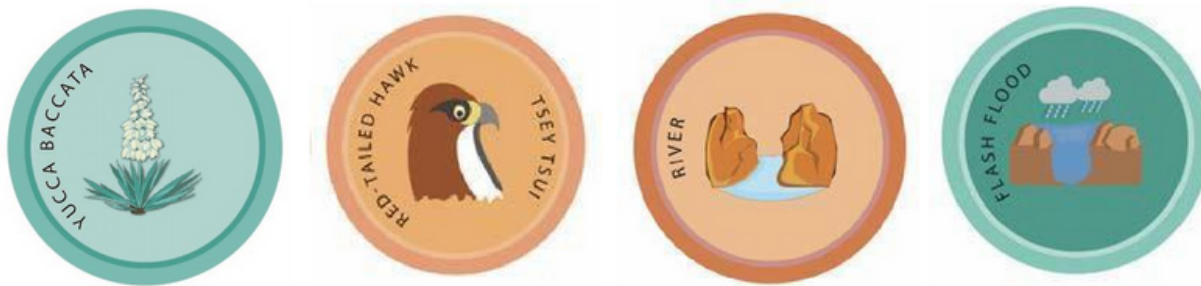


Water and Life (a.k.a. Connect 4)

Water is a driving force that shapes weather, landscape features, and wildlife adaptations. To live in this dry landscape, people, wildlife, and plants must make the most of the little water available. The game allows students to visualize the plants and animals that are unique to the climate of the Four Corners Region. The panels explain the role of wildfires in the environment and the risks of warmer temperatures and drier conditions.

Engagement suggestions:

- Play a new take on the classic Connect 4 game! Try to line up 4 plant, animal, landscape, and weather tokens in a row. Have students talk about the ecological connections they can make between the tokens in the row.
- Use the accompanying trivia cards to learn more about the items on the tokens. The tokens feature names in Navajo, Ute, Spanish, and English languages.



Water and Life (aka Connect 4)

Humans aren't the only ones who need water in the Four Corners Region.

Engagement ideas, continued

- Ask students: How do plants and animals survive in this dry climate?
- Ask students to identify the elements that make the plant or animal able to live in an arid climate.
- Consider setting up stations using the [Adaptations, A Way of Life](#) activity guide for younger students to explore.
- Once students have succeeded in getting four tokens of the same color in a row, challenge them to get a row with one of *each* of the different pieces. After all, the four elements exist together to make up this unique ecosystem.
- Encourage students to gently explore and play with the tokens! Encourage them to create their own stories using all the icons included in the bottom row of the Connect 4 board.





**Thank you for visiting the
We are Water Exhibition!**



Land Acknowledgement

We honor and acknowledge the traditional territories and ancestral homelands of the Navajo, Jicarilla Apache, Hopi, Zuni, Ute Mountain Ute, Southern Ute, and Pueblo Nations. Their relationship with the land we call the Four Corners continues to this day. The region is also home to descendants of Hispanic and European Americans who first arrived here starting in the 1500's.



A special thanks to our funder

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