



# Hands-On Science for Teaching Rain Forest Ecosystems

Level: *secondary*

Course: *science*

## Rationale

The basic objective of this unit is to get students to think about how the ecosystem of tropical forests fits into the big picture of the Planet Earth. Teachers will do this through a variety of teaching methodologies carried out in their own style. I have provided a basic framework of articles, information, references and “classroom ready” labs aimed primarily at teaching cause and effect relationships of deforestation.

## Lesson Overview

The basic premise for the materials provided is to teach about rain forest ecosystems—focusing primarily on the tropical forests of Latin America. The subject is not that simple, however. The issue is not really the cutting down of trees. In order to successfully teach this unit, one has to get the students to think globally and incorporate ideas of the worldwide ramifications of forest destruction. I have provided several different types of laboratory experiences regarding the atmosphere, pollution and the effects of rain forest destruction. Also included are labs dealing with the subjects of archeology, and chemical weathering of artifacts.

## Time Needed

The time line will vary depending on how many of the activities the educator wishes to use.

by  
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## Procedures

Rather than tell how to teach these materials, I will list the activities in the order that I would do them. Each of the activities is then self-explanatory unless otherwise noted.

1. Have students read The Shrinking Forest, by John C. Ryan for Homework. They should read the article for discussion the next day. As a focus for this introduction to a unit on rain forest ecosystems, I will do the Ranger Rick Activity Lost In the Jungle.
2. The next day as a focus for the beginning of the lesson, I suggest starting with the rainforest simulation on the Save the Rainforest, Inc. Activity Sheet. I'll follow this with a discussion of The Shrinking Forest article. This will be followed by a teacher-led lesson on tropical forest facts (rates of rainforest loss, Benefits to us from tropical rain forests, can ecotourism save the rainforests?, perhaps use some of LADB's articles.)
3. The third day I will show slides or a video illustrating the natural balance and beauty of tropical forests.
4. After these three days of lead-up, the students will be ready for the laboratory activities (see Ciencias en dos Lenguas and on-line resources for activities. Use the experiments you are most comfortable with doing--these activities are a spring board for a variety of other lessons and topics.
5. Have a good time! Although teaching can be hard work...it is a lot of fun !!! *Enjoy yourself!!!*

## Follow-up Activities

I plan to use the materials provided by my colleague Robert W. Chavez (see Geography) as follow-up activities. These lesson plans are available through the Latin America Data Base.

## Bibliography

Ciencias en Dos Lenguas: Manual de Laboratorio, Bilingual Materials Development Center, Fort Worth Independent School District, Fort Worth TX, 1976.

MayaQuest K-12 education project, gopher: InforMNs.k12.mn.us WWW URL: <http://www.mecc.com/mayaquest.html>

Rainforest Action Network, Rainforest Information, WWW URL: <http://www.ran.org/ran/>

Ranger Rick, Tropical Forest

Ryan, John C., The Shrinking Forest, Rediscovering/Redescubriendo America.

Save the Rain Forest, Inc., Newsletter, January 1993.

Society for American Archeology, Public Education Committee, January Newsletter.