LESSON PLAN

Level: Grades 6-8

About the Author: This lesson has been adapted from *The TV Book: Talking Back to Your TV*, by Shelagh Wallace, Annick Press (Toronto, Canada), 1996, and accompanying activities written by Chris Worsnop.

Scientific Detectives

Overview

In this lesson, students use science and critical thinking to test the legitimacy of advertisers' claims about their products. The lesson begins with students viewing and discussing a series of ads that make claims about their products. Students read a case study about two girls who replicated experiments from advertisements as a science fair project, and discuss their findings. Then students conduct their own experiments to see if products live up to their claims.

Learning Outcomes

Students will demonstrate:

- an awareness that claims made in commercial messages may not be entirely accurate
- an awareness that there are rules governing advertising claims
- an understanding of the need to critically question media messages
- an ability to investigate the properties of objects and materials

Preparation and Materials

- Photocopy the student handout *Scientific Detectives Interview*
- Tape a few commercials that make claims that could be scientifically proven. Such commercials might be for a toothpaste that claims to whiten teeth better than other leading brands; a deodorant that will leave you dry, no matter what; a shampoo and conditioner that works with heat to leave your hair "silky smooth" ; or a skin cream that eliminates "the visible signs of aging."
- Television and VCR

Procedure

Begin the class by playing the commercials. After each commercial, pause and ask:

- What claims are made about the product being advertised?
- What advertising methods are used to make us believe these claims?
- Do you believe in the claims made about these products? Why or why not?

Distribute the student handout *Scientific Detectives Interview*, and give students some time to read it and answer the questions. Take up their answers as a class. Question 8 asks: “In Canada, are there any rules about the claims advertisers can make about products?” In response, point out that the Canadian Code of Advertising Standards addresses this in two sections:

1. Accuracy and Clarity

(a) Advertisements must not contain inaccurate or deceptive claims, statements, illustrations, or representations, either direct or implied, with regard to price, availability, or performance of a product or service.

8. Professional or Scientific Claims

Advertisements must not distort the true meaning of statements made by professionals or scientific authorities. Advertising claims must not imply that they have a scientific basis that they do not truly possess. Any scientific, professional or authoritative claims or statements must be applicable to the Canadian context, unless otherwise clearly stated.

Activities

The following activities encourage students to explore the legitimacy of advertising claims themselves.

- Find some TV commercials that base their claims on experiments. Get the addresses for the makers of the products advertised in the commercials, and do what Rebecca and Dalia did:
    - Write to the manufacturers for information.
    - See if you can duplicate the experiments.
    - Write again to the manufacturers to tell them your results.
    - Write a report on your project for a science fair and/or local newspaper.
- Rebecca says: "I think people should look at TV advertising a lot more critically and question everything they see and are told. You really have to go and find out yourself." Make a list of ways you could be more critical of TV ads.
- Make up a skit in which someone plays the part of a commercial, and others ask it "critical questions."
- Write a story or play to describe what might happen to TV if there were no ads.
- Discuss the lessons learned from these activities:
    - always question everything
    - don't take anything at face value
    - be critical

Evaluation

- TV commercial investigations, skits, stories or plays.

Scientific Detectives Interview

When Rebecca Greenstein and Dalia Rotstein were twelve years old, they came up with an unusual idea for a science project. They decided to find about TV advertising by looking at the scientific experiments in some TV commercials. With their amazing project, Rebecca and Dalia became winners at their school's science fair – and went to compete at the annual Canada-Wide Science Fair!

Interviewer: What was the main idea behind your science fair project?

Dalia: The purpose was to look at brand-name products which have scientific experiments presented in TV ads. We looked at the commercials for several of these products, then we did the experiments ourselves to see how well they worked outside the commercial. As we took some of each product's competitors and tested them in the same experiments.

Rebecca: We also made up our own variations of the TV experiments and tried those too. We did that to extend our knowledge and make our project a more unique science project that it would have been if we had just done what we saw on TV.

Interviewer: Why did you decide to look at advertising for your project?

Rebecca: Commercials are something we're exposed to every day and we take them at face value. Kids, especially, are always taught to see things and not really question them. Basically, we wanted to do the experiments we saw on TV and see how well they worked in real life. That's the main idea behind most science projects: you notice something that you see every day, you get curious about it, and you wonder why it is that way.

Interviewer: Were you surprised at the results you got?

Rebecca: We didn't expect any of our results to be wildly different from what was shown on TV. But at the same time, we didn't expect them to turn out exactly the same way.

Dalia: We tried the experiments for five different products. One product worked perfectly and two didn't work at all the way they did on TV. The other two products were somewhere in between.

Interviewer: Did you contact the companies whose products you tested?

Dalia: Yes, we did, at the beginning of our project. A lot of companies sent stuff to us describing their experiments, including instructions for doing the experiments. It was very interesting to receive their results. Some companies also sent instructions for other experiments, not just the TV ones. Some of the companies were more willing to do this than others and one company said they couldn't send us anything because their stuff was confidential.

Rebecca: After we finished our project, we wrote to the companies again. We just told them we would be sharing our results at the Canada-Wide Science Fair. We told them that if they had any comments or questions on how we conducted our experiments, please feel free to contact us. That was a long time ago. I hope eventually we'll get a response, but it's hard to say.

Interviewer: How did you find the names of the companies and their addresses?

Rebecca: We looked on the products' packages. Sometime they give mailing addresses right on the box. That's how we got a lot of our mailing information.

Interviewer: Now that you've done a science project on TV advertising, what do you think of TV advertising in general?

Dalia: I think a lot of advertising is unclear and takes advantage of the fact that you're not really paying close attention because it's only a commercial.

Rebecca: I think people should look at TV advertising a lot more critically and question everything they see and are told. You really have to go and find out yourself.

Questions

1. What was the purpose of Rebecca and Dalia's Science Fair project?
2. Did they get very much cooperation from the companies behind the products they tested?
3. How did they contact the companies? What other ways might they have contacted them?
4. How did they enhance their experiments?
5. What were their results?
6. What do they think of television advertising?
7. Do you agree or disagree with Dalia's statement that people don't really pay close attention because it's "only a commercial?"
8. In Canada, are there any rules about the claims advertisers can make about products?