

Lesson Plan

This is a generic lesson plan that can be used with any *Natural Inquirer* article, including all of the articles in this journal. You may also visit <http://www.naturalinquirer.org> and view or download “FACE Look!” or “Worming Their Way In” for more generic lesson plans, which are located at the back of each monograph.

This lesson plan is an adaptation of the “Questions Only” Reading Strategy. The goal is to help students identify key concepts and develop their own interpretations of what they read. This is especially important as a foundation for developing critical thinking skills in science.

This lesson plan is based on a typology of thinking called Bloom’s Taxonomy, developed in 1956. It identifies six categories of thinking: Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation. For more information, search the Web for Bloom’s Taxonomy.

Time Required

1 class period (2 class periods with optional “hands-on” activity)

Materials

Natural Inquirer article, question strips (see p. 51), one sheet of lined paper and pencil per student

Procedures

In advance:

Make a copy of the 42 questions on page 51 and cut them into strips (one strip for each question). Fold the strips in half and put them into a box or hat.

In class (3 minutes):

Have students write the following headings on their lined paper. Students should leave three blank spaces in between each heading.

- Meet the Scientists
- Science
- Environment
- Introduction
- Methods
- Findings
- Discussion

Pass the box or hat around the room and have each student pull out one strip of paper.

30 minutes:

Read each of the seven sections of the *Natural Inquirer* article aloud in class. Ask for student volunteers to read one paragraph each. Skip the “Reflection Sections” and “Number Crunches,” but examine any illustrations, charts, or graphs. At the conclusion of each section, students should complete the question they have pulled, based on information in the section. They should write their question in the

correct section of their lined paper. Be sure to give students a few moments to formulate their question, and encourage them to reflect on the section before writing their question.

Now, have students pass their question (on the paper strip) to the student next to them. Repeat the process with each section. At the end, students should have formulated a different question for each of the seven sections.

5 minutes:

Quickly review the article by holding a class discussion using the following questions:

1. What was the problem the scientists wanted to address? (From the “Introduction” Section)
2. What was the question the scientists wanted to answer? (From the “Introduction” Section)
3. What did the scientists do to answer the question? (From the “Methods” Section)
4. What did the scientists discover? (From the “Findings” Section)
5. What was the key point of the “Discussion” section?

10 minutes:

Now, review each article section by having students share their questions. See if anyone in the class can come up with an answer to the questions. Encourage students to use logic to develop answers. In some cases, answers will be pure speculation. This is okay. The exercise is intended to have students identify questions that will help them think about their reading, and to consider potential answers to these questions.

Remind students that as they read, they should always be asking questions about the content. When they read science, they should ask critical questions, such as questions beginning with who, what, when, where, why, and how.

Optional (2nd day)

1 class period:

Quickly review the article from the previous day. Do the FACTivity associated with the article. The FACTivity can be found at the end of each article.

Who.....

What.....

Where else.....

What if.....

When will.....

How.....

What would happen if.....

How would you test.....

How would you apply.....

What does.....

How would you compare.....

Do you think.....

Why did....

What else.....

How did.....

How would you change.....

How is _____ like.....

Who else.....

What is.....

What did.....

Where.....

Why do.....

When did.....

When would.....

Why was it better to.....

Can you connect ___ with.....

Where have I heard about....

Do you think.....

Why.....

What is one.....

How could.....

Where did.....

What is the most.....

Could.....

How could.....

Who was.....

How could you explain.....

What is most important.....

What difference....

Which do you.....

What do you think.....

What evidence.....