

How to Apply for ECO Classroom

Interested teachers must form a team of 4 and all members must submit a joint application to participate by March 15, 2012. Teams may be comprised of 4 teachers from the same district or a neighboring district. Teams may be of both middle school and high school teachers but must have at least one high school teacher. Applicants will be notified of their acceptance in early April 2012.

Eligibility and Requirements

Eligible Teachers:

- Need be full time science teachers (biology, life science, earth and environmental science) at accredited public middle or high schools in the USA
- Must form teams of 4 teachers from a school district or region to work on a group project before, during and after the field experience. All 4 teachers must be from different schools.
- Need to be recommended by a department chair, principal or other supervisor
- Must be highly motivated to embrace the goals of the ECO Classroom Program
- Due to the facilities and landscape of the La Selva Biological Station and the field work associated with this program, applicants will need to be physically able to perform the field work and have the ability to walk, hike or otherwise navigate through the Costa Rican terrain.

Special considerations:

- Will be given to educators in underserved communities
- Only teachers who have not previously participated in the Northrop Grumman Foundation Earthwatch Educators program are eligible to apply

Requirements for teachers:

- Fill out and submit an ECO Classroom application form
- Obtain and submit 1) a signed letter of recommendation, on school letterhead, from the school principal or science department chair AND 2) a signed letter of recommendation, on school letterhead, from a colleague familiar with your work.
- Attend a one day ECO Classroom regional meeting during the school year prior to the field trip experience with full release from your assignment for that day
- Possess or obtain a valid U.S. passport
- If selected, complete the appropriate liability, medical and photo release forms
- Complete post-field experience curriculum for publication on the ECO Classroom web site
- Participate in post-field experience interviews and/or surveys
- Some teachers may be asked to co-lead a workshop at National or State Science Teacher Association meeting

2012 Tentative Schedule

Sunday, July 8

Travel to San Jose, Costa Rica
Meet at the hotel
6-8:00 Dinner in San Jose

Monday, July 9

7-8:00 Breakfast
8:30 Depart for La Selva (LS)
10:30-11:30 Arrive LS, check-in and get settled in cabins
11:30-1:00 Lunch
1:30-2:00 Group bonding activity
2-3:00 Intro to LS talk
3:00-3:30 Safety information talk
3:30-5:30 Guided nature hikes (4 groups, 4 guides)
6:00-7:30 Dinner
7:00-9:00 Indonesia slides

Tuesday, July 10

6:30-7:30 Breakfast
8-9:30 Intro to TEAM
9:30-11:30 Intro to TEAM protocols in the field (vegetation and camera trapping) (2 groups)
11:30-1:00 Lunch
1:00-2:00 Climate change talk
2:00-3:00 Climate change labs
3:00-4:00 Lecture on basic statistical methods
4:00-6:00 work on group projects
6:00 Dinner
7:00-9:00 Guided night walk

Wednesday, July 11

6:30-7:30 Breakfast
8:30-1:30 Group A goes to coffee plantation; Group B free time
11:30-1:00 Group B lunch
2:00-6:00 Group B goes to coffee plantation; Group A free time
6:00 dinner
7:00-9:00 Antarctica talk

Thursday, July 12

6:30-7:30 Breakfast
8:00-10:00 plant collections and methods
10:00-11:30 Inquiry based teaching/learning talk
11:30-1:00 Lunch
1:00-3:00 Guided hike
3:00-6:00 work on group projects
6:00 Dinner

Friday, July 13

6:30-7:30 Breakfast
8:00-11:30 group project field work
11:30-1:00 Lunch
1:00-4:00 Group A goes to banana plantation; Group B does canopy towers and free time
4-6:00 work on group projects and Trip Leaders meet with individual groups to assess progress
6:00 Dinner
7:00-9:00 Movie and popcorn

Saturday, July 14

6:30-7:30 Breakfast
8:00-11:30 Group B goes to banana plantation; Group A does canopy towers and free time
11:30-1:00 Lunch
1:00-2:00 Visiting researcher talk
2:00-6:00 Group project field work
6:00 Dinner

Sunday, July 15

6:30-7:30 Breakfast
½ free day
2:00-5:00 Teacher presentations/lessons from home
6:00 Dinner
7-9:00 Scientists and science careers talk and activities

Monday, July 16

6:30-7:30 Breakfast
8:00-9:30 Ethogram/Animal Behavior (talk and activity)
9:30-11:30 RS/GIS lab
11:30-1:00 Lunch
1:00-1:30 classroom prep for vegetation transect
1:30-4:00 Vegetation transect in the field
4:00-5:30 Lab time for vegetation analysis
6:00 Dinner
7-9:00 Movie and popcorn

Tuesday, July 17

6:30-7:30 Breakfast
8-11:00 Teacher presentations/lessons from home
11:30-1:00 Lunch
1:00-3:00 Soil/leaf litter in field
3-6:00 work on projects; Trip Leaders check-in with groups
6:00 Dinner
7-9:00 Visiting researcher talk

Wednesday, July 18

6:30-7:30 Breakfast
8:00-9:00 Visiting researcher talk
9-11:30 Work on projects
11:30-1:00 Lunch
1-6:00 Work on group projects; Trip Leaders check-in
6:00-7:00 Dinner
7-9:00 Guided night walk

Thursday, July 19

6:30-7:30 Breakfast
8-9:30 Group 1 presentation
10:00-11:30 Group 2 presentation
11:30-1:00 Lunch
1:00-2:30 Group 3 presentation
2:30-3:00 Break
3:00-4:30 Group 4 presentation
4:30-6:00 wrap-up
6:00 Dinner

Friday, July 20

6:30-7:30 Breakfast
9:00 Travel back to San Jose
Check in to hotel, free time, dinner in San Jose

Saturday, July 21

Travel home

Tips for Success in the Application Process

1. Read through the program requirements and the application document to determine your eligibility.
2. Contact three other middle or high school science (biology, ecology, environmental or earth systems science) colleagues from your district or a neighboring district to form your ECO Classroom team. Team should have at least 1 high school teacher and all 4 teachers must be from different schools.
3. Meet and decide on the focus of your group plan. (See the list of 5 possible group plans).
4. Choose a group leader and name and write a single page outline of your group plan.
5. Individually fill out parts A – E in the application. Each teacher submits an application, but one group plan (part F).
6. Part F in the application will be your one page group plan.
7. Individually obtain your 2 letters of recommendation for Part G (remember that letters must be on letterhead stationary). Letters should be sealed for confidentiality.
8. Submit your complete application to Morgan Cottle postmarked by **March 15, 2012**.

Morgan Cottle
Conservation International
2011 Crystal Drive, Suite 500
Arlington, VA 22202

Email: m.cottle@conservation.org

We look forward to reading your application. You will be notified in early April 2012 of our group choices for the Eco Classroom program. Thank you for your interest!

ECO Classroom Application

Thank you for your interest in our exciting program. One of our overriding philosophies is that STEM education in our country grows in strength as its teachers are given more opportunities to expand the horizons of their students. This program aims to do just that.

16 middle and high school science teachers in teams of 4 will be selected to participate in an ecological and climate change program in Costa Rica at La Selva Biological Station from July 8 to July 21, 2012. Review all of the requirements for this program before submitting your application. **The deadline for this application is March 15, 2012.**

Everyone must complete an ECO Classroom application but you should submit one group plan.

A. Contact Information

Title: _____
First Name: _____
Last Name: _____
Email (preferably not the school email): _____
Home Address:
Street: _____
City: _____ State: _____ Zip: _____
Home Phone: _____
Cell Phone: _____
School Name: _____
School Address:
Street: _____
City: _____ State: _____ Zip: _____
School Phone: _____
Classroom Extension: _____
School Fax: _____
School Website: _____
Principal's Name: _____
Principal's Email: _____

B. Team and Release Information

List the other three teachers on your team:

1. _____
2. _____
3. _____

Name of your team leader: _____

Team Name: _____

Do you have the ability to obtain release time for a meeting in your region during the school year (Y/N)? _____

Can you travel to Costa Rica from July 8 to July 21, 2012 (Y/N)? _____
Can you work with your teammates to develop a coordinated program across schools using your Costa Rica research and experiences (Y/N)? _____

C. Demographic Information

Brief Description of School & Community (rural/urban, economics, socio-economic makeup of the student population etc.):

Population of School: _____
Ethnic makeup of the school's student population: _____
% of Students qualifying for free or reduced lunch program: _____
Total number of students you teach in a year: _____

D. Candidate's Qualifications

List your university degree(s) and institution(s):

How many years have you been teaching?: _____
How many years have you taught at your present school?: _____
List any other experiences or positions you have had that enhance your science teaching:

List any awards or honors you have received as an educator:

What is your primary teaching assignment/subject(s) and grade(s) taught?

While not a program requirement, please tell us if you speak conversational Spanish.

E. Candidate's Motivation

On a separate sheet of paper, please submit a personal statement of 600 words or less that answers the following two questions:

1. Why are you a good candidate for this field related, environmentally focused program?
2. How will you personally integrate your ECO Classroom experiences into your teaching and your community?

F. Group Plan

Please submit a single page group plan (same for all 4 members) that outlines the group goals. This should include how you plan on working together and how the group project in Costa Rica could be mirrored in a temperate setting with students as the research scientists. At the end of this application, please select one of the group project ideas (below) and elaborate on how that selection complements and/or expands your current curriculum.

G. Letters of Recommendation

Two letters of recommendation on school letterhead are required.

1. The first letter should be from your principal or department chair.
2. The second letter should be from a teaching colleague who is familiar with your work.

Submit your application to:

Morgan Cottle
Conservation International
2011 Crystal Drive, Suite 500
Arlington, VA 22202

Or via email at m.cottle@conservation.org

It must be postmarked by March 15, 2012

Thank you for applying.

Group Project Options:

1. Land Use Issues

In Costa Rica investigate land use in the La Selva area. Visit the coffee and banana plantations as well as the protected areas. Investigate the environmental and socio-economic trade-offs of the land uses. How compatible are different land uses with the preservation of biodiversity? Compare different measures of biodiversity at the various land use areas. (Note – Your group can use mapping, carbon calculators, satellite images, etc. to explore these issues)

At home do a parallel project with students for nearby areas. Compare and contrast your discoveries.

Before trip:

Find reading materials about your topic and write a thorough summary.

What are different land use types? How are these important socially, ecologically, economically? What are trade-offs or compliments among these?

2. Carbon storage and forest plants

At La Selva, follow TEAM protocols to collect vegetation data at a site of your choice. Use the TEAM carbon calculator and investigate the importance of forests for carbon sequestration. Investigate how carbon sequestration changes with different forest types and forest ages.

At home, collect comparable data and do carbon calculations. Compare your results with the tropical data from La Selva.

Before trip:

Find reading materials about your topic and write a thorough summary.

Research the importance of forests for carbon sequestration and the different carbon sequestration values for various vegetation types (forest types, cropland, etc.).

3. Camera Traps as tools to document elusive animals

Using TEAM protocols, set up camera traps at La Selva to document elusive animals of the forest. Camera traps help map corridors, document biodiversity and enrich our knowledge of animal behavior.

At home set out camera traps in your area to assess corridors, biodiversity and/or animal behaviors. Predict how climate change could change patterns discovered in the camera trap activity.

Before trip:

Research the habitat ranges of local organisms and the predicted climate change effects of local populations including species range shifts, migration and timing of fruiting/flowering, etc.

4. Biodiversity Transects

Document biodiversity in La Selva using TEAM transect protocols. Choose to record biodiversity for vegetation, birds, amphibians, reptiles, insects and/or mammals. Think about why biodiversity matters, why organisms depend on specific environmental niches and why biodiversity is important in the light of climate change issues.

At home, run comparable transects and compare to the La Selva transect results.

Before trip:

Find reading materials about your topic and write a thorough summary including the importance of biodiversity, how climate change affects biodiversity and species niches and migration.

5. Propose your own project or a hybrid of any of the above projects.