

Making the Ocean of Dreams a Reality: Leading a Study Abroad

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Greenville Technical College
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Session S029



NICARAGUA

CARIBBEAN SEA

PACIFIC OCEAN

PANAMA

La Cruz

Los Chiles

Golfo de Papagayo

Playa El Coco

Filadelfia

Flamingo

Tamarindo

Paraíso

Marbella

Nosara

Sámara

Carrillo

Mal País

Montazuma

Playa Hermosa

Playa Naranjo

Paquera

Tambor

Jacó

Los Sueños

Parrita

Quepos

Matapalo

Dominical

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San Vito

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San Marcos

S. Ignacio

Colón

Puriscal

Ortina

Atenas

San Ramón

Zarcero

San Carlos

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Science Immersion

IDS 206 Special Topics in International Education

- 9 day trip to Costa Rica
- One credit hour, graded (A – F) course
- Home stays in Atenas, near San Jose
- Day trips in Atenas area
 - Former gold mine
 - Organic and non-organic coffee farms
 - Volcano Poas
- Three days/two nights to Estacion Las Tortugas
 - Turtle preservation
 - Wildlife excursion
- Day trip to Pacific coast
 - Playa Hermosa
 - Rio Tarcoles
 - Zip line

Trip Planning

- On-site trip to organize and plan itinerary
 - Turkey trip compared to Costa Rica
- Hire a local for daily arrangements and in-country travel
- Finalize details approximately 6 months before applications accepted
- Begin marketing a year in advance with approximate costs and schedule of payments

Costa Rica – Student Selection

- Applications and interviews at start of Fall semester
- Require a refundable deposit with application
- Interview students, tentative acceptance, drug and background check results for final approval
- Schedule of obligations for the Spring term
 - Travel schedule
 - Class meetings
 - Assignments

Pre-trip activities

- Regular communications and follow-up on details
 - Securing deposits
 - Completing insurance paperwork
 - Obtaining passports
- Class meetings during the semester of travel
 - 3 pre-travel
 - 1 post-travel

First class meeting

- Introductions and icebreaker activity
- Course syllabus
 - Tentative trip schedule
 - Due date reminders
- Develop list of questions and make assignments for next meeting
- Create groups (pairs work well) for pre-travel research of major activities during travel

Second class meeting

- Answers to questions posed at first group meeting
- Group presentations
 - Rainforests/surfing
 - Sea turtles
 - Tilapia farming
 - Volcanos and geography
- Itinerary updates

Third class meeting

- Final pre-travel meeting
- Tie up loose ends from last meeting
- Distribute final itinerary
- Check all communication details
- Host family gifts
- Packing details
- Security
- Discuss in-country behavior, wardrobe, drugs & consequences

During the trip

- Encourage bonding with host families
- Daily schedule updates before end-of-day dismissal
- Use travel time
 - Language lessons
 - Feedback and concerns
- Regular discussions on pros and cons to date
- Be flexible; take advantage of last-minute opportunities
 - International Music & Arts Festival in San Jose

Lessons learned/warnings

- Two faculty/adults minimum
- Book flights early
- Don't overbook daily activities; allow free time
- Be prepared for the unexpected – overbooked flight, lost luggage, landslide and road closure, closed zipline
- Reconsider extremely remote sites
- Be prepared for medical emergencies
- Trust students, but be prepared to send problem students home

Post travel meeting

- Publicize during the term
- Invite campus community
- 10-15 minute group presentations
- Evaluations

Abandoned Gold Mine

- Relaxing activity after long travel day
- Hike and exploration of old gold mine
- Swimming in natural waterfall pool
- Naps on the bus to catch up on sleep
- Learning opportunities:
 - Bus ride and hike: Introduction to geography and flora of central Costa Rica
 - Gold mine: History of Atenas area; introduction to fauna of central Costa Rica (*BATS!*)
 - Waterfall pool: Discussion of possible influence of mining on environment

Coffee Farms

- Visit to organic and traditional coffee farms
- Tree species identification
- Soil sampling
- Coffee tasting
- Learning opportunities:
 - Comparison of organic vs. traditional coffee-growing methods and impact on landscape and environment
 - Comparison of quantity and species of trees at the two farms
 - Comparison of soil pH levels at the two farms

Enrichment Idea:

Step 1

- Before visiting the farms, discuss:
 - Which farm will average a larger number of tree species per sector?
 - Which farm's soil will average a higher pH level per sector?

Step 2

- Divide organic farm into sampling sectors
- Randomly assign one group of students to each sampling sector
- Within each sector
 - Take soil sample
 - Count and record number of tree species

Step 3

- Divide traditional farm into sampling sectors
- Randomly assign one group of students to each sampling sector
- Within each sector
 - Take soil sample
 - Count and record number of tree species

Step 4

- Measure and record pH level for each organic farm sector

Step 5

- Measure and record pH level for each traditional farm sector

Step 6

- Summarize Data

Number of Species	
Organic	Traditional
Sector 1 #	Sector 1 #
Sector 2 #	Sector 2 #
Sector 3 #	Sector 3 #
Sector 4 #	Sector 4 #

pH Level	
Organic	Traditional
Sector 1 pH	Sector 1 pH
Sector 2 pH	Sector 2 pH
Sector 3 pH	Sector 3 pH
Sector 4 pH	Sector 4 pH

Step 7

- Use hypothesis made in Step 1 to perform 2-sample t test to compare mean number of tree species, organic vs. traditional
- Use hypothesis made in Step 1 to perform 2-sample t test to compare mean pH level, organic vs. traditional.
- Discuss results

Volcano Poas

- Visit to Volcano Poas National Park
- Unobstructed early-morning view of one of the world's largest active volcano craters
- Hike into caldera with San Jose University volcanologist
- Hike to inactive lake-filled crater
- Learning opportunities:
 - History of eruptions, resulting landscape, recovering forest
 - Effect of acid rain on local flora
 - History of eruptions as seen in soil layers
 - Comparison of rocks in caldera and their origins
 - Explanation of equipment and instruments used in study of crater's deadly lake
 - Exposure to career of volcanologist in "Ring of Fire"

Estacion Las Tortugas

- Hands-on conservation experience at leatherback sea turtle rescue station
- Late night beach patrol
- Rain forest wildlife excursion
- Learning opportunities:
 - Lecture covering causes of leatherback sea turtles' near extinction and preservation efforts
 - Participating in harvesting of eggs
 - Observation of rain forest wildlife: howler monkeys, caimans, crocodiles, waterfowl, etc.
- Planned enrichment activity:
 - Access data on leatherback sea turtle egg clutches; create timeline to study cyclic and annual trends
 - Problems: data are closely held; some data are available online, but are incomplete and summarized

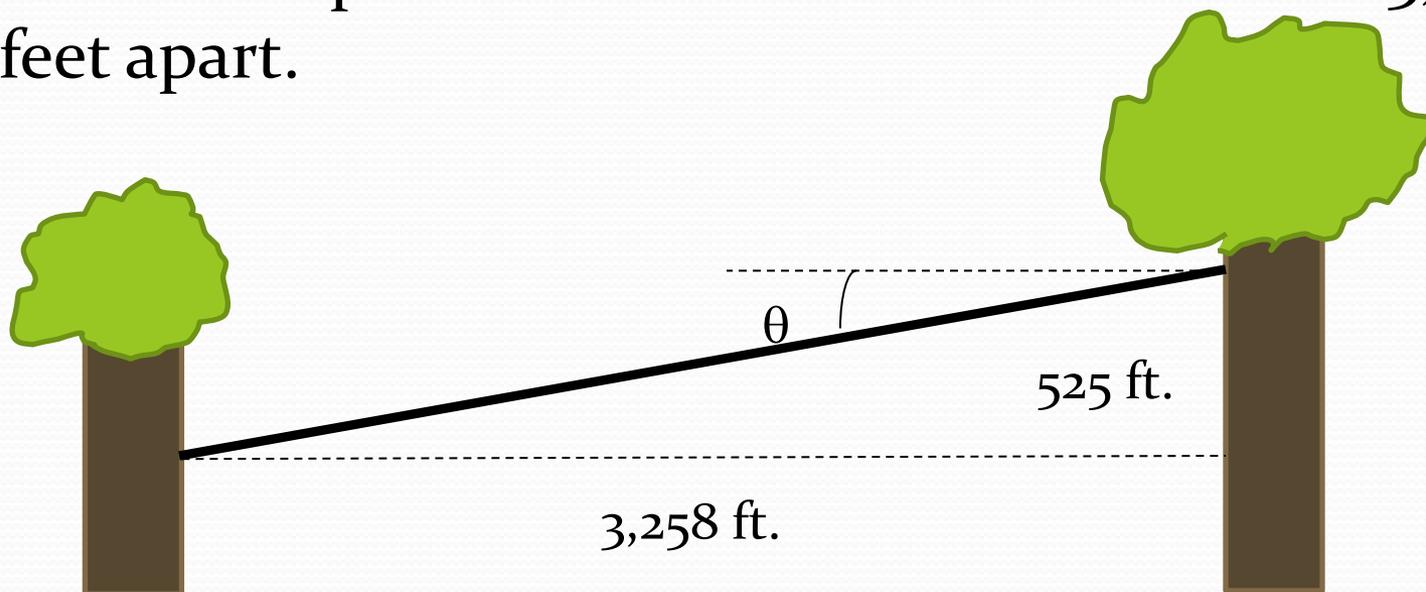
Playa Hermosa & Rio Tarcolas

- Fun-filled last day
- Beach time
- Rio Tarcoles “Crocodile Bridge”
- Zip line
- Learning opportunities:
 - Comparison of Pacific coast to Caribbean coast
 - Wildlife viewing: scarlet macaw, crocodiles

Enrichment ideas:

Zipline Mathematics:

- The Heavenly Ski Resort at Lake Tahoe is one of the longest in North America. It has a vertical drop of 525 feet. The zip line is connected to trees that are 3,258 feet apart.



- Assuming that the zip line is taut, what is the length of the zip line? (3,300 feet; Pythagorean Theorem)
- What is the angle of descent on the zip line? (9.15° ; Right angle Trigonometry)
- In reality zip lines are not taut, but sag in the middle, forming a catenary curve. Study the equation of a catenary curve, assuming that both ends of the zip line are connected to the two trees at the same height. Questions: What is the equation that represents this zip line? What is the lowest point along the zip line?
- Physics, including Newton's Laws of Motion can also be studied using zip line mathematics.

**Pura
Vida!**