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Evaluating Sources of Information Tutorials

Is BPA a Toxin?

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Introduction

In this tutorial, we're going to learn about primary, secondary, and tertiary sources, and learn how to evaluate scientific information.

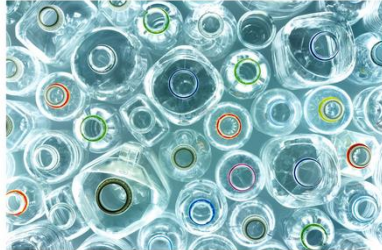
Bisphenol A, or BPA as it is more commonly known, is a synthetic chemical. Since the late 1940s, it has been used in the linings of metal food cans and in many plastic products. But mounting evidence has implicated BPA in medical issues ranging from impaired neurological and sexual development to cancer.

In 2008, a panel of scientists known as the National Toxicology Program stated they had "some concern" about the effects of BPA on human development. Both Canada and the European Union had recently banned the use of BPA in baby bottles and baby food cans. Most panelists felt this was too drastic a step, but they also thought it would be prudent for industries that use BPA to look for a replacement.

In this tutorial, we will examine various information sources that discuss BPA. You will use these sources to determine whether you agree or disagree that BPA is a toxin.

[NOTE: this tutorial is intended for demo purposes, and has not yet been through QA. The final version will have clickable hyperlinks and embedded audio. For this demo version, please copy and paste URLs into your browser's address bar.]

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Chapter 3: Environmental Science for a Changing World
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Sources of Information

First, let's learn about types of information sources.

PRIMARY SOURCES



Primary sources are first-hand accounts. Many primary sources are technical. They include peer-reviewed articles that give actual methods and data. They are the highest-caliber publications of scientific studies.

SECONDARY SOURCES

PRIVATE AND FOR-PROFIT PUBLICATIONS

- Books
- Magazines
- Review articles
- Newspaper articles
- Reference books
- Websites

GOVERNMENT AND INTERNATIONAL AGENCIES

Reputable sources for environmental information include: the EPA, the National Institutes of Health, the FDA, and international sources such as the United Nations, the World Health Organization, the International Panel on Climate Change, and the World Meteorological Organization.

TERTIARY SOURCES



Tertiary sources can draw from, or summarize, a secondary source. They may be accurate; however, they may introduce errors because they do not rely on the original source for facts. They also may perpetuate any errors that appeared in the secondary source.

Infographic 3.1
Environmental Science for a Changing World
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Sources of Information

Let's say you're researching BPA and you find a blog post by a nonprofit environmental group that summarizes information from a government report on BPA. What type of resource would this be?

A primary

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Let's say you're researching BPA and you find a blog post by a nonprofit environmental group that summarizes information from a government report on BPA. What type of resource would this be?

- ☐ A. primary
- ☐ B. secondary
- ☒ C. tertiary

Feedback
Correct. A tertiary source summarizes information from a secondary source.
Points awarded: 1 out of 1

What would the secondary source be in this case?

- ☐ A. the blog post
- ☒ B. the government report
- ☐ C. the environmental group

Feedback
Correct. Secondary sources include books, articles and websites that act as reputable, or respected, sources of information.
Points awarded: 1 out of 1

What makes a resource reputable?

- ☒ A. It interprets information from primary sources.
- ☐ B. It makes information easy to understand.
- ☐ C. It links to tertiary resources.

Feedback

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Correct.
Points awarded: 1 out of 1

Which of the following would be a primary resource?

- ☐ A. a report by a government environmental agency
- ☐ B. a report by a nonprofit environmental agency
- ☒ C. an environmental science article from a scientific journal

Feedback
Correct.
Points awarded: 1 out of 1

Why is an article from a scientific journal considered a primary source?

- ☐ A. It includes new and original data.
- ☐ B. It includes first-hand accounts of observations.
- ☐ C. It's reviewed for quality and accuracy by the author's peers.
- ☒ D. All of the above.

Feedback
Correct.
Points awarded: 1 out of 1

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Analyzing BPA Information Sources

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The first BPA information source we are going to analyze is from the National Toxicology Program (NTP):

<http://www.niehs.nih.gov/news/sya/sya-bpa/>

(please copy and paste the URL into your browser's address bar)

Take some time to read the information on this page and evaluate it for yourself, then answer the following questions.

What type of resource is this particular website?

☐ A. primary
☒ B. secondary
☐ C. tertiary

Feedback
Correct. This is a secondary source prepared by a government agency.
Points awarded: 1 out of 1

Do the credentials of the organization running the site make the information presented reliable or unreliable? Explain.

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Feedback
Correct.
Points awarded: 1 out of 1 (provisional)

The next website we're going to look at is an editorial on Bisphenol A:

<http://ehp03.niehs.nih.gov/article/fetchArticle.action?articleURI=info%3Adoi%2F10.1289%2Fehp.12492>

(please copy and paste the URL into your browser's address bar).

Scroll down to the list of references at the bottom of the article and review the references to answer the following question.

What data sources does NTP rely on? Are these data sources reliable? Why or why not?

Submit **Show Answer**

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Analyzing BPA Information Sources (part II) Previous 4 of 5 Next

The second information source we're going to analyze is a report by the Oregon Environmental Council, titled "Safer Alternatives to Bisphenol A (BPA)":

<http://ehp03.niehs.nih.gov/article/fetchArticle.action?articleURI=info%3Adoi%2F10.1289%2Fehp.12492>
(please copy and paste the URL into your browser's address bar).



(Photo by David McNew/Getty Images North America)

This report is an example of what kind of source?

☐ A. primary
☐ B. secondary
☒ C. tertiary

Feedback
Correct. This is a tertiary source because it includes summaries of secondary sources.
Points awarded: 1 out of 1

Evaluate the Oregon Environmental Council's website: <http://www.oeonline.org/about-us>
(please copy and paste the URL into your browser's address bar).

Do the credentials of the organization running the site make the information presented reliable or unreliable? Explain.

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Now we return to our original question: Is BPA a toxin? Is your answer yes or no, based on the resources you've reviewed? What do you consider to be reliable information from these resources? What do you consider to be unreliable information? Explain how the reliable information supports your answer.

Submit **Show Answer**

REFERENCES: