



With so much information on the Internet, students need to become skilled detectives to identify the good sites from the bad. Detectives require a lot of training before they are given their first solo cases. The online and offline activities below will help them practice their detective skills and learn how to choose an A+ source when doing independent research. All activities are geared for students in grades 3–5 unless otherwise indicated.

## Setting the Scene

**Bulletin Board:** Place the silhouette of a computer on one side of the board and the “Choose an A+ Source” poster from Upstart ([www.demco.com/goto?BLK290014](http://www.demco.com/goto?BLK290014)) on the other side. Use three sets of footprints, in different colors or sizes, to connect the computer to the three source categories: Authoritative, Accurate, and Appropriate. Printable footprints are available at <http://coolest-free-printables.com/2013/02/03/printable-black-footprints/>. Add question marks and cut-outs of magnifying glasses. Title the bulletin board “Be a Website Detective.”

**Library Display:** Wrap crime-scene tape around a Detective Center titled “A+ Tools for Super Sleuths.” Set out a camera, magnifying glass, and flashlight. Label the camera “Authoritative: Get the Big Picture”; the magnifying glass, “Accurate: Look Closely”; and the flashlight, “Appropriate: Focus on Information.” Add books related to the mystery theme, such as fiction and nonfiction books about strange phenomena like the Bermuda Triangle.

**Computer Center Display:** Multnomah County Library has created four printable infographics on Internet use at <https://multcolib.org/homework/research-and-citations>: “How to Evaluate Websites,” “How to Master a Google

Search,” “How to Search the Internet,” and “Why Use Books/Why Use the Internet?” Print the infographics and post them strategically near computer centers as resources for doing Internet research.

**Detective Kit Incentives:** Depending on budget and time, collect inexpensive detective tools into a “super sleuth kit.” Inexpensive magnifying glasses, flashlights, “Top Secret” notebooks, and DIY paper binoculars are available through Oriental Trading ([www.orientaltrading.com](http://www.orientaltrading.com)). Plastic “Junior Detective” badges can be personalized with your school name at ([www.foremostpromotions.com](http://www.foremostpromotions.com), minimum order 250).

**Ducktective Read-aloud:** Get students in a mystery-solving mood by reading aloud *The Web Files* by Margie Palatini. This picture book parodies *Dragnet* (which children may not know), with Ducktective and his partner, Bill, in the farmyard investigating the disappearance of a “peck of perfect, purple, almost-pickled peppers.” Children will delight in the questioning of familiar nursery rhyme characters.

## Teaching the Skills

Evaluating resources is a complex task requiring higher-level thinking. For greatest success in teaching children

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to evaluate resources, break down the skills into the three components: Authority, Accuracy, and Appropriateness. These skills can be applied to Internet resources, visual media, and print materials. Although the following activities can be used separately, if done in sequence, they will progressively build evaluation skills.

### **Authoritative: Is the Author Worthy?**

**Finding Experts (K–5):** Detectives can't be experts in everything, so they often look for trustworthy (authoritative) resources to find out what they don't know. Part of detective training is learning to recognize a trustworthy source. Make a three-column chart graphic organizer titled "Who's the Expert?" Label the first column WHO or WHAT?, the second column WHEN?, and the third column WHEN? in a red circle with a line through it to represent "not." Explain that collectively you'll generate a list of trustworthy resources. Give a few examples:

- The PE teacher is trustworthy when I want to know the rules of a game. The PE teacher is probably NOT trustworthy when I want to know what it's like to fly in a spaceship.
- A cookbook is trustworthy when I want to bake cookies. A cookbook is probably NOT trustworthy if I want to build a house.

Give one or two partial examples (A librarian is trustworthy when... or A map is trustworthy when...) and let student volunteers complete the sentences. Pair students to brainstorm more ideas; then ask each pair for their two best examples to add to the chart.

**Identifying Expertise (Art/Writing):** Recognize that children may already have expertise in some areas. To help children think about what kind of expertise they have, print off the "I'm an Expert" charts at E Is for Explore! (<http://eisforexplore.blogspot.com/2012/08/im-expert-at.html>). While these charts are intended to be copied for a get-acquainted game, you could post them as inspiration. Give each child an Experts card and body template (printable from the link labeled "Experts" at [www.weareteachers.com/blogs/post/2014/08/05/fun-back-to-school-lesson-invite-students-to-show-their-expertise](http://www.weareteachers.com/blogs/post/2014/08/05/fun-back-to-school-lesson-invite-students-to-show-their-expertise)). Students can color their body templates and write an area of expertise on their Experts cards. Encourage them to be creative and to write why they are experts. Examples from the website can also help.

**Ask an Expert (Science):** Sometimes one detail makes a big difference. Place a washcloth in a bowl of water. Ask students what will happen if someone wrings the water out of the washcloth. Since most students will have done this before, they will probably make an accurate prediction. Let a student volunteer test the prediction. Now ask what will happen if the washcloth is on the International Space Station. Ask for predictions, then for ideas of who would have the expertise to answer the question. Watch the experiment done on the ISS by an astronaut at [www.youtube.com/watch?v=o8TssbmY-GM0](http://www.youtube.com/watch?v=o8TssbmY-GM0). Did anyone predict correctly? Discuss who was better qualified to make the prediction: the students or an astronaut?

**Check It Out (K–5) (Online/Reading):** Pair students for this online activity as a great introduction to the importance of evaluating online resources. In the interactive ebook *Webster's Gecko Goof* ([www.netsmartzkids.org/eBooks/WebstersGeckoGoof](http://www.netsmartzkids.org/eBooks/WebstersGeckoGoof)), Webster learns the importance of checking information found on websites. All age groups can use the site since it is audio-supported.

**Mix & Match Domains:** URLs are a great place to start investigating the authority or trustworthiness of a website because the acronyms after the dot (i.e., *.com* or *.edu*) often indicate sponsors of sites. Some domains are strictly limited to groups that belong to that category. Other domains are open for registration from anyone, whether the owner fits the category or not. For instance, *.mil* is strictly limited to the U.S. military; *.net* refers to networked groups but anyone can register for the domain. The ~ (tilde) sign indicates that even if a web page is hosted on a restricted domain, such as *.edu*, the web page itself belongs to an individual in that institution and expresses the personal viewpoint of the individual.

Print the Mix & Match Domain Cards on pages 6 and 7, cut them apart, and put each mixed-up set into an envelope. One set per 2–3 students should be enough. In pairs or trios, students match the domains and groups. Explain that the boxed domains are restricted and the others are unrestricted. Ask student teams to sort the domains into two categories: More Trustworthy and Less Trustworthy. Discuss their decisions and rationales as a group. The sort does not require consensus, but rather focuses attention on the types of questions students should ask about a web address.

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If time allows, look at the URLs of popular sites, including the school's website. What does the URL of a website tell the user?

**Questioning Authority! (Online):** Detectives verify their information sources. For this activity, students will look for the authors or sponsoring organizations that give authority to commonly used websites. The questions on the Website Checklist at <https://docs.google.com/document/d/1j2WJDJMBTqTIY1BFtb3CtB29sZ37FB3cTDKa2Yj4Dq8/edit> can keep students focused on the task of determining authority, although not all questions may be applicable to every site.

In advance, make a document that students can access containing links to several websites with different domain types. The following list of websites can be a good starting place. You can supplement with sites your students commonly use at school, particularly if students have access to online research databases. Depending on time, assign one to three sites to student pairs. More than one team can explore the same site.

- Smithsonian's National Zoo, <https://nationalzoo.si.edu>
- Enchanted Learning, [www.enchantedlearning.com/Home.html](http://www.enchantedlearning.com/Home.html)
- Energy Kids, [www.eia.gov/kids](http://www.eia.gov/kids)
- Storyline Online, [www.storylineonline.net](http://www.storylineonline.net)
- FBI Kids, [www.fbi.gov/fun-games/kids/kids](http://www.fbi.gov/fun-games/kids/kids)
- Zoopz, [www.zoopz.com/zoopz/zoopz.swf](http://www.zoopz.com/zoopz/zoopz.swf)
- San Diego Zoo, <http://kids.sandiegozoo.org>
- Kids Health, <http://kidshealth.org/kid>
- Johnnie's Math Page, <http://jmathpage.com>
- SuperLame, [www.superlame.com](http://www.superlame.com)
- National Library of Virtual Manipulatives, <http://nlvm.usu.edu/en/nav/vlibrary.html>
- E-Learning for Kids, [www.e-learningforkids.org](http://www.e-learningforkids.org)
- Space Place, <http://spaceplace.nasa.gov>
- Congress For Kids, [www.congressforkids.net](http://www.congressforkids.net)

Model the activity using a teacher-resource website like TeachersFirst ([www.teachersfirst.com](http://www.teachersfirst.com)). Note the domain name. Then point out clues on the top and bottom of the page. Click the "About Us" link to learn more. Note that the sidebar menu has additional information.

During the activity, students should first identify the website's main domain name (i.e., .com, .edu) and then explore the site to identify the author or organization. They may need to click on links like "About" or "Who We Are," or even a company logo.

### **Accuracy: Is The Information Worthy?**

**Accuracy refers to two aspects:** correctness and bias. Checking for correctness may mean noticing errors or consulting more than one source. Bias is always present, so the goal is to identify the audience, purpose, and prevalence of facts versus opinion.

#### **Detecting Correctness**

**Fingerprint Fun (Craft):** Fingerprints are distinctive and often used to identify law-breakers. CyberBee has written up a simple procedure for taking fingerprints at [www.cyberbee.com/whodunnit/prints.html](http://www.cyberbee.com/whodunnit/prints.html) as part of a larger unit on mysteries. Supplies needed are pencils, paper, transparent tape, and magnifying glasses.

**Detailed Observation (Magic Trick):** Amaze students with your ability to notice the change of one detail. This magic trick will make it seem as though you have an incredible ability to notice and remember details. It's up to you whether you want to reveal the trick. Card Flip Magic (<http://csunplugged.org/error-detection/#Downloads>) is actually a simulation of how a computer checks for errors in transferred files. You will need a set of cards that have different patterns on the two sides. You will lay out the cards randomly in a grid (5 x 5 or 7 x 7). Then you will add one more seemingly random row and column. When students flip one card, you'll be able to tell them which card has been flipped.

**Detecting False Information (Language Arts):** Students who already read mysteries know that detectives have to sort through information to detect inconsistencies or false information. Use a short mystery as a read-aloud and challenge students to "crack the case." You can download "The Case of the Ruined Roses" at <http://kids.mysterynet.com/solveit/> or "The Case of the Snack Shack" at <http://kids.mysterynet.com/quicksolve/>, or choose an Encyclopedia Brown mystery. "The Case of the Slippery Salamander," a short story from the book with the same name, is reasonable for a student to solve.

**Observation Skills (Online):** Students can test their skills of observation when they engage in art games based on

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observation and memory at Getty Games ([www.getty.edu/gettygames](http://www.getty.edu/gettygames)). The three timed games, “Detail Detective,” “Match Madness,” and “Switch,” are based on art at the Getty Museum in Los Angeles.

**The Effective Detective (2–4)(Online):** In “The Effective Detective” (<http://pbskids.org/arthur/games/effectivedetective/effectivedetective.html>), sponsored by PBS, children take turns with Arthur describing characters. The task is not as easy as it seems!

**Research Hunt (4–5+)(Online):** It’s time for the first research challenge—and it’s likely to trip up impatient students who work quickly without checking their facts. All About Explorers (<http://allaboutexplorers.com>) was designed by classroom teachers to reinforce the importance of evaluating websites. Visitors to the site have two options: a quick Treasure Hunt activity or a longer Explorer research project.

For most classes, Treasure Hunts will be sufficient to get the point across. Students can complete Treasure Hunts in a 30– to 45-minute session, although discussion may take longer. On the home page of the All About Explorers site, click on “Treasure Hunts.” The list of 12 explorers is color-coded for reading difficulty (blue = easy; green = moderate; red = advanced) to aid in assigning explorers to student pairs. When the students click on their explorer’s name, a new page will pose three research questions. Students are given links to two websites and urged to verify their facts. At the bottom of the page are additional websites for further confirmation. What students won’t know is that the first website link is self-contained on the site and was written by the website creators to be riddled with errors. If students don’t check both websites, they will end up with inaccurate, or even nonsensical, information. If partnering with a classroom teacher on a curricular unit on explorers, you may want to complete the “Explorer” webquests on the site, which take more time.

After exploring, invite students to talk about when they realized that the first website was inaccurate. What steps did they take to verify the information? Did any students check the domain name and author(s) before they began?

### Detecting Bias

Bias means “point of view.” We all have biases based on our experiences. Biases are not wrong—unless they are used unfairly. For instance, I may have a bias for reading

mysteries; that bias is not unfair. But if, as a librarian, I helped only students who liked mysteries, my bias would hurt other students who needed help. In this section, children will learn about identifying point of view and detecting bias by separating fact from opinion.

**Biases are Everywhere! Reader’s Theater (Language Arts):** Stories are always told from specific points of view. At [www.thebestclass.org/rtscripts.html](http://www.thebestclass.org/rtscripts.html), download the scripts for “The Three Little Pigs,” “The True Story of the Three Little Pigs,” and “The Three Little Wolves and the Big Bad Pig.” After students perform the scripts, discuss how the stories are told from different perspectives, revealing the biases of the narrators. If you have hard copies of these books, display them and similar books, such as *Walter the Giant Storyteller’s Giant Book of Giant Stories* by Walter M. Mayes.

**Revise a Fairy Tale (Writing):** Students choose a fairy tale and tell it from a different character’s perspective. For instance, how might Cinderella’s stepsister tell the story? What about the wolf in Little Red Riding Hood? Could these characters have been misunderstood? Was the witch in Hansel and Gretel actually kind and generous?

**Fact or Opinion?:** One way we express bias is through opinion statements, but children find it hard to distinguish fact from opinion. Use a concept attainment strategy ([www.ascd.org/ascd-express/vol4/420-silver.aspx](http://www.ascd.org/ascd-express/vol4/420-silver.aspx)) to introduce fact and opinion, as this second grade teacher explains ([www.proteacher.org/a/20276\\_Fact\\_or\\_Opinion\\_Game.html](http://www.proteacher.org/a/20276_Fact_or_Opinion_Game.html)). This introductory lesson will help students be successful in subsequent activities.

**Binky’s Facts and Opinions (1–3)(Online):** The interactive, audio-supported game at <http://pbskids.org/arthur/games/factsopinions/> challenges students to decide whether statements made by Francine or Buster express facts or opinions. Pair students so they can support one another. When students click “Back to Game,” they get different statements.

**Fact or Opinion Closed Sort (Language Arts):** The goal of this activity is to have groups of 3–4 students sort sentences into Fact or Opinion categories. You can download “Animal Facts and Opinions” sentences for the sort at Super Teacher Worksheets ([www.superteacherworksheets.com/factopinion.html](http://www.superteacherworksheets.com/factopinion.html)). Students must reach consensus. Check their work by doing a whole class sort on the board or with a document camera image.

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**Wonderful Worms (3–6)(Science):** PBS Learning Media has produced a fact or opinion lesson plan based on a video of a girl who is passionate about worms. Video and handouts for the lesson are found at [www.pbslearningmedia.org/resource/vtl07.la.rv.text.lpfactworm/facts-or-opinions-wonderful-worms/](http://www.pbslearningmedia.org/resource/vtl07.la.rv.text.lpfactworm/facts-or-opinions-wonderful-worms/). Even if you choose not to do the full lesson, students will enjoy watching the video and listening for facts and opinions.

**Is History Balanced? (5–6)(History):** Children tend to think that history is factual rather than an interpretation of events based on the bias of the teller. History Colorado’s lesson plan on Patriots and Tories ([www.historycolorado.org/educators/lesson-plans-0](http://www.historycolorado.org/educators/lesson-plans-0)) uses primary sources to examine what Patriots and Tories said about one another during the time of the Revolutionary War.

**Advertising—Fact or Opinion? (Math):** Collect a number of print advertisements, particularly advertisements for children’s toys and favorite foods. Give pairs of students one or two of the ads and two colors of sticky notes—pink or red for opinion and green for fact. Have them place a sticky note everywhere on the ad where they find a fact or opinion. Remember that pictures can be labeled as well! Students should count up the total number of sticky notes they used and then write them as fractions: 9/12 are opinions, 3/12 are facts. Consider totaling the number of sticky notes for the whole group and tracking the number of facts versus opinions. What percentage of the ads are facts? What percentage are opinions?

**Write It Up! (Writing/Art):** From the library collection, select books that students often overlook. Have each student choose a book, read it, and design an advertisement for the book. Encourage opinions! Make a display of the advertisements next to their books. Track whether any books get checked out based on the advertisements. If time permits, revisit the activity later to talk about why students responded to some advertisements.

## Appropriate: Is the Source Worthy (for me)?

**P.I.C.K. Tool (Reading):** Sometimes detectives need to know how to use a P.I.C.K. to unlock information. When children are looking for a website that is appropriate for their research, the P.I.C.K. strategy can help them evaluate the site for appropriateness.

- **P**—Purpose: What is the purpose of the assignment? Does this website meet that purpose?
- **I**—Interest: Does the website hold my interest enough that I can find an answer to my question?
- **C**—Comprehension: Do I understand what I am reading? Can I figure out the important information and what it means?
- **K**—Knowledge: Do I know most of the words so that I can rephrase the information?

Let students watch the student I PICK rap at [www.youtube.com/watch?v=vfecFjBHfc8](http://www.youtube.com/watch?v=vfecFjBHfc8). Challenge your students to write and perform their own website rap!

## Putting It All Together

**Investigate to Evaluate (Library Skills):** To earn their Junior Detective status, students need to evaluate websites. Download and distribute the Web Evaluation Checklist at [www.gananda.org/webpages/hslibrary/files/Web%20Evaluation%20Checklist%20Elem%20MS.doc](http://www.gananda.org/webpages/hslibrary/files/Web%20Evaluation%20Checklist%20Elem%20MS.doc). You may want to alter the form slightly to better reflect the skills you taught, but the form itself is student-friendly and easy to use. This would be a good time to pair a real website with a hoax website and see what children decide. Elementary-level pairings (presented as hoax and real, respectively) include

- Dog Island, [www.thedogisland.com/sendyourdog.html](http://www.thedogisland.com/sendyourdog.html), and The Blue Dog, [www.thebluedog.org/en/](http://www.thebluedog.org/en/)
- The Burmese Mountain Dog, <http://descy.50megs.com/akcj3/bmd.html>, and BMDINFO [www.bmdinfo.org/](http://www.bmdinfo.org/)
- Baby Bush Toys, [www.babybushtoy.com/index.html](http://www.babybushtoy.com/index.html), and Sassy Baby, <http://www.sassybaby.com/home>
- Save the Pacific Northwest Tree Octopus, <http://zapatopi.net/treeoctopus/>, and Islandwood Pacific Tree Frog, [http://wiki.islandwood.org/index.php?title=Pacific\\_Tree\\_Frog](http://wiki.islandwood.org/index.php?title=Pacific_Tree_Frog)

Domain Mix and Match Cards

**.edu**

**education**

**.k12**

**schools**

**.com**

**company**

**.org**

**organization**

**.gov**

**government**

Domain Mix and Match Cards

**.net**

**network**

**.mil**

**military**

**.int**

**international  
organizations**

**.ca**

**Canada  
country code**

**~**

**personal  
page**