Splash Science Onsite Lab Information Guide

Dear participating teachers,

Greetings from the San Diego County Office of Education's Science Outreach Team! We are looking forward to our visit at your site. Please familiarize yourself with the information detailed in this document. This will ensure an optimal experience before and during the program.

Whether you have participated before or if this is our first visit to your school, we hope that that this experience will be academically enriching, relevant, and memorable for your students. We encourage feedback and hope that you can complete the additional program evaluation. This will help us continue to develop an amazing program for students throughout San Diego County.

Below lists the requirements and logistical requests for 2020/2021

1. Please submit the Splash Science Lab Schedule and Logistics documents no later than 10 business days after your program date is confirmed by the SDCOE staff. scienceoutreach@sdcoe.net

2. There are lessons, word matches, and background information PowerPoints that will prepare your students for the program. They cover key concepts and vocabulary that are integral parts of the program content. If your program is sponsored by San Diego County or the city of Vista, you are asked to have your students complete the required pre/post-tests. Please complete these pre-tests prior to facilitating any of the pre-program activities.

3. The program activities can take place inside a room (multi-purpose, gym, classroom, etc.) or if necessary outside. The space should be large enough for the movement between three stations, at approximately 10'x10' each. We require that the activities remain in one location and are undisturbed for the entirety of the program.

4. If there is inclement weather, a vacant room (classroom, multipurpose, gym) will need to be available for the entirety of the program.

5. Our staff will be arriving in a standard cargo van. We request close access to the program location. This can either be a dedicated parking spot in the main lot or we can park the vehicle inside the campus.

6. Inform all relevant school site personnel of the program date/schedule/location and our onsite requirements (access to a sink, unlocking of gates, etc.).

7. There is a maximum of 35 students for each one hour session. A maximum of four sessions can be scheduled during a single visit to a school site. Please set the schedule with at least 10 minutes between classes. The first session may start no earlier than 8:00am.

8. Please have your students put on nametags before their arrival to the program.

9. Divide your class into three groups. Each group will have an assigned instructor who will guide their group through the three hands-on stations.

10. Each participating class should arrive promptly at its scheduled time. Each program session will be facilitated with the following schedule: 5 minute Introduction, 15 minutes at each station, 5 minute conclusion.

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 conservation, and common pollutants. Our instructors will facilitate each station's content through the 5 E's framework. They are connected to Next Generation Science Standards for 4th, 5th, and Middle School.

Your students will become watershed scientists to find out how water pollution is causing significant environmental change within local ecosystems. This program strives to empower them to find solutions to reduce water pollution and become active stewards of the environment.

Activity Station Overview
(You select 3 of the 4 options for your site visit)

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 4 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.

Microscope Investigation
Students will identify and count microscopic organisms in both prepared and live samples, 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.

Please call (858) 290-5986 or email scienceoutreach@sdcoe.net if you have any questions. We are looking forward to visiting your site!

SDCOE's Science Outreach Team