

HOT SHOT HEROES

Essential Question

What role does fire play in our community?

Driving Questions

How can we use storytelling to foster community?

How does the nature of fire impact regional ecosystems?

How can we keep our community safe from a wildfire?

Products

Pourquoi tales to explain a natural phenomenon

Design a fire-safe landscape for a local home in San Marcos

Wildfire Index and weather station for our school

Fieldwork and Experts

Storytelling expert

San Diego Public Library via Public Transportation

San Diego Fire House #1

Firehouse Museum

Landscape architect expert

San Dieguito River Park

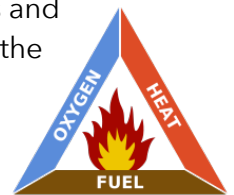
San Marcos Firehouse

Elfin Forest field work

Wildfires are omnipresent events in southern California and are part of the natural cycle and patterns of our climate and ecosystem. Fire is necessary for our survival and for the health of particular habitats, yet it also poses a threat to our safety and our properties. In fact, many of our very own families were impacted by a series of wildfires that occurred in and around North County in 2011. As we enter "fire season" in San Diego, our fifth grade students will engage in an interdisciplinary project that will help us to understand the nature of fire and its role in our community.



Through a variety of field experiences, work with experts, reading and writing, and hands-on science investigations, students will become experts in fire science and fire safety and will transform their knowledge into authentic products for our community. Launching with an oral storyteller, students will hear how humans use stories to teach about everyday phenomena. We will develop our own "Pourquoi" tales of how and why nature is a significant part of our lives. Working with our local fire fighting community, students will become "fit as a firefighter" and learn about how to prevent and extinguish fires in our homes and communities. In science, students will study the chemistry of matter, and the dynamics of weather and how it factors into the science of fire. We will also apply our understanding of chemistry and wildfire in maintaining a healthy environment for raising local Rainbow Trout and come to understand how local plants and animals are adapted to living with fire. Finally, students will use math and their overall project experiences to consult and develop plans for local residents in creating and maintaining fire safe residences.



Fit as a Firefighter

Physical fitness is key in the life of a firefighter. The same can be said for a fifth grader. Our students will experience interval training that includes full body fire related movements often utilized by firefighters to prepare themselves for the challenges required for their job. This will be tied in during morning PE time. We are getting fire fit!

Trout in the Classroom

How does fire impact an ecosystem? In science, students will be raising trout in the classroom in collaboration with The Escondido Creek Conservancy and California Fish and Wildlife Service. The experience will begin with delivery of 150 fish eggs and end with a release of juvenile fish into a local watershed. While raising the trout, students will learn what requirements trout have for survival in both the natural and classroom settings (cold, clear, and clean water) and how fire impacts our freshwater habitats and local ecosystems.



Standards we will meet in this project:

Math: Read, write, round and compare decimals; add, subtract, multiply and divide with decimals; area; scale; measure and convert measurements; measure volume as unit cubes; use volume and its equation ($V = l \times w \times h$) to solve real world problems

Reading: Fluently read and understand books at my level; accurately quote text when explaining what it says; determine theme; compare and contrast two texts (characters, theme, setting, events) using quotes; read, explain, summarize and compare informational texts

Writing (Narrative Stories): Write stories with detailed descriptions and a clear sequence; provide a clear introduction; use dialogue and description to show how characters respond to different situations; use transitional words and phrases; write a conclusion that makes sense for the story; Plan, revise, edit and rewrite to suit my task, purpose and audience, using technology to create and publish my writing

Speaking and Listening: Participate in different types of discussions with different people; build on others' ideas and express my own thoughts; follow agreed upon rules for discussion and carry out my assigned role

Science: Through explorations into chemistry, weather, and plant/animal adaptations, students will use the NGSS 3-dimensions to develop models to explain the cycling and organization of matter, how energy is transferred through systems, and for determining patterns of weather. Students will plan and carry out investigations into the cause and effect of fire on plants and animals and the cycling of matter. Additionally, students will obtain and use information to communicate how human activities impact Earth systems and what humans are doing to protect Earth's resources and environments.

