

ATTACHMENT 1

Proposed Collaborative Programming

EXAMPLE THEMES



Observing the Landscape

Leaf Phenology: What causes the colors of the fall leaves? How do we know when they will change and how bright they'll be each year? View time lapse photography of the Tahoe forest, observe the trees with a spotting scope, examine leaves under an on-board microscope, and create a leaf mosaic at the water's edge.

Geology of the Tahoe Basin: From the center of Lake Tahoe, observe the surrounding basin and hear from a local scientist about the geologic formation of the lake and mountains. Examine rock samples on-board the Lake Observatory.

Landscape Math: How far are you from the edge of Lake Tahoe? How long will it take you to paddle to shore? Using known heights of distant landmarks and your own body, learn to estimate sizes and distances in the landscape to help you navigate when you're out paddling on the water. We'll also practice using landmarks and our shadows to find north.

Traces of Bark Beetles: Look out across the landscape for evidence of trees impacted by bark beetles. Hear from a local forest ecologist and climate scientist about the relationship between climate change, drought, and bark beetle damage to pines. Investigate core samples, climate models, and maps, and learn about what could be the next steps for the Lake Tahoe forests. Back on shore, meet up with the Sugar Pine Foundation to plant a tree.

Observing the Lake

Blue water: What makes Lake Tahoe blue? Investigate the water at the time of year when the lake clarity is on the rise and the blue is declining. Take water samples, measure clarity, and view plankton under a microscope.

Lake Bathymetry: Transect Lake Tahoe using an echo sounder to measure the depth of the lake. Enjoy a hot toddy or hot cocoa and the view of the snow-capped mountains, and then learn from a TERC scientist about how your transect fits into the overall bathymetry of the lake and the significance of its structure.

Lake Sedimentation: Join a TERC researcher to learn about the journey of sediment through the watershed into Lake Tahoe. Take secchi disc measurements at the clearest time of the year and compare the data from other seasons. Visit the Upper Truckee River to learn about the impact of the wetland restoration projects on the sedimentation of the lake, and enjoy a view down into the lake through the Lake Observatory's glass portal.

Tracing Currents: View surface currents upwelling in Lake Tahoe, and then compare your own infrared view of the surface with remotely sensed data from NASA's Jet Propulsion Laboratory and with temperature data you take from on-board sensors.

Observing the Sky

Color of the Sky: Is it partly sunny or partly cloudy? Use a nephoscope to measure the cloud cover in the sky. Hear from a NOAA meteorologist about what they look for in clouds and why, and then add your photos of the Tahoe sky to the Cloud Appreciation Society gallery.

Snowflake Microscopy: What kind of snow is best for skiing? What can we observe in the snow that will tell us about the water levels in spring? Look at snowflakes under a video microscope and hear from an atmospheric scientist about what causes their hexagonal symmetry and their differing individual crystal structures.

Spring Migration: Join a TINS birding expert to travel to the Upper Truckee Marsh or Sand Harbor to spot migrating birds such as the black-throated sparrow, western kingbird, and gray flycatcher. Learn about their journeys and what attracts them to Lake Tahoe along the way.

Trace of Stars: Relax on the Lake Observatory for a summer night star gazing. Learn from a professional photographer how to take long-exposure photographs of the night sky to reveal traces of the stars, and see examples of local artists' photographs of the night sky over Lake Tahoe.

Observing Ourselves

A Night of Local Color: Gather together to share home videos of your encounters with bears. What are your bear stories? Hear from a local expert from the Forest Service about the life history of bears and how to protect yourself and the bears.

Floating Lantern Festival: Celebrate the dark, winter evenings with a festival of lights on the water. Join a local artist for a collaborative installation of interlocked, floating LED lanterns radiating out from the Lake Observatory.

Where did we all come from? Create a collective map of the origins of Lake Tahoe visitors & residents and gather for an evening of storytelling on the lake about what brought each of us here and what keeps us coming back. Hear from a local historian or tribal member about the Washoe people's long history at Lake Tahoe.

Tracing Invasives: Fracturing of the Lake Tahoe ecosystem can be traced back to invasive species entering the water by boats that have been in other bodies of water. You can help protect Lake Tahoe by preventing invasive species from entering the lake on your boat. Meet up with the Tahoe Keepers at an inspection station for an inspection and decontamination of your kayak, canoe, or inflatable boat. Then we'll all paddle out to the Lake Observatory and raft up for a picnic and celebrate a clean Lake Tahoe.