

# Does It Matter Who Has Your Data?

## Essential Question

*What are the upsides and downsides of companies collecting your data online?*

## Lesson Overview


Students consider the ways websites and companies collect data online and utilize it to personalize content for their users, as well as consider companies' motives in doing so. Students then break into small groups and, using the **Same Search Student Handout**, examine the fictionalized Web results of two people with different demographic backgrounds who search on the same topic. Based on this analysis, they explore the benefits and risks of online tracking and targeting, and learn strategies for managing what happens with their own online data.

## Learning Objectives

*Students will be able to ...*

- recognize that companies collect several types of information about them when they go online.
- think critically about the benefits and risks of online tracking and targeting, and of the content that is offered based on collected data.
- learn strategies for managing what happens with their information online.

## Materials and Preparation

- Copy the **Same Search Student Handout**, one for every four or five students.
- Review the **Same Search Student Handout – Teacher Version**.
- Optional:  Preview the videos “**Online Targeting and Tracking Animation**” and “**Husband Sees Wife on Facebook Dating Ad**” ([www.youtube.com/watch?v=Ns6Aa3CeKas](http://www.youtube.com/watch?v=Ns6Aa3CeKas)) and prepare to show one of them to students.
- Prepare a chart as shown on Question 3 of the **Same Search Student Handout – Teacher Version**, with room to fill in class responses.

## Family Resources

- Send home the **Online Security Family Tip Sheet (Middle & High School)**.

**Estimated time:** 45 minutes

## Standards Alignment –

### Common Core:

**grades 9-10:** RI.3, RI.4, RI.8, RI.10, W.4, W.7, W.8, W.10, SL.1a, SL.1b, SL.1c, SL.1d, SL.5, L.6

**grades 11-12:** RL.4, RL.10, RI.4, RI.7, RI.10, W.4, W.7, W.8, W.9, W.10, SL.1a, SL.1b, SL.1c, SL.1d, SL.2, SL.3, SL.5, L.6

**ISTE:** 1a, 1c, 1d, 2a, 2d, 3b, 3d, 4a, 4c, 4d, 5a, 5b, 6a

## Key Vocabulary –

**track:** when companies collect information about you based on your online behavior

**target:** when companies tailor content to you based on the information they have collected about you

**demographic:** common categories of the population, such as age, gender, and race

**cookies:** data files that are stored on your computer when you visit certain sites, often used by companies to identify repeat customers and personalize visitors' experiences

## introduction

### Warm-up (15 minutes)

**Note:** Key elements of this lesson are based on Eli Pariser’s insightful book, *The Filter Bubble* (2011). This book would make excellent background reading for teachers and students alike.

#### ASK:

*What kinds of information about yourself do you share online?*


Students will likely respond that they share information about themselves in online profiles and on social networking sites.

*What else do you do online that reflects who you are?*

Students should understand that the searches they perform and websites they choose to visit also reveal information about themselves.

**TEACH** the Key Vocabulary terms **track** and **target**. Explain to students that when they input information into a website – such as profile information or search terms – they are telling that site something about themselves. The companies that run the sites track this data. They then use it to target students with specific content, especially advertising related to their interests.

**EXPLAIN** that you are going to discuss the kinds of data companies collect about users, and the benefits and risks of companies having this information.

**Optional:**  **SHOW** students the video “**Online Targeting and Tracking Animation**” or the video “**Husband Sees Wife on Facebook Dating Ad**” ([www.youtube.com/watch?v=N56Aa3CeKas](http://www.youtube.com/watch?v=N56Aa3CeKas)). Elicit student reactions, and ask how it might relate to the idea of targeting and tracking.

**EXPLAIN** that one of the first companies to track and target users online was Amazon.com. It created technology that could match people’s preferences with other users whose buying habits were like their own, and make recommendations on that basis. This kind of targeting worked, and Amazon’s sales grew rapidly. More recently, Amazon began to sell e-books (electronic books). With e-books, the company can track information about what you read, what pages you skip, and what you highlight. Amazon then uses this information to figure out what books to recommend to you (Pariser, *The Filter Bubble*, 2011, p. 29). Other companies, such as Netflix (which offers movies that you can order by DVD or stream online) and Pandora (which allows you to rate music in real time), have a similar model: Based on your choices, they try to determine your tastes. Then they recommend products that reflect those tastes.

#### ASK:

*What do you think are companies’ goals in tracking your information?*

Students should understand that tracking allows companies to target them with personalized content, usually to tailor their experience on the website, or to deliver advertising aimed at them.

*What do you think of tracking and targeting?*

Some students may believe that this is an invasion of their privacy or makes them feel uncomfortable; others might find that personalized information is useful to them or makes them feel special.

*Do you think it is okay for companies to collect information about you?*

Opinions will vary. Explain that you will debate this issue later in the lesson.

## teach 1

### No Two Searches Are Alike (25 minutes)

**DEFINE** the Key Vocabulary term **demographic**.

**DIVIDE** students into groups of four or five.

**DISTRIBUTE** the **Same Search Student Handout**, one per group, and have students read the directions.

**EXPLAIN** to students that they are going to examine the search results of two people, Cole and Lola. Both of them want to buy boots and are looking for discounts online. Both of them have entered the word “boots” into a search engine. The results that each one gets are listed in the handout.

**ALLOW** students 10 minutes to review the Web results for Cole and Lola, and discuss the questions.

**LEAD** a discussion with students using the guidance in the **Same Search Student Handout – Teacher Version**. After inviting groups to share their responses to Questions 1 and 2, work as a class to fill in the chart prepared for Question 3. Sample responses to the questions are included in the handout.

## teach 2

### How to Protect Your Data (15 minutes)

**DISCUSS** the idea that students may sometimes want to share information on sites that they know and trust, while preventing other sites from getting their data. The important thing is to make their own choices about how and where they share their personal data, and about how this data is used.

**INTRODUCE** students to the idea that there are things they can do to help protect their personal information. Let students know that they will be learning some strategies that can help them limit the data that companies collect.

**DEFINE** the Key Vocabulary term **cookies**.

**DISCUSS** with students each of the following tips for limiting data collection. Invite volunteers to explain how and why each item might affect how much personal information companies are able to acquire.

- Do not provide email addresses to mailing lists unless you need to do so.
- Unsubscribe from listserves or websites that you do not regularly use.
- Limit the number of times you click on ads, no matter what they are for.
- Avoid “too good to be true” products, deals, and opportunities. Once you have confirmed your email address, they are likely to sell your email address to other companies.
- Make sure you have antivirus software, and that it also protects against spyware, programs that secretly collect your data.
- Disable Internet cookies, so that companies cannot put tracking devices on your computer. (Sites will not be able to remember your preferences as well this way, which is something to consider.)
- Investigate computer applications that block pop-up ads.
- Examine sites’ privacy policies before you reveal any information on the site; avoid using sites that will share your data with others.

**EXPLAIN** to students that the techniques companies use will change over time, so the best strategy they can use is to think critically and conduct research about different companies and practices. The Privacy Rights Clearinghouse ([www.privacyrights.org/fs/fs18-cyb.htm](http://www.privacyrights.org/fs/fs18-cyb.htm)) has helpful information on this issue.

## closing

### Wrap-up (5 minutes)

You can use these questions to assess your students' understanding of the lesson objectives. You may want to ask students to reflect in writing on one of the questions, using a journal or an online blog/wiki.

#### ASK:

*What information about your demographic group and online behavior might websites collect about you?*

Sample responses:

- Gender, age, ethnicity, location
- Political or religious views
- Likes and dislikes
- Subjects or activities that interest you
- Products you look at or buy online

*What are the pros and cons of online tracking and targeting?*

Students should understand that tracking and targeting enable websites to provide search results and advertising that may be of greater interest to them. On the other hand, these practices may limit the results they get when they perform online searches, and they may represent an invasion of privacy.

*What are three ways you might help prevent companies from collecting information about you online that you may not want them to have?*

Sample responses:

- Limit the amount of personal information you give out on websites
- Disable cookies
- Install antivirus software
- Read site privacy policies

# Does It Matter Who Has Your Data

## Directions

Cole and Lola are both searching online for great deals on boots. They both type the word “boots” into the same search engine. The search results and ads that turn up are shown below. Work in small groups to review their results and answer the questions that follow. Circle or highlight any examples from the results that will help you answer the questions.

### Cole’s online search for “boots”

SEARCH IT boots

About 2,490,000 results (0.23 seconds)

▶ Places for Work Boots Supply near Burchcreek, Arizona

**Atlas Army Supply**  
maps.findit.com 22 Kimball Way, Burch Creek, AZ ★★★★★

**Army/Navy Supplies**  
maps.findit.com 10967 Shaw St., Shancy, AZ ★★★★★

**Bootman's Bounty Bluegrass**  
www.bootman'sbountybluegrass.com  
LIVE at the Town Hall every Thursday and Saturday this month

**Boot – define it internet dictionary**  
www.define-it.com  
Protective footwear that covers the majority of your foot.

**B.O.O.T | Building Our Own Telescopes.**  
www.bootstars.org  
We are a collective that constructs simple telescopes and other star-gazing devices. Become a member today. Reach for the stars.

Ads

**Dream Jobs in the US Army**  
Join the Army Today  
www.we\_recruit\_you.com  
It's never too early to start looking for your dream job. Find out about our US informational tour now!

**1-888-Giddyup Cowboy Boots**  
Join the Army Today  
www.giddyup-boots.com  
The best western wear in the country. Find boots, belts, buckles, and more. Just one click away.

# Lola's online search for "boots"

SEARCH IT boots

About 3,550,000 results (0.23 seconds)

[Boot Camp Crantown | You Can Do It](#)  
[www.boottowncrantown.com](http://www.boottowncrantown.com)  
For women of all sizes and shapes. Get up early and run, kick, stretch, and bend. Spanish-speaking instructors!

[www.PiratesBooty.com](#)  
[www.piratesbooty.com](http://www.piratesbooty.com)  
Diamonds, pearls, gemstones, 24K gold and other fine jewelry. By appointment only: Call 123-DIA-MOND

[how do I give him "the boot"? ...serve-it-up answers](#)  
Top answers: You can do it nicely without hurting his feelings ... breaking up is always hard to do ...  
Where is this relationship going? – 13 answers – August 22, 2008  
What if he doesn't call – 2 answers – January 7, 2010

[Boot – define it internet dictionary](#)  
[www.define-it.com](http://www.define-it.com)  
Protective footwear that covers the majority of your foot.

Ads

[Sexy boots in all sizes](#)  
[www.bootspot.com](http://www.bootspot.com)  
Hola! Newly single? Need new boots for a hot date?

[Boot Bonanza](#)  
[www.bonanzaboot.com](http://www.bonanzaboot.com)  
Designer women's boots at great prices! Buy boots now.

## Questions

1. Based on the search results and ads for Cole and Lola, what kind of demographic data do you think companies had collected about each one of them? What is your evidence? What kind of previous searches might they have done, or which sites might they have visited before searching for "boots" ?

2. Do you think it is fair for companies to return different search results for Cole than for Lola? How about for people in general?

3. What are the benefits and risks for ourselves and for the community of Internet users in general when companies give different news, information, and ads to different people? (You will answer this question as a class, but write down some ideas to prepare for class discussion.)



# Does It Matter Who Has Your Data

## Teacher Directions

You will already have divided students into groups of 4 or 5. Each group should have a copy of the **Same Search Student Handout**. After they are done analyzing the profiles of Cole and Lola, have each group report on the questions below for which we provide teacher guidance. Encourage students to circle or highlight any examples from the results that will help them answer the questions.

## Student Directions *(For reference)*

Cole and Lola are both searching online for great deals on boots. They both type the word “boots” into the same search engine. The results that turn up are shown below. Review their results and answer the questions that follow in small groups. Be sure to look at the demographic information for both of them.

## Cole’s online search for “boots”

www.searchit.com Google

**SEARCH IT** boots

About 2,490,000, results (0.23 seconds)

**Places for Work Boots Supply near Burchcreek, Arizona** Ads

[Atlas Army Supply](#)  
maps.findit.com 22 Kimball Way, Burch Creek, AZ ★★★★★

[Army/Navy Supplies](#)  
maps.findit.com 10967 Shaw St., Shancy, AZ ★★★★★

[Bootman's Bounty Bluegrass](#)  
www.bootman'sbountybluegrass.com  
LIVE at the Town Hall every Thursday and Saturday this month

[Boot – define it internet dictionary](#)  
www.define-it.com  
Protective footwear that covers the majority of your foot.

[B.O.O.T | Building Our Own Telescopes.](#)  
www.bootstars.org  
We are a collective that constructs simple telescopes and other star-gazing devices. Become a member today. Reach for the stars.

**Dream Jobs in the US Army** Ads  
Join the Army Today  
www.we\_recruit\_you.com  
It's never too early to start looking for your dream job. Find out about our US informational tour now!

**1-888-Giddyup Cowboy Boots**  
Join the Army Today  
www.giddyup-boots.com  
The best western wear in the country. Find boots, belts, buckles, and more. Just one click away.



# Lola's online search for "boots"

SEARCH IT boots

About 3,550,000 results (0.23 seconds)

[Boot Camp Crantown | You Can Do It](#)  
[www.boottowncrantown.com](http://www.boottowncrantown.com)  
For women of all sizes and shapes. Get up early and run, kick, stretch, and bend. Spanish-speaking instructors!

[www.PiratesBooty.com](#)  
[www.piratesbooty.com](http://www.piratesbooty.com)  
Diamonds, pearls, gemstones, 24K gold and other fine jewelry. By appointment only: Call 123-DIA-MOND

[how do I give him "the boot"? ...serve-it-up answers](#)  
**Top answers:** You can do it nicely without hurting his feelings ... breaking up is always hard to do ...  
Where is this relationship going? – 13 answers – August 22, 2008  
What if he doesn't call – 2 answers – January 7, 2010

[Boot – define it internet dictionary](#)  
[www.define-it.com](http://www.define-it.com)  
Protective footwear that covers the majority of your foot.

Ads

[Sexy boots in all sizes](#)  
[www.bootspot.com](http://www.bootspot.com)  
Hola! Newly single? Need new boots for a hot date?

[Boot Bonanza](#)  
[www.bonanzaboot.com](http://www.bonanzaboot.com)  
Designer women's boots at great prices! Buy boots now.

## Questions

1. Based on the search results and ads for Cole and Lola, what kind of demographic data do you think companies had collected about each one of them? What is your evidence? What kind of previous searches might they have done, or which sites might they have visited before searching for "boots"?

Let students know that Cole and Lola probably did not post their own demographic data online. Instead, companies gathered whatever information was available based on their online behavior and made assumptions based on this information. Their location and family names may have been enough for companies to target them. In addition, companies tracked their searches: Cole may have searched using terms related to Western gear or astronomy, and Lola may have searched on terms related to fashion or software. Emphasize that the assumptions that companies made about them may very well be untrue.

Sample responses:

- Cole**
- Gender: Male, because of the work boots and telescope results
  - Age: Late teens, because he gets an ad for the army
  - Location: Burch Creek, because the Army/Navy store addresses are both there
- Lola**
- Gender: Female, because of the listings for exercise and the sexy boot ad
  - Ethnicity: Latina, because it says that the Boot Camp Crantown has Spanish-speaking instructors
  - Location: Crantown, because the bootcamp that is advertised is there

2. Do you think it is fair for companies to return different search results for Cole than for Lola? How about for people in general?

Student responses will vary. Some students might say that using demographic data is a good thing because it helps them find the results they need, even if the results are based on stereotypes about people of certain genders, ages, or ethnicities. For example, it can be useful to have information targeted to your geographic area, rather than getting results from all over the country or the world. Other students might think that this kind of targeting only reinforces stereotypes, and keeps those who don't fit the stereotypes from finding the results they need. For example, Lola may love astronomy, yet she does not receive the telescope ad – perhaps because girls are often perceived to be less interested in science. Encourage students to give other examples.

3. What are the benefits and risks for ourselves and for the community of Internet users in general when companies give different news, information, and ads to different people? (You will answer this question as a class, but write down some ideas to prepare for class discussion.)

Sample responses:

- **Benefits:** Time saving; convenient; efficient delivery of information; feeling of being special with personalized content; community-building with others like you; more quality shopping experience; interests can flourish
- **Risks:** Undemocratic to have unequal access to information; limiting to have exposure to narrower interests, points of view, and news; discrimination through different pricing and opportunities based on data; assumptions that reinforce stereotypes; the sense that our privacy or freedom is being limited

**Sample chart** (Note: Re-create the chart with only the bolded information. Use the sample responses below to help guide student discussion.)

	<b>Benefits</b>		<b>Risks</b>	
<b>Ads</b>	<b>Individual</b> You don't have to wade through ads that do not apply to you.	<b>Community</b> People are more satisfied with their options and spend more time on other goals and pastimes.	<b>Individual</b> You lose choice as a consumer about what products you want shown to you.	<b>Community</b> People's choices are limited, which seems like a violation of their freedom.
<b>Search Results</b>	You can receive news that is more in line with what you are looking for.	People have access to material that is of interest to them.	You only receive a limited amount of information, and your worldview is limited.	People cannot engage in intelligent, well-informed conversation, because they have not been exposed to points of view other than their own.

# Does It Matter Who Has Your Data?

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## 1. What kinds of information do companies collect about you when you go online?

- a) Your likes and dislikes
- b) Where you live
- c) Products you look at or buy online
- d) Subjects or activities that interest you
- e) All of the above

## 2. True or false: The information you enter about yourself online, or the ads that you click on, can affect the results you get when you do an online search.

- a) True
- b) False

## 3. Jana is searching for books online. She wants to make sure that she protects her private information, such as her address, when she searches for and buys the books. Jana could:

- a) Email the online companies she is thinking about buying from to ask them not to use her private information
- b) Only buy books from sites that her friends buy books from
- c) Read the sites' privacy policies before she gives out information

# Does It Matter Who Has Your Data?

ASSESSMENT  
TEACHER VERSION

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## 1. What kinds of information do companies collect about you when you go online?

- a) Your likes and dislikes
- b) Where you live
- c) Products you look at or buy online
- d) Subjects or activities that interest you
- e) All of the above**

*Answer feedback*

The correct answer is **e**. Companies store all kinds of information about you so they can recommend more products that you may want to buy.

## 2. True or false: The information you enter about yourself online, or the ads that you click on, can affect the results you get when you do an online search.

- a) True**
- b) False

*Answer feedback*

The correct answer is **a**, True. Companies may use the data you enter online to offer search results they think are most relevant to you.

## 3. Jana is searching for books online. She wants to make sure that she protects her private information, such as her address, when she searches for and buys the books. Jana could:

- a) Email the online companies she is thinking about buying from to ask them not to use her private information
- b) Only buy books from sites that her friends buy books from
- c) Read the sites' privacy policies before she gives out information**

*Answer feedback*

The correct answer is **c**. Jana can find out about how a company plans to use her information by reading its privacy policy. Then she can decide which sites she feels comfortable giving her information to, before she searches for and buys books from them.