

Activity 18: Facts and Opinions (Aquatic WILD - Facts and Falsehoods)



Adapted from Facts and Falsehoods - Aquatic WILD

Age:

Grades 7-12



Time:

Two or three 45 minute periods;

State Essential Learning Requirements

Reading: All of 2, 3.1, 3.2

Communication: All of 1, All of 3.

Science 1.2, 1.3, 3.2

Geography: All of 3

Arts: 3.1, 3.2, 4.1, 4.3

Materials:

Aquatic WILD Activity provided. You use WDFW informational materials provided in trunk and find other sources of information about salmon (available in trunk).

Overview:

Students analyze and evaluate print materials according to criteria they establish for quality, balance, and fairness. Then students develop their own informational material or presentations using the same criteria.

Washington adaptation provided:

- Print material from several sources introducing the salmon issue available in the Introductory Activity Packet A.
- Four activity/coloring books available from several sources in Coloring/Activity book Packet.
- Three videos describing the Salmon Issue in Washington from diverse sources available in the Video Packet.

Objectives:

- To differentiate between evidence and belief on salmon issues.
- To apply criteria for balanced reporting.

Critical Questions Addressed:

1. Value
2. Endangered
3. Salmon Recovery

FACTS AND FALSEHOODS

OBJECTIVES

Students will: 1) develop criteria for evaluating the quality, balance and fairness of an informational presentation; and 2) evaluate the balance and fairness of informational presentations designed to represent points of view about an environmental topic.

METHOD

Students analyze and evaluate print material according to criteria they establish for quality, balance, and fairness; then develop their own informational presentations using such criteria.

BACKGROUND

People have many different points of view, particularly concerning issues. It is difficult at times to discern fact from falsehood, objectivity from subjectivity, and accuracy from exaggeration. Sometimes people are knowingly selective in what information they present about a topic. Other times they do not realize that they are presenting only a narrow view of the topic—that the way they see the world is not the only possible way to see it.

Everything is probably somewhat subjective. That is, everything is subject to an individual's personal filters and perspective. Objectivity is one goal of science.

Age: Grades 7-12

Subjects: Language Arts, Social Studies, Science

Skills: analysis, application, communication, comparing similarities and differences, description, discussion, evaluation, generalization, identification, inference, interpretation, listening, listing, problem solving, public speaking, reading, reporting, small group work, synthesis, writing

Duration: two or three 45-minute periods; can be shortened or lengthened

Group Size: any; part of activity has students working in small groups

Setting: indoors

Conceptual Framework Reference: VI.B., VI.B.1., VI.B.2., VI.B.3., VI.B.4., VI.B.5., VI.B.6., VI.C., VI.C.1., VI.C.2., VI.C.12., VII.A., VII.B., VII.B.5., VII.B.6., VII.B.7., V.A., V.A.5., V.A.6., V.B., V.B.1., V.B.2.

Key Vocabulary: balance, fairness, criteria, objectivity, subjectivity, bias, propaganda, accuracy

Appendices: Local Resources, List of Agencies and Organizations

Even in the precise world of scientific measurement, pure objectivity without some influence on the part of the observer may be beyond reach. So objectivity is a goal; it is difficult, if not impossible, to achieve in a pure and technical sense.

If objectivity is so difficult to achieve, what can we do to develop our own skills of objectivity? One way is to become more discerning about balance and fairness. When you hear a speaker presenting information on a topic—particularly a controversial topic—is that person making an effort to describe the topic as a whole? Or, is the speaker selectively describing only his or her view? Does the speaker acknowledge that there are any other differing points of view? Is the speaker presenting accurate information or opinion as if it were factually based? These are some of the questions this activity is designed to address. To provide a focus, the activity will emphasize the kinds of informational presentations that students might encounter in public settings—especially those related to the environment and specifically aquatic environments.

Providing information about the environment is a widespread activity in settings as varied as classrooms, national parks, reactor sites, industrial complexes and wilderness preserves. Some information is provided by the distribution of printed materials. In other cases the information is provided through a presentation, possibly using many media and involving audience participation. The latter often combines people's passion for entertainment and recreation with their desire for self-education. Agencies of local, state and national governments, as well as private entities, have recognized the economic benefits of attracting the public to natural and cultural sites of interest. Prepared lectures, exhibits, and handouts contain ecological, recreational, scientific and historical information. The main purpose of those who prepare the materials and presentations is to inform the public. Part of the effort to inform in such settings may also focus on justifying the site or the development of the site and what this offers. The result may be a mixture of information, entertainment and subtle justifications of policy offered in a palatable

form. Sometimes the exhibits, programs and materials offered at such sites—even those under the administration of public agencies—become fairly one-sided and possibly even closed about other options or viewpoints. Clearly this may not be intentional but the effect may be more to propagandize than to inform or educate.

Sometimes the distortion of information, or at least its lack of completeness, may be intentional. At other times the limitations are a reflection of emerging and conflicting perspectives about what is accurate concerning the topic. Science itself is not free from controversy. Physicists argue about whether light is a wave or a particle. Biologists debate whether or not wolves should be re-introduced to their former habitats, or whether Inuit should be allowed to kill Bowhead whales. Aquatic biologists are on both sides of the fence regarding the introduction of exotic fish species; for example, controversy exists about those fish introduced to North American waters from other parts of the world. Those who sponsor the construction of dams, canals, aqueducts and locks, and those who propose large-scale diking and dredging projects, all must wrestle with the impact that the project may have on the aquatic habitat and its life forms.

The major purpose of this activity is for students to develop and use their own set of criteria for evaluating the quality, balance and fairness of informational presentations. Special emphasis here is placed on information concerning aquatic environments; however, the process also applies to other topics.

MATERIALS

collections of sample print informational brochures and publications, especially concerning the aquatic environment; sample advertisements and articles from popular tabloid publications; art materials; markers, poster paper, display boards, a display area;
OPTIONAL: video or still cameras; darkroom facilities



PROCEDURE

1. Assemble a file of sample informational brochures from various public or private agencies and organizations. The brochures may cover a range of topics. Make sure some address aquatic topics or issues. Examples might include acid rain, water pollution, conservation, sewage treatment and hydroelectric power. Articles concerning water issues—including water quality, the development of aquatic resources, and water use—from local news media would also be of potential use.
2. Also before beginning this activity with students, obtain several issues of popular, sensational, tabloid publications. These are widely available at the checkout counters of convenience stores and supermarkets. We do not recommend that you take any of these publications in their entirety to school. Cut out selected articles, feature stories, and even advertisements from these tabloids. Choose those that deal with science; health; the environment; new technology; new products or inventions; and discoveries as being most suited to this activity. Prepare a student assignment sheet with some of the following questions. (Feel free to add others suited to your setting.)

- Does the article or advertisement cite or list facts? What are they?
 - Does the item make a claim? Is the claim based on or supported by facts or by some sort of evidence? Describe the claims and the supporting facts and evidence.
 - Does the item or article base its claim or story on some part of science or technology? Is a scientific law or principle used to support the claims? If yes, what are they? Is a scientist or engineer cited as an authority? Who is he or she and how is his or her expertise established? Which fields of science or engineering are employed?
 - Is there any indication that the writer of the article stands behind its accuracy or validity? Will the publishers or editors of the tabloid support the claims? Will the advertisers back up their products?
 - How could you go about checking or verifying the claims and facts in the article?
 - What is your overall assessment of the accuracy of the article or advertisement? Exceptionally accurate? Generally accurate? Somewhat accurate? Generally inaccurate? Exceptionally inaccurate?
3. Divide the class into pairs or teams. Give each group an article from the tabloid and a student assignment sheet listing the questions. Ask the students to review the article or item and to answer the questions on the sheet. Encourage the students to develop any other questions that they think might usefully be asked. Discuss the students' results. What do they think about the overall quality of what they read? Do they believe the article? Would they buy the advertised products? Why or why not?
4. Next distribute the samples of informational brochures, handouts, or pamphlets that were collected and are related to aquatic and other environmental topics. Provide at least one brochure to each of the teams. Ask the students to analyze and evaluate these materials in the same way they did the tabloid items.

Provide the students with another copy of the assignment sheet with the same questions. Again encourage them to add questions of their own. In addition, ask the students to consider:

- whether or not the publication acknowledges different points of view or opinions about the topic, where these exist.
 - whether information or facts have been selected in order to support a view or develop a perspective. Does the material try to persuade the reader in some way or is the reader invited to make up his or her own mind? What evidence can the students find to support their viewpoints?
5. Ask each group to report on their findings. They can summarize their findings by giving the brochure an overall rating—using the five categories from “exceptionally accurate” to “exceptionally inaccurate.” Ask them to support their evaluation with some evidence and reasons for their view.
6. Now have the students work as a whole group to develop a “checklist” that they can use to evaluate informational materials, exhibits or presentations. What, in their view, should be the characteristics of an informational presentation of quality? Of balance? Of fairness?
7. After the checklist has been developed in draft, open the discussion to a few more questions. For example, ask the students whether or not it is possible to be forceful and effective in expressing one's view without becoming unfair or biased. Is it possible to separate one's own viewpoint from a publicly neutral position? To what extent do government agencies, citizen's groups, businesses, interest groups and individual citizens have a responsibility to acknowledge other points of view concerning their policies and practices? After discussion, see if the students want to make any changes in their “Checklist for Quality, Balance and Fairness in Informational Presentations.” Make any changes that they recommend. Post the final checklist in a visible place in the classroom. Also provide each student with a copy of the final checklist for personal use.

8. **OPTIONAL:** Send a copy of your final "Checklist for Quality, Balance and Fairness in Informational Presentations" to the national offices of Project WILD, 5430 Grosvenor Lane, Suite 230, Bethesda, MD 20814-2142. This is a challenging and important topic. We'd love to get to share in your thinking!

9. **OPTIONAL:** Prepare a set of assignments in which groups of students are to act as the designers and developers of an informational brochure or program. Have the students draw assignments at random. Each team will prepare an informational presentation having two components:

- a verbal presentation (10 minutes maximum)
- a display or prepared print brochure

In each case the remainder of the class will apply the criteria from the checklist for quality to the presentations. Following each presentation, the other class members will suggest improvements and changes to add to the quality.

EXTENSIONS

1. Visit a site where information is provided that is related to the environment in some way. Using your criteria, evaluate whether the programs, exhibits and printed materials appear to be balanced and fair.
2. Choose an aquatic wildlife issue in your own community. Write an article for a newspaper or develop a presentation to make in informal educational settings (garden club, Kiwanis, Chamber of Commerce, etc.). Make sure your article or presentation reflects your standards for quality, balance and fairness.
3. Think of five things you could do to enhance the public's understanding of aquatic wildlife and habitats in your own community without using propaganda.

EVALUATION

1. Select one of the following topics and describe the types of information that should be included in an informational presentation designed for students your age: recreation area, sewage treatment plant, whaling museum.
2. Why is it, or is it not, important for informational presentations to be accurate, balanced, fair and of quality?
3. The visitor area of a dam in a state has two informational displays. One explains how water is taken from the basin and used for irrigation for agriculture and for city water supplies. The second shows property damage from floods before the dam was constructed. What other information, if any, should be provided for visitors?

