REEF ENVIRONMENTAL EDUCATION FOUNDATION
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OCEAN EXPLORERS VIRTUAL FIELD TRIPS
PROGRAM OVERVIEW

What is the Virtual Field Trip Program?

REEF's Ocean Explorers Field Trips include interactive and engaging lesson plans and activities in three themes—Citizen Science, Invasive Species, and Endangered Species. The program employs an interdisciplinary and applied approach to science, technology, engineering, and math (STEM) curricula. It includes classroom lessons and in-school "research field trips" to perform and create research trials and complete field journals as citizen scientists.

Sessions are adaptable and can be accommodated to be taught in-person at school, off-site in the field, or entirely online in a virtual format. The program curriculum follows the 5E lesson structure: Engagement, Exploration, Explanation, Elaboration, Evaluation. The programs are designed to easily supplement a teacher's classroom curriculum by following this structure.

What is included in the Virtual Field Trip Program?

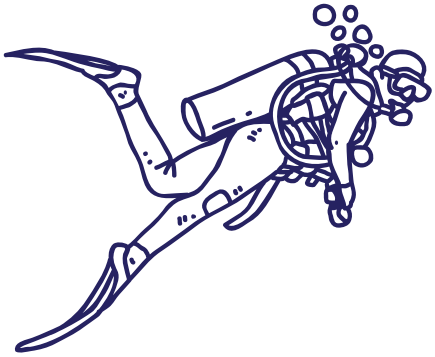
Each Virtual Field Trip Program will include the following:

- Printable Research Field Journals for students to document their exploration activities Educator's guide for teachers and instructors to easily explain and demonstrate each program
- Pre-recorded footage and lesson slides to present the field trip.
- Live session with a REEF Scientist at the conclusion of each field trip

Once you have signed up for a Virtual Field Trip, a REEF team member will contact you to ensure you have received all of your materials and the resources are clear and comprehensive. If needed, a meeting can be scheduled to discuss questions, concerns, clarifications, or any general inquiries regarding the facilitation of a Virtual Field Trip.

VIRTUAL FIELD TRIP THEMES

Volunteer Fish Survey Project



Through the Volunteer Fish Survey Project (VFSP), REEF facilitates programs that actively engage divers, snorkelers, and other marine enthusiasts in marine conservation. This citizen science program has generated the most extensive marine life database globally, with over 250,000 surveys conducted at almost 15,000 sites throughout the world's oceans by over 16,000 volunteer divers and snorkelers worldwide.

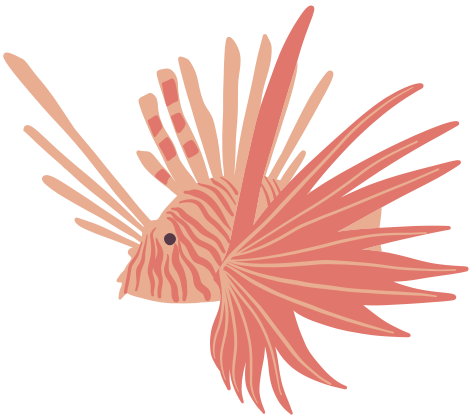
REEF's volunteer divers and snorkelers become citizen scientists, as they are collecting and reporting information on marine fish populations and selected invertebrate and algae species in temperate areas. Various resource agencies and researchers use the significant data contributed by these marine citizen scientists.

Grouper Moon Project

Grouper Moon is a collaborative conservation program between REEF and the Cayman Islands Department of the Environment (CIDOE) studying Nassau grouper (Epinephelus striatus) – a social and ecological cornerstone of the Caribbean's coral reefs. Historically, Nassau grouper represented one of the Caribbean's most economically important fisheries. Unfortunately, due to intense harvest at the gatherings where these fish reproduce, called spawning aggregations, their populations have dwindled to a fraction of their historic numbers.

Since 2002, REEF and the CIDOE have coordinated annual efforts to monitor and study Little Cayman Nassau grouper spawning aggregations. The team has developed a protocol for monitoring the fish's numbers and activity at the site through the Grouper Moon Project. The project also studies the historical aggregation sites on Grand Cayman and Cayman Brac. It's grown in scope to include an ambitious acoustic tagging project, juvenile habitat research, genetic studies, and a water current drifter project to understand how currents and other oceanographic conditions affect grouper larvae recruitment.

Invasive Species Program



Known for their show-stopping appearance, venomous spines, and the damage they cause to coral reefs, invasive lionfish are the first non-native marine fish established in the Atlantic. Lionfish pose a significant threat to local marine ecosystems due to widespread predation of native species, high-volume reproduction, and lack of natural predators.

REEF works in close partnership with government agencies and partners throughout the region to help develop lionfish response plans, train resource managers and dive operators in effective collecting and handling techniques, and conduct cutting-edge research to help address the invasion. To aid in this effort, REEF recruits interested recreational divers and snorkelers to join organized lionfish research and removal projects, encouraging public participation to address the invasion through annual lionfish workshops and fishing competitions called derbies.