Splash Science Lab
Virtual and Onsite Experience

Goal: Increase in knowledge of impacts of storm drains and urban runoff, pollution prevention, and safe alternatives.
Objective: Examine the impacts of polluted runoff to receiving waters within SD County through experimentation and observation.

Rotation Timing

Introduction – 5 minutes
Station (1,2,3) – 15 minutes each
Conclusion – 5 minutes
*Please not all time are approximate

The program design of the **Splash Science Lab** will continue to introduce students to scientific principles, natural systems, and environmental occurrences, specifically those affecting water resources in Southern California. The students will be engaged with hands-on, inquiry-based activities that will address key concepts, such as urban runoff, water quality, and bio magnification. Our instructors will facilitate each station's content through the 5 E's framework. The stations are connected to Next Generation Science Standards for 4th, 5th, and Middle School.

Activity Station Overview
(3 of the 4 options are selected for each program)

Watershed Model
Students will identify and categorize common contaminants into point source or non-point source pollution. They will determine the origin for these pollutants and add them to the model. Students will assist in the creation of a rain event to move the standing pollution through the watershed. They will learn the differences between our storm drain and sewer systems.

Water Quality
Students will test four factors of a water sample from a local source. They will analyze dissolved oxygen, pH, temperature, and salinity in order to determine if they are within their ideal ranges. They will also hypothesize the cause for any shift in range and its possible effect on the biosphere.

Microorganism Investigation
Students will identify microscopic organisms in prepared slides to understand the patterns of interaction/relationships between them. They will investigate the effects of common pollutants within a water sample. They will discover which types of organisms are good indicators of pollution.

Life In an Estuary
Students examine the relationships and interdependency of animals within an estuary. They will see how pollution can travel through the food web from smaller organisms to large predators. They will hypothesize how pollution might affect these relationships and alter the balance within the ecosystem.