



**Schooling Fish**  
Matt Leader  
8<sup>th</sup> Grade Math and Science  
High Tech Middle North County

At the start of this project, students raised rainbow trout in order to reintroduce them to streams and rivers in San Diego County, as part of a larger effort led by the California Department of Fish and Wildlife. Rainbow trout are a domesticated form of steelhead trout, and are used as a “model organism” to understand steelhead trout in the classroom.

When in-person school ended abruptly in March 2020, teacher Matt Leader moved the trout to his garage, and set up cameras to “stream” them to his students as they matured. While students continued to observe and analyze the fish, they also studied the broader ecological implications (and challenges) of steelhead trout recovery in San Diego. In addition, students participated in online art workshops and critique sessions in order to create artwork designed to raise awareness of the steps needed to reintroduce trout to local waterways. They submitted these pieces to the Bow Seat Ocean Awareness Art Contest, an international competition that has been running for a decade.

This took place as part of an ongoing, multi-year collaboration between teachers across High Tech High, ranging from elementary to high school, led by Matt in collaboration with elementary science teacher Shelly Glenn Lee.

**Teacher Reflection**

Raising trout every year continues to be a great way to bring the natural world to our students. We raise babies, care for them, and see it through to get them to a habitat with the highest possible chance for survival.

*—Matt Leader*

**What the Image on the Facing Page Shows**

This art piece shows a mix of the causes and effects of climate change: coral bleaching, pollution, oil spills, dams, hurricanes and habitat loss. In San Diego, steelhead trout are a native, keystone species. Due to climate change and things like dams, their habitable habitats have been diminishing, causing a significant decline in the species. The uninhabitable habitats have runoff from farming, factories or sewage treatment plants. Also, sediment from human development can severely disrupt the food chain and cause a decline in all species.

*—Athena Bernheim, 8<sup>th</sup> grade Student*