

# Lesson Plan for Inquiry 1

Before beginning Inquiry 1, have students read "Thinking About the Environment" and "Thinking About Science". This will give students an introduction to the importance of global forests and to FAO's effort to understand the world's forests.

**Need:** Journal, paper, pencils, a globe or world map with lines of latitude, internet or library access, and copy of the Table on page 31.

Have students read the title and first paragraph of "The Situation". Check comprehension by asking the difference between weather and climate. Ask students to identify the two ways that FAO could have classified forests, based on the information in this paragraph. Check comprehension of the word classify. It is important for students to fully understand classification before continuing.

Have students read and answer the question in the next paragraph.

After reading the paragraph that follows, have students examine Figures 6 and 7. Explain latitude, especially as it relates to the equator and Earth's climate. Now do the activity below to determine your latitude

## **DETERMINING LATITUDE.**

Using a globe or a world map, have students identify where on Earth they are located. Primarily, have them identify their latitude, or distance from the equator. Some maps may show latitude in degrees, minutes, and seconds. Others may only show degrees and minutes, or just degrees. Have them identify the closest degree of latitude to their geographic location. After they have located their latitude, determine how far between the equator and one of the poles their location is. (Latitude is 0 degrees at the equator, 90 degrees at the poles.)

Students should read the paragraph that begins, "About 71 percent of Earth....". After reading the paragraph, they should examine Figure 8.

After reading the next paragraph, ask students to identify the paragraph's main idea. Then, ask them to describe the natural area close by. How much rainfall does it receive? Ask students to describe the trees and vegetation growing close to home.

Students should read the next paragraph, then examine Figures 9, 10 and 12.

Next, have students do research in the library or on the internet to discover their elevation and amount of annual rainfall. Elevation is the height of the land above sea level. Using Figures 9, 10 and 12, have them identify what kind of forest, if any, should naturally grow nearby.

Using the picture of the distribution of the world's forests on page 13, you can further check the understanding of the students by asking them to explain why they think that there are no forests in North Africa.

Now, using Figure 5, have students identify into which ecozone forests close to home should be placed.

Read the paragraph beginning with "In addition to latitude,..." Hold a class discussion based on the last sentence in the paragraph. Then read the next paragraph.

Using Table 1, hold a class discussion on the closest forest to their home. Into which FAO category would they place this forest? Explore the advantages and disadvantages of each forest type. Students can work in small groups to do this. Do plantation forests look different than more natural forests? How? Do students think different animals might live in different types of forests? Why or why not? What evidence do they have to support their answer?

The next four paragraphs should be read by students, and a short class discussion should be held between each paragraph. This will

bring students to the end of The Situation. Some ideas for discussion include:

- Paragraph 1:** How many of the 5 categories contain trees planted by humans? Is this a surprise? Why or why not?
- Paragraph 2:** Do you think fruit orchards should have been included by FAO in their study? Why or why not?
- Paragraph 3:** Discuss the difference between primary forests and protective plantations.
- Paragraph 4:** Discuss the idea of understanding trends and examining trend data.

### WHAT THEY DISCOVERED

Read the entire section. Use your globe, a world map, or Figure 2 to locate the Amazon area of South America. Read the next paragraph and examine Figures 11 and 13. Ask students to identify which category of forest is comprised of the least amount of land. Have them “do the math (first problem only).” Students can use Figure 11 to do this calculation. Ask a student to explain what this

means about the current character of most of the world’s forests.

Have students “do the math” (second problem) and briefly discuss the meaning of the results.

### REFLECTION SECTION:

In small groups, have students discuss the two "questions" and appoint a representative to make a short presentation to the class. You can use this presentation as an informal assessment of student comprehension.

### EXTENSION:

Kenya’s Green Belt Movement ([www.greenbeltmovement.org](http://www.greenbeltmovement.org)) has developed a program to reforest Kenya. The program suggests what types of trees should be planted for what purposes and where. Using the Table below (developed by the Green Belt Movement), have students identify into which of FAO’s 5 categories of forests each type of planting should be placed. Remember that in every case and in the Table below, humans are planting trees. Therefore, none will be categorized as primary forest or modified natural forest.

<b>PURPOSE</b>	<b>BEST SUITED SPECIES</b>	<b>PRIMARILY PLANTED IN</b>	<b>FAO CATEGORY</b>
Environmental conservation	Native	Public places	
Household needs	Fast growing non-native	Farms	
Fodder	Fast growing non-native	Farms	
Medicine/herbs	Native	Public places	
Food security	Non-natives and fruit trees	Farms	
Shade	Native	Farms	
Increase biological diversity	Native (to support birds, animals, and plants)	Public places	
Protecting cultural sites	Native	Public places	