Lesson Plan

Note: This lesson plan should be used with the *Natural Inquirer* World's Forests 2 edition (http://www.naturalinquirer.org/The-World's-Forest-2-i-32.html).

Time Needed:

1 class period

Materials (for each student or group of students):

- *Natural Inquirer* World's Forests 2 edition (http://www.naturalinquirer.org/The-World's-Forest-2-i-32.html).
- Should You Believe Everything You Read? Graphic organizer
- Writing utensil

In this lesson, students will apply critical thinking skills to the interpretation of charts and tables.

Methods:

Prep

Educators should read the *Natural Inquirer* World's Forests I edition fully. Make copies of the Should You Believe Everything You Read? Graphic Organizer.

Day One

Introduce *Natural Inquirer* and the concept of scientific journals. Scientists write scientific articles to share their research with the public and their colleagues in the science field. *Natural Inquirer* articles are written for students, but they are based on content directly from real scientific articles.

Provide each student with the chosen monograph or article. Direct students to read the entirety of the article.

Once students are done reading, write the following Figure and Table numbers on the board with their corresponding page numbers:
- Table 2 on page 21
- Figure 26 on page 22
- Figure 34 on page 27
- Table 5 on page 29

After students examine table 2 and figure 26, have them note the regions with the two highest and two lowest percentages.

After students examine figure 34 and table 5, have them note the regions with the two highest and two lowest percentages.

Then have students compare their observations. What is unusual about the data for these two pairs of displays? Why do students think these two pairs of displays do not match?

To discover why, students will explore the text. Have students read aloud pages 26-28, beginning with "Protective Forest Benefits" and ending at the bottom of the left-hand column on page 28 ("… enjoyment as 'multiple use' forests."). Based on their reading of the text, discuss why these two pairs of displays may not match. For a hint, students should focus their attention on the first paragraph under "Protective Forest Benefits" (page 26) and the two paragraphs on page 28.

As a class, discuss what students learned about the interpretation of charts and tables. What is needed to understand some charts and tables? How can the captions of figure 34 and table 5 be improved?

Have students edit the captions of figure 34 and table 5 so that their meanings are clearer.

Note: The two pairs of data displays appear to be a mismatch. North America and Oceania have over 15 percent of their land set aside to conserve biodiversity and over 10 percent of their land in protected status. Common sense suggests these regions have more than the percentage shown of their land managed for soil and water conservation and social benefits. The two pairs of data displays do not match because they are using different

measures. The word "primarily" on page 26 provides the first clue, and the text on page 28 provides an explanation. Figure 34 and table 5 show the percentage of land managed primarily for either soil and water conservation (figure 34) and for social benefits (table 5). If the figure and table instead showed the percentage of land, by region, being managed for these benefits along with other benefits (multiple uses), the percentages would have been much higher. A better caption would have the word "primarily" inserted after the word "managed."

You can use this lesson to have students explore the following:
- Why one should always read the text along with a graph or table if possible
- Why captions should accurately describe the chart or table
- Why one should not always believe what one reads or observes without critical questioning and thinking

Should You Believe Everything You Read? Graphic Organizer

Table 2	Regions with the 2 highest percentages 1. 2.	Regions with the 2 lowest percentages 1. 2.
Figure 26	Regions with the 2 highest percentages 1. 2.	Regions with the 2 lowest percentages 1. 2.
Figure 34	Regions with the 2 highest percentages 1. 2.	Regions with the 2 lowest percentages 1. 2.
Table 5	Regions with the 2 highest percentages 1. 2.	Regions with the 2 lowest percentages 1. 2.

What is the mismatch between these two pairs of data displays?
What are possible reasons for this mismatch?
New caption for figure 34:
New caption for table 5: