

Dear Teacher,

Six years ago, I founded Ocean Challenge, Inc. to link classrooms around the world to adventures.

Adventures are potent teaching tools. They are personal in nature, thus promoting a bond between adventurers and classroom students; uncertain in outcome, thus dramatic and engaging; and multi-disciplinary in content, thus meeting curriculum requirements in all subjects. Because adventures are real people doing real things in real time with real consequences, they demonstrate the active application of subjects that are often dry and passive on a textbook page.

Our first project linked thousands of classrooms to the voyage of *Great American II* in her quest to break the sailing record set in 1853 by the clipper *Northern Light* from San Francisco to Boston around treacherous Cape Horn. I was privileged to be the skipper of *GA II* for the record run of 69 days and 20 hours.

It was our hope that the adventure for us would become an adventure for students. And in visiting dozens of classrooms afterward, I was amazed at how they took our voyage to heart and learned from it. The response was beyond our wildest dreams. We resolved to produce further programs focusing on marvelous learning adventures.

Continuing with our mission, over the past three years, we have linked thousands of classrooms to the voyage of a tall ship sailing around the world. The success of this program, called Class Afloat, prompted us to develop the sites *ALIVE!* series.

Recently, we joined forces with The School for Field Studies (SFS), an organization dedicated to offering college-level environmental field courses at research sites around the world. Together with SFS, we developed two new science programs as part of the sites *ALIVE!* series: Oceans Live and Rainforest Live. Through these programs, classroom students are linked to SFS student researchers living, working, and studying on the shores of South Caicos Island and in the rainforest of Queensland, Australia.

We look forward to marveling at their remarkable learning adventure with you and your students this semester.

Sincerely,



Rich Wilson  
President  
Ocean Challenge, Inc.



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# Why are rainforests important?

Tropical rainforests are the most complex and biologically diverse natural communities on Earth. Although they cover less than five percent of the planet's land area, tropical forests support at least half, and possibly more than 90 percent, of the earth's species. A single square kilometer of primary, lowland rainforest often contains as many tree species as the entire continental United States.

In the past century, nearly half of the world's stock of these forests has been lost or drastically altered by agriculture, ranching, logging, mining, and hydroelectric schemes. Today, an acre of rainforest is destroyed every second! This equates to a yearly loss of area exceeding the size of Switzerland. As the world's human population swells, the pace of destruction accelerates. Many conservationists fear that little will remain of the rainforests by the year 2025, when the population of the human species reaches a population size of approximately nine billion.

Why is the deforestation cause for alarm? Many scientists think that destroying tropical rainforests could drastically change world weather patterns. The loss of thousands of acres is already causing serious local problems, including increased soil erosion and water pollution. In addition, tropical rainforests supply the world with many foods and products: coffee and chocolate; fruits, such as bananas and avocados; and paints, gums, and glues. Even more important are the medicines derived from tropical plants. Preliminary screenings have found cancer-combating properties in more than 2,000 tropical plants. It is clear that many potentially life-saving drugs are to be found in the tropical forests. Most of the practical uses of tropical plants were first identified by indigenous peoples who have lived in the forests for centuries. As rainforests disappear, so will their knowledge.

# Why study rainforests?

The rainforests are a great subject for teaching a wide variety of science topics—everything from chemistry and food chains to animal classification and environmental protection. Rainforests appeal to students because they are exotic, unfamiliar yet fascinating environments. These distant environments can be used to teach scientific methods and principles that are also applicable in our own backyards.

The rainforests are also a timely topic in this era of increased environmental awareness. As we become more aware of the responsibility we have to take care of the earth, we understand that this includes taking care of the world's rainforests. Students are never too young to begin to learn this lesson. The children of today will be the decision makers for tomorrow. Soon the future of this planet will be in their hands.

# How do I use Rainforest Live?

Rainforest Live provides a link between your students and college-age student researchers at The School for Field Studies (SFS) Center for Rainforest Studies in Queensland, Australia. Through journals and interactive questions and answers, SFS students share the experience of living, researching, and working in the last remaining rainforest of Australia. While SFS students are conducting their directed research projects, classroom students participate in hands-on activities and team projects that have been specially created to reflect experiences in the field.

By the end of the program, both groups will gain an in-depth understanding of the ecology of the Australian rainforest, a knowledge of the successes, failures, and challenges to their wise use, and insight into the role that indigenous and Euro-Australian cultures have played and can play in rainforest landscapes. They will also be familiar with many new species and environmental systems, and most importantly, they will have first-person familiarity with real and current field research.

## What are the components?

*Queensland News*: Links you and your class to SFS students as they investigate the last remaining rainforest of Australia.

Teacher's Guide: Provides everything you need to integrate Rainforest Live into your science curriculum.

World Wide Web site: Provides a multi-media platform which captures students' interest through photographs of animals and plants that inhabit the Australian rainforest, interactive activities for home and school, and sounds of the rainforest at <http://www.sitesalive.com>

Rainforest Live Video: Introduces your students to the rainforest and its inhabitants.

## How do I use the newsletters?

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Every week for 12 weeks, you and your class will receive *Queensland News*. Your students will enjoy reading:

**Journals:** Essays written by SFS students focusing on their experience.

**Research Updates:** Updates on the latest research at the site, includes research methods used, data collected and solutions found.

**Extra!Extra!** Highlights of the learning adventure.

**Q&As:** SFS students' answers to questions asked by your students.

**Home-School Connection:** Hands-on activities or field trip suggestions for students to do at home with family members.

## How do I use the guide?

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The guide provides everything you need to use Rainforest Live successfully with your class. You'll find the following information and classroom activities:

**Getting Started:** Includes information on the Australian rainforest. Also provides an introduction to the SFS research site and students.

**Classroom Activities:** Provides detailed lesson plans on a wide variety of science topics which relate to the rainforest.

**Case Studies:** Details hands-on and cooperative learning projects that parallel case studies being done by SFS students at the site. Emphasizes the scientific methods and processes that they utilize.

**Careers in Science:** Designed to introduce students to exciting careers that relate to the rainforest.

**Resources:** Lists literature, reference books, videotapes, and web sites that are useful for student research projects.

## How do I use the World Wide Web site?

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The sites *ALIVE!* web site at <http://www.sitesalive.com> is designed to make your Rainforest Live curriculum "come alive" via regular and timely updates from the field, personalization by Q&A and Journal communication from the field, and interactive learning activities which complement those in this guide. In essence, the site is a "live" documentary.

What is online for students?

- ▶ Photos and bios of the students in the field, and pictures and sounds of the site itself.
- ▶ Extra!Extra!, Research Updates, Journals, Q&A from the students in the field; send a question to the field.
- ▶ Topic-relevant interactive learning activities.

What is online for teachers?

You may explore the site on your own, so that its navigation and content will be familiar. Also, visit the Teacher-to-Teacher area to see how other teachers are using the site and program; and, when you're ready, contribute your own ideas! Here are some further ideas:

- ▶ have the students login individually or in small groups to explore the site.
- ▶ assign small groups of students to check the site on a regular schedule to gain updated information, such as Q&A, Journals, Extra!Extra!, Sites Log, etc. Either print these for posting on your bulletin board, or have that student group report to your class and lead a discussion.
- ▶ assign projects related to the weekly topic which require researching particular information on the site or elsewhere on the web.
- ▶ assign students to do the special interactive learning activities on the site.

### How do I log on to the web site?

1. On the site, go to the Rainforest Live front page and click on MEMBERS. Click on "to select username and password." You will be asked to enter the first name, last name, and zip code that you sent in when you ordered the program along with a Username and Password of your choice. When you enter these into the login area, the private section of the site will be available to you.
2. Call Ocean Challenge at 1-800-890-3049 if you have any questions.