

Crap Detection 101

This document will help you teach students to evaluate information they find online. The concepts, resources and exercises listed here are also available on a new wiki. Please add your knowledge to the wiki. Together we will create a resource more valuable than any one of us could create alone.

Remember the more things change the more they stay the same. The single most important evaluation strategy you can teach students is an old rule of thumb. *If it seems too good to be true it's probably not true.*

Wiki URL:

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A. Vocabulary

Knowledge of the concepts below will help students evaluate information they find online.

Word	Definition
Phishing	“Attempting to acquire sensitive information such as usernames, passwords and credit card details by masquerading as a trustworthy entity in an electronic communication...”
Domain name	Examples: WebMD.com, Google.com, Bing.com, Facebook.com, etc.
WHOIS search	Searching to determine who registered a domain name.
Hoax	“A deliberate attempt to deceive or trick an audience into believing or accepting that something is real, when the hoaxer (the person or group creating the hoax) knows it is false. In the instance of a hoax, an object or event is not what it appears or is claimed to be.”
Nigerian email scam	A famous example of an advance-fee fraud. This kind of fraud is a, “confidence trick in which the target is persuaded to advance sums of money in the hope of realizing a significantly larger gain.”
Trojan horse virus	“Non-self-replicating malware that appears to perform a desirable function for the user but instead facilitates unauthorized access to the user's computer system.”
Author	The person who creates information such as a website, video or book
Credibility	Capability of being believed
Curriculum vitae / Resume	A document which describes a person's accomplishments and qualifications
Fallacy	A misconception resulting from incorrect reasoning
Publisher	The firm which finances and/or distributes information
Audience	The person or people to whom the author is speaking
Demographics	A statistic characterizing human populations (e.g. age, income, etc.)
What other concepts are important? Remember to add them to the wiki!	

B. Websites Useful for Evaluating Information

This is a list of websites which are useful for evaluating information online.

<u>URL</u>	<u>Use</u>
Snopes.com	Confirm/deny hoaxes
Hoax-slayer.com	Confirm/deny hoaxes
FactCheck.org	Confirm/deny claims by politicians, political ads and chain e-mails
EasyWhois.com	Determine who owns a domain name and find their contact information. For example, MartinLutherKing.org is not what you think it is.
Delicious.com	Get a clue for how credible a website is by the number of people who bookmarked it
Google.com/advanced_search	Understand the context of a website, person or company. Use the advanced search feature to find pages which link to a specific website. What do others think of it?
Siteexplorer.search.yahoo.com	Understand the context of a website, person or company. Like Google, Yahoo's Site Explorer can help you find links to a particular website. Input the URL and click 'Explore URL' to understand how others reference the website.
Search.Twitter.com	Understand the context of a website, person or company. See what people are saying on Twitter.
Bing.com/twitter	Understand the context of a website, person or company. Bing uses a different algorithm than Twitter's search feature to remove spam and duplicate tweets.
Bing.com/maps	Bing's map search can display the geographical location of tweets on Twitter. Use this feature to evaluate the authenticity of reports on twitter (e.g. about natural disasters). Simply click on 'Map Apps' then 'Twitter Maps'
Bing.com / Yahoo.com / Google.com	Do your research against more than one search engine and compare differences you may find in what is returned and its prioritization on the page, as well as whether the URL turns up in ads on the page or within organic search results. These are clues as to how each engine has indexed and ranked the site, as well as whether the site is marketing itself/paid for placement.
Quantcast.com	Understand the audience for a website by considering demographic information
Alexa.com	Understand the audience for a website by considering demographic information. You can also use Alexa to find

	links to a particular website like Google's advanced search or Yahoo's SiteExplorer.
NewsTrust.net	Find high quality journalism and compare news sources
TheyRule.net	Find connections between companies and their leaders. Does the author of a website have unspoken connections which may lead to bias?
Muckety.com	Find connections between companies and their leaders. Does the author of a website have unspoken connections which may lead to bias?
PostRank.com	Evaluate blogs based on how engaged their community is
VoteSmart.org	Evaluate politicians' claims with more sophistication. Politicians' background information.
OpenCongress.org	Evaluate politicians' claims with more sophistication. Politicians' voting records and more
OpenSecrets.org	Evaluate politicians' claims with more sophistication. Politicians' campaign contributions
What are other websites are useful for evaluating information found online?	

C. CLEAR Model for Critical Reading

Professor Roland Paris's C.L.E.A.R. model can help students analyze an argument in a text/website/video. For more information see: <http://aix1.uottawa.ca/~rparis/critical.html>

- **Claims**
 - What are the main claims the author is making? How would you summarize what the author is saying in a few sentences?
- **Logical structure of argument**
 - Does the author's reasoning make sense? Or are they using fallacies? [See list below]
- **Evidence**
 - What evidence (if any) does the author provide?
- **Assumptions**
 - What assumptions does the author make?
- **AlteRnative arguments**
 - Be a devil's advocate. Pretend you agree with the author's assumptions and evidence but disagree with their claims.

Fallacies

Below are a few common fallacies authors use to mislead their audience. If you understand these fallacies you will be better able to evaluate information.

<u>Fallacy</u>	<u>Definition</u>	<u>Example</u>
Ad hominem	When an argument is dismissed because of an irrelevant fact about the author.	Bob: "We should extend the hours of the public library." Mike: "No we shouldn't. You are an awful, horrible man."
False dilemma	When someone presents two options as if they are the only valid options.	Bob: "The United States must either invade Iraq or invade Afghanistan." These are not the only options.
Red herring	When someone brings up an irrelevant topic to distract the audience from the original topic.	Bob: "I finally caught you stealing from the cookie jar!" Mike: "Did you notice how beautiful the weather is today?"
Slippery slope	When someone acts as if one event most lead to another without acknowledging the many optional steps inbetween.	Bob: "Automatic guns should not be illegal. Next thing you know we won't be able to own guns or bow and arrows."
Straw man	When some misrepresents someone else's position.	Bob: "I think we should increase the speed limit from 55 mph to 70 mph." Mike: "Are you crazy? If we abolished the speed limit the roads would be dangerous!"
<p>For over 80 more fallacies see: http://www.don-lindsay-archive.org/skeptic/arguments.html</p>		

D. Exercises to Think Critically

This section includes a taxonomy of simple questions to encourage critical thinking. Each simple question has a single, factual answer. The questions are grouped by age and topic:

- A. Author
- B. Publisher
- C. Timeliness
- D. Audience
- E. Argument Structure

Author

The purpose of questions in this sub-section will help people understand the following aspects of a text/website/video:

- Basics about the author – name, age, location
- Author’s level of credibility – quality of education, accomplishments, awards
- Authors background – where grew up, unusual experiences
- Author’s agenda
- Quality of text and web design

Grades 3 – 5

Have students search the internet to answer questions like:

1. Mark Kistler has a TV called the Imagination Station. Use his website (Draw3D.com) to find out what in what state Mark lives.

Texas

2. What can Mark Kistler teach you on his website or on his TV show?

Drawing

3. What is Mark Kistler’s favorite household chore?

Laundry

Grades 6 - 8

Have students search the internet to answer questions like:

1. Bill Nye the Science Guy grew up in what city?

Washington DC

2. What university did Bill Nye attend?

Cornell University

3. What subject did Bill Nye study in college?

Mechanical Engineering

4. If you wanted to mail a letter to Bill Nye to what address should you send it?

Nye Labs, LLC

Bill Nye The Science Guy

4742 42nd Avenue SW, #143

Seattle, WA 98116

Grades 9 - 12

Have students search the internet to answer questions like:

1. What is the name of the main blogger who maintains MindHacks.com?

Vaughan Bell

2. What degrees does he hold, and he is a research fellow at the Department of Clinical Neuroscience at what major college in England?

Degrees: BSc (Hons), MSc, CertHE, PhD, DClinPsy, CPsychol

Institute of Psychiatry, King's College London

3. The user 'aeyal' contributes to this blog about tea: <http://chadao.blogspot.com> What is aeyal's real name and in what discipline is he a faculty member?

Dr. Aeyal Gross, Faculty of Law, Tel-Aviv University

4. Organizations like the U.S. Chamber of Commerce issue scorecards which "score" a politician's voting record. The more the politician voted in favor of bills which the U.S. Chamber of Commerce wanted passed the higher that politician's score. You can use this fact to determine possible bias. Use OpenCongress.org to find the score card "agree-ratio" the U.S. Chamber of Commerce gave to U.S. Representative Dennis Moore (KS) in 2007.

12 out of 20

5. Use NewsTrust.net to determine which of the following sources of news have the lowest quality rating: TruthOut, Talking Points Memo, MSNBC, CNN.

CNN

6. What did PostRank.com claim was the highest ranking blog about cancer in 2009?

EurekaAlert! - Breaking News

7. On 2/21/10 Twitter user michaeloc tweeted about digital ethnographer Michael Wesch. Use Search.Twitter.com to find the adjective michaeloc used to describe Wesch's famous video.

awesome

Publisher

The purpose of questions in this sub-section will help people understand the following aspects of a text/website/video:

- What entity helped publish it – financed it, disseminated it, hosts it
- Publisher's background – history, associations
- Domain name – domain name ending, possible phishing, WHOIS information

Grades 3 - 5

Have students search the internet to answer questions like:

1. You can often learn who created a website by looked at the bottom of the website. Go to Draw3D.com What is the name of the company which created Mark Kistler's website? (Hint: Mark calls this company the "Design/Programming/Genius Interstellar Web Manager")

Kim Solga Artworks

Grades 6 - 8

Have students search the internet to answer questions like:

1. What company designed Bill Nye the Science Guy's official website?

Rhizome Design!

2. Use Whois.net to look up this domain name: www.billnye.com When was the domain created? (Hint: look for the "Creation Date")

09-jul-1996

Grades 9 - 12

Have students search the internet to answer questions like:

1. Economist Russ Roberts hosts an economics podcast called EconTalk. What Indianapolis based organization funds EconTalk?

Liberty Fund, Inc.

2. A majority of staff at the American Enterprise Institute were most likely to support Al Gore or George Bush in the 2000 presidential election?

George Bush

3. Use WHOIS information to determine the first and last name of the 'Administrative Contact' for the domain HamsterDance.com.

Brian Hoffman

Timeliness

The purpose of questions in this sub-section will help people understand the following aspects of a text/website/video:

- Time/date published
- Speed in which the field changes
- Possibly relevant recent developments

Grades 3 - 5

Have students search the internet to answer questions like:

1. Have you ever seen this symbol? © This symbol is often on websites and books. It means that someone owns the website or book. Look for this symbol on Draw3D.com How long has Mark Kistler owned his website?

2002

Grades 6 - 8

Have students search the internet to answer questions like:

1. On what date did Bill Nye the Science guy make an appearance on the Rachel Maddow show?

November 13, 2009

2. A curriculum vitae describes a person's accomplishments and qualifications. Find Bill Nye's curriculum vitae on his website. In what year did he get an Honorary PhD from Rensselaer Polytechnic?

1999

3. Use his curriculum vitae to find the year in which he won this award: Carl Sagan Candle in the Dark Award for the Development of Critical Thinking

1998

Grades 9 - 12

Have students search the internet to answer questions like:

1. Warren Olney hosted a radio discussion with, among others, Clay Shirky called Is Today's Internet Killing Our Culture. When did this program first air?

Friday, July 6, 2007

2. In what year did Andrew Keen publish his book The Cult of the Amateur?

2007

Audience

The purpose of questions in this sub-section will help people understand the following aspects of a text/website/video:

- Primary audience – age, sex, ethnicity, educational level
- Characteristics of audience - political/sexual orientation, vocation, life outlook
- Assumptions of audience – generational moods
- Size of audience

Grades 3 - 5

Have students search the internet to answer questions like:

1. Mark Kistler has an image advertising a summer camp on this webpage:
<http://www.draw3d.com/mainframe.html> Who is the summer camp for?

kids who love to draw

2. If you like to create art you are most likely:
 - a. funny
 - b. creative ←**
 - c. mad
 - d. excited

Grades 6 - 8

Have students search the internet to answer questions like:

1. How old do you think Bill Nye's primary audience is?
 - a. 3-12 years old
 - b. 13-17 years old ←**
 - c. 18-34 years old
 - d. 35-49 years old

2. How many people bookmarked this URL on Delicious.com: BillNye.com

775 (as of 2/26/10)

Grades 9 - 12

Have students search the internet to answer questions like:

1. Use quantcast.com to determine what percentage of DailyKos.com readers have a salary of \$60K+.

72% (as of 2/26/10)

2. Use quantcast.com to determine what percentage of DailyKos.com readers are Caucasian.

91% (as of 2/26/10)

3. Use quantcast.com to determine what percentage of TruthOut.org visitors went to graduate school.

34% (as of 2/26/10)

4. True or false: over 250 people bookmarked this URL using Delicious.com - http://www.sfgate.com/cgi-bin/blogs/rheingold/detail?entry_id=42805

True

5. Use FactCheck.org's analysis of President Obama's 2010 State of the Union address. Obama said, "there are about 2 million Americans working right now" because of last year's stimulus bill. This analysis references an estimate from Moody's Economy.com. How many new jobs were created because of the stimulus bill according to Economy.com?

1.6 million

6. FactChecked.org outlines a, "five-step framework for analyzing information and avoiding deception" called Tools of the Trade. What is number five?

Weigh the evidence

E. About the Author – Daniel Scott Poynter

The MacArthur Foundation named Daniel a Young Innovator in 2009. In 2008 he created the Digital Literacy Contest while a student at Purdue University. During the contest college students compete to find information online. They have 30 minutes to answer 30 questions. Questions like:

- “How much did the ‘Health Professionals’ industry contribute to Representative Todd Akin's 2008 campaign?”
- “There is an administration in the U.S. Government dedicated to providing official energy statistics about the U.S. Their website gives data about renewable and alternative fuels. How much more nuclear energy was consumed by the U.S. in 2007 than in 2003?”
- “What is the username of the person who edited the Wikipedia article 'Exxon' on August, 26 2007 at 4:02 am?”
- “According to U.S. Census Bureau data collected in 2006, what is the difference in average wages between men and women with a Bachelor's degree in U.S. dollars?”

Universities across the U.S. and Canada host the contest to engage their students. A few include Brown University, Cornell University and Northwestern University. Others include:

- Hanover College
- Indiana University
- Pennsylvania State University
- Purdue University
- Saskatchewan Institute of Applied Science and Technology
- University of Alabama
- University of Florida
- University of Michigan
- University of Wisconsin at Milwaukee
- Western Illinois University

Use the Digital Literacy Contest in Your Class

Daniel can easily modify the Digital Literacy Contest for use in your class. For a demo see:

DigitalLiteracyContest.org/demo

Primer on Digital Information Literacy

Digital information literacy is the ability to find, evaluate and synthesize information online. Daniel wrote a primer on the subject based on over 100 interviews with students who won the Digital Literacy Contest. The students who win are often an order of magnitude faster and more effective than their peers. Why? This primer describes their techniques and favorite tools. Contact Daniel if you are interested in using the text:

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