

SANDWATCH

Sandwatch is a UNESCO-developed program to monitor beach areas and prevent degradation of the world's beaches through environmental education and action. It includes steps to generate data that can in turn inform decision-making and steps to prevent or reduce human impact on beach ecosystems.

For this year's Group IV project, NIS Science students will be collecting, analyzing and presenting data gathered during a day at the beach. The groups descriptions below include the reference to the chapter in the *Sandwatch manual*, if you'd like to read more about it. *All procedures are provided for you to focus on team work!*

Group I (8.1): Water Quality (except BOD)

Students will collect water samples from the ocean and analyze it using different ready-to-use kits. Each kit comes with an instruction manual on how to prepare the sample and read the results.

Group II (3.1 and 5.3): Map the beach and measuring beach sand

There are two objectives for this group. One is to create a sketch map of the beach which will be used by all of the other groups to document where data was collected.

The second objective is to collect data on the beach sand: size, sorting and shape. You'll be doing this at different locations along the beach.

Group III (7.1 and 9.1): Beach debris and measuring waves

There are two objectives for this group. One is to use a "Beach Cleanup Data Card" provided to record the type and quantity of debris (trash) in a particular area of the beach. You are not necessarily *collecting it*, you're just recording how much of each thing is in the sand.

You're going to get wet for the second objective! You're going to measure wave height, wave period and the direction of the wave at different points along the beach.

Group IV (10.1, 6.1, 6.2 — 3.2): Measuring longshore currents

You're getting wet for this activity! The first objective of this group is to record longshore currents which tells us, among other things, the current speeds.

Additionally, this group is observing beach activities and carrying out simple interviews with local beach-goers. The beach we go to usually is quite deserted (very few users), so as a backup (or as an extension), this group would have to interview local business owners to gather *qualitative* (not numerical) information on how the beach *used to* look like in the past.

Group V (4.1) - Measuring erosion and accretion

Erosion is the reduction of the width of beach (sand being taken away), while accretion is the opposite (sand being deposited on the beach, extending it). You will record the high water mark at different points along the beach.

Group VI (4.3): Measuring beach profiles

Measuring beach profiles involves recording the slope of the beach using ranging poles at different sections of the beach.

Group VII (11.2): the role of coastal vegetation

This group's objective is to record and identify (using locals as a source of knowledge) the vegetation along the beach.