

Science Communication Confusion

Course Name:	
Unit Title: Radiation and the Human Body	Day: 12 of 15
Relevant NC Standard Course of Study Goal(s):	
<ul style="list-style-type: none">Note that there is not a directly defined standard that addresses the concepts of science communication or science literacy. However, we feel that this topic is essential to discuss in the science classroom and it relates what we are discussing in the science classroom both to skills more commonly discussed in other courses and to understanding and navigating science in our everyday world in the 21st century.	
Specific Lesson Objectives	
Students will understand:	
<ul style="list-style-type: none">how the scientific community, politicians, the media, and everyday citizens evaluate risk and communicate scientific findings differently	
Students will know:	
<ul style="list-style-type: none">that different backgrounds and motives can influence how science is communicated	
Students will be able to:	
<ul style="list-style-type: none">evaluate texts describing science with a critical eye for source, background, motive, and audiencediscuss how representations and explanations of the same science differ	

Key Vocabulary/Formulae for this Lesson	
<ul style="list-style-type: none">motiveaudiencemediaexpertrisk	
Suggested discussion questions/topics:	
<ul style="list-style-type: none">What factors do citizens consider when evaluating risk? What about scientists? How do these compare and contrast? (reference to Introduction in Kabat book)Why might different people communicate science differently?What factors could influence media representation of scientific studies?How might scientific communication from any party be biased?What is correlation? What is causation? How are they related?Who should we believe, anyway?How can we ensure clarity in our scientific writing?Are all experts equal?	

Materials
<ul style="list-style-type: none"> ● reference text(s) to be discussed. Suggestions include <ul style="list-style-type: none"> ○ excerpts from the Introduction in <u>Hyping Health Risks: Environmental Hazards in Daily Life and the Science of Epidemiology</u> by Geoffrey C. Kabat. ○ Examples of science information communicated in different ways (awareness of political influence is key here- we recommend something like the cell phone radiation articles provided). ○ political cartoons, ad campaigns, or popular magazine articles ● desks arranged in proper discussion circles according to preferred facilitation of Socratic seminar discussions
Technology Needs
<ul style="list-style-type: none"> ● document camera or smart projector to display any selected texts or excerpts to focus on

LESSON ACTIVITIES			
Opening (Hook, Warm-Up, Anticipatory Set, Review, etc.)			
<p><i>Describe activity to elicit active involvement of students or refer to previous learning: Students will take out any previously assigned texts they read and sit in designated seats. If no prior texts or assigned to be read, use this time to have students read and note observations of various texts. (5-20 min)</i></p>			
Procedure: Include all sections that apply to this lesson; combine as necessary.			
Section	Time	What the Teacher will do:	What the Students will do:
Statement of Objective & Purpose	10 min	Explain the days agenda and present ground rules for Socratic seminar discussions. Pose the first question.	Listen, respond when prompted.
Guided Practice	55-70 min	facilitate discussion of scientific communication	take notes if needed, participate in discussion when required, complete optional additional worksheet to note observations
Closing/ Summary	5 min	assign exit ticket in which students are asked to write two lingering questions or observations.	complete exit ticket and hand in
Assessment of Student Learning			
<p><i>How & when will you know that the students have learned this material?</i></p> <p>Students will have a Unit Test on the final day of the unit. The assessment for this day alone is evaluation of the assigned exit ticket. Qualitative evaluation should be consistently carried out by the teacher in the form of leading questions and class discussions.</p>			