

Research in the Current Generation

Janet Dean

Introduction

A sixth grade health class came in to the library to conduct research on different diets, as part of their healthy living unit. The directions from the teacher were: “just Google a diet, find out what it costs, copy and paste the information in to a word document and print it out.” The students did just that (and no more). It did not concern them whether it was a reputable site or whether the information was correct; it didn’t seem to concern the teacher, either. There were also no instructions about making a note of what site they were on. They then added some pictures from clip art, printed it out, and handed it in. At least one student took all their information from Wikipedia. While this may seem appropriate for that teacher, it is setting a completely unrealistic idea for these students of what research is about.

This generation of students has more technology skills than any generation before them. They have grown up using the internet, social media, and networking. They should be the best researchers we have ever seen, right? Wrong! Give a student in school an assignment and the first thing they do is go to the computer and Google it. Then they will click on the first website that comes up and look for their information there. I actually heard a teacher in my library tell her students that if the website ended in dot org, dot gov, or dot edu, it was a reliable website. While in some ways that may be true, is she aware that every student who has a college e-mail account has a dot edu account, and they may set up personal webpages. In addition, the presence of “org” in an address does not guarantee the site is reputable; there have been instances where phony “org” sites were set up to mislead consumers. So how do we teach our students the skills they need to navigate the vast flow of information in a responsible way?

Rationale/objective

While most students know not to believe everything they read online, the majority also don’t take the time to fully evaluate their sources, according to the John D. and Catherine T. MacArthur Foundation. The same study showed that, on average, kids as young as 11 rated themselves as proficient internet users. I want to teach these students that just being able to find things on the internet will not be the only skills they need.

My objective is for students to learn how to conduct good research on the web by looking at valid websites as well as examples of fictional websites. This is also a cross curricular unit as I will be working with an English teacher and assisting the ELA curriculum by teaching students how to properly examine informational articles and conduct good research.

Demographics

Conrad Schools of Science (CSS) is a unique school in the Red Clay School District housing grades from 6th to 12th. The school is considered a magnet school with a primary focus on mathematics, science and technology. The high school courses offered are meant to lead into various pathways: Allied Health, Sports Physical Therapy, Engineering and Biotechnology. All students now have to apply and interview in order to be accepted into the school. I have been the librarian at Conrad since 2003. The library has a flexible schedule, allowing teachers to schedule time to bring their classes. This does mean that the librarian has to be more proactive in collaboration to ensure that students and teachers are getting the most out of the library facilities. The current population of Conrad is 1220 students.

This particular unit will be taught in collaboration with a 6th grade ELA teacher. The 6th grade classes are inclusion classes, with both English Language Learners and special education students mainstreamed in the population, so there will need to be some differentiations in instruction.

Essential Questions

- How can I evaluate information found on the internet on the basis of accuracy, validity, importance, and appropriate for my needs?
- How can I refine my search questions to get better results?

Common Core Standards

English Reading Informational Standards

CC.6.R.I.1 Key ideas and Details: Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

Content

Search competency is a form of literacy, like learning a language, and it is not something that can be taught in one lesson or one unit. Rather, it is something students need to practice on a regular basis, every time they look something up. There are stages: the first stage is an inquiry one – a broad search that allows students to narrow in on what is of interest to them. They follow this with actual evidence gathering. Students need to be

competent at identifying the type of source they're finding, decoding the different types of information and deciding if it meets their need. They also need to learn to go beyond the surface information and deepen the questions they are asking. Finally, students need to learn to respect ownership of material they find. This is probably, especially for this "download" generation, one of the most difficult ideas to teach. One of the best ways to do this seems to be to get the students to put themselves in the position of someone who has developed something unique and to then ask them how they would feel if someone came along and claimed it as theirs instead.

This seminar was a huge eye-opener for me. On April 28 Dr. Bartley gave a lecture demonstrating how the human population has been growing. The fact that we have doubled the population in my lifetime (and quadrupled it in my mother's lifetime) was something I realized I had just not given much thought to. I guess it is one thing to hear there is population growth; it's quite another to see the figures:

<u>Date</u>	<u>Est. # people</u>	<u>Double time</u>
8000 BC	5 million	
1650 AD	500 million	every 1500 years
1850 AD	1 billion	every 200 years
1930 AD	2 billion	every 80 years
1975 AD	4 billion	every 45 years
2015 AD	8 billion	every 40 years

If the population continues at this rate, where will we be by the year 2050? What would it take for the human population to be a ZPG – zero population growth? And is there a way to get the whole world on board with the same idea?

We read an article from Omni magazine that was an interview with Garrett Hardin, a microbiologist and human ecologist, most widely known for his 1968 essay "The Tragedy of the Commons" in which he describes the follies of overpopulation. The interview was conducted in 1992, and includes some of Mr. Hardin's suggestions for ways in which population might be controlled. The article also contains an interesting discussion of zero population growth which, according to Mr. Hardin, had some major problems, although he said it was a "step in the right direction." One of the problems was that "women who want large families will still have them – there is no way to tie individual wants to national needs without some sort of coercion." There was a very interesting class discussion about which of the various methods he mentioned might be viable in the United States. Personally, I liked the idea, originally from economist Kenneth Boulding, that each woman be given a certain number of green stamps giving her the right to have a certain number of children. If she chose to have fewer, she could sell the extra, if she wanted to have more than her allotment, she would have to purchase them. Since the article was from 1992, I researched further on the internet to see what Dr. Hardin had written since then. I learned that he and his wife committed suicide in 2003.

Dr. Hardin, age 88, had a heart condition, and his wife, age 81, suffered from Lou Gehrig's disease. They were members of a group called End-of-Life Choices.¹

The next impact of population growth that we examined was the effect on water. With all the news of the droughts in the west, this is not a new topic. However, one of the most interesting activities we did was to look at articles about water issues from 20 years ago, and then research to see what is currently going on in those areas. This would be a very interesting comparison lesson for students.

I felt that it would be of even more interest to our students to research the effect human population growth has had on the animal population. What animals are going, or have gone, extinct due to human population growth? We spent some time in seminar examining this topic as well. We considered species such as the polar bear, an extinct breed of rhino, and the passenger pigeon. Having already done work with the bogus "Pacific Northwest Tree Octopus" site, students can now research an actual extinct species and how the human population has affected it. In order to get a better idea of what students would find, I tried to search for a list of endangered species. My original search using "endangered species list" returned 10,500,000 entries. No wonder our students get overwhelmed. There are as many lists of endangered species as there are organizations looking for funding to help them. (this is also a point to make with students – exactly who has put the website up, and what are they looking to get out of it – in other words 'follow the money') I found one list from the World Wildlife Fund² that broke down species by critically endangered, endangered, and vulnerable. I liked the ability it had to click on an animal and then go to specific information about each animal. It explained habitat, why the animal is important, and why it is endangered. There was also a section about what they are doing to help. I will demonstrate information gathering using one of these endangered animals. There are currently sixteen animals on their "critically endangered list, so this might be one good way to assign each child an endangered animal. However, I noticed that the majority of the animals were the more exotic, and there appeared to be few, if any, from the America's.

I then went to the Fish and Wildlife Department's webpage <http://www.fws.gov/endangered/> for their endangered list. I really liked this website. It was very interactive, with the ability to search in many different ways, including by state, and it showed those that were endangered and those that were threatened. I think this will be another site that I will introduce to students so that they get a better idea of the animals that are endangered in Delaware and the surrounding areas.

When I introduce the tree octopus website, I want to talk to students about what they already know about the octopus. I do not want to give them too much information, as I want them to view the website with an open mind; however, I also wanted to be sure of all actual facts. I learned all of the following: the octopus is a mollusk having no shell, eight muscular arms or tentacles, a pouch-shaped body, and two large, highly developed

eyes. Their usual prey (crabs, lobsters, and other shellfish) is seized by the sucker-bearing arms and pulled into the web of tissue at the base of the arms, paralyzed and partially digested by a poisonous salivary secretion, and chewed by the horny, beaklike jaws and the radula, or tooth ribbon. Octopuses move by pulling themselves along with their arms or by forcibly expelling water through the funnel or siphon in the manner of their near relative, the squid. Sometimes they construct barricades of large stones; most hide in rocky crevices at the approach of danger or cloud the water by ejecting dark "ink" from the ink sac. They also change color (from pinkish to brown) according to mood and environment, sometimes exhibiting rapid waves of color changes that sweep over the body. The 3-ft (91-cm) American devilfish is found off Florida and in the West Indies; a smaller species that reaches only 2 in. (5 cm) is found N of Cape Cod. The common octopus of the Mediterranean and the Atlantic occasionally reaches 10 ft (3 m) in length; the giant octopus of the Pacific may have a diameter of over 30 ft (9 m). Octopuses reproduce sexually. One of the arms of the male is modified into a sexual organ that deposits spermatophores in the mantle cavity of the female. The eggs are encased in capsules and attached to a rock, where the female guards them. The young hatch directly, without a larval stage. Octopus is eaten in many parts of the world.³ With this background, the website can be introduced and students' prior knowledge of the octopus discussed.

The third activity of this unit will be for students to use their new skills to conduct web research on critically endangered species that have been significantly impacted by human population growth. In order to assign and monitor this, I needed to do additional research. I began with the animals on the World Wildlife Fund's "critically endangered" species list. Their list included the Amur Leopard, Black Rhino, Cross River Gorilla, Hawksbill Turtle, Javan Rhino, Leatherback Turtle, Mountain Gorilla, Saola, South China Tiger, Sumatran Elephant, Sumatran Orangutan, Sumatran Rhino, Sumatran Tiger, Western Lowland Gorilla, and the Yangtze Finless Porpoise. These animals are all endangered due to human population growth in one form or another.

Issues in Sumatra

Sumatra has experienced one of the highest rates of deforestation. Over two-thirds of its natural lowland forest has been razed in the past 25 years, and this has resulted in four animals unique to Sumatra being placed on the critically endangered list. Over 70 percent of the Sumatran elephant's habitat has been destroyed in one generation. In Sumatra's Riau province, pulp and paper industries and oil palm plantations have caused some of the world's most rapid rates of deforestation. Orangutan habitat in north Sumatra is being lost at an extremely high rate, mainly due to fire and conversion of forests to oil palm plantations and other agricultural development. This species depends on high-quality forests. Widespread forest fires, many set deliberately to clear land for plantations, are becoming a regular disaster. Not only do fires destroy vast areas of orangutan habitat, but thousands of these slow-moving apes are thought to have burned to

death, unable to escape the flames.⁴ The island of Sumatra is the only place where tigers, rhinos, orangutans and elephants live together and the presence of Sumatran tiger is an important indicator of biodiversity in a forest. Protecting tigers and their habitat means many other species benefit—including humans. Today, the last of Indonesia's tigers—now fewer than 400—are holding on for survival in the remaining patches of forests on the island of Sumatra. Accelerating deforestation and rampant poaching mean this noble creature could end up like its extinct Javan and Balinese relatives.

Gorillas

Cross River gorillas live in a region populated by many humans who have encroached upon the gorilla's territory—clearing forests for timber and to create fields for agriculture and livestock. Poaching occurs in the forests as well, and the loss of even a few of these gorillas has a detrimental effect on such a small population. It is estimated there are only about 200 to 300 of these gorillas left in the wilds of Cameroon and Nigeria. Mountain gorillas, as their name implies, have thicker fur and live higher up in the mountains than their lowland relatives, but as humans have moved more and more into the gorillas' territory, the gorillas have been pushed farther up into the mountains for longer periods, forcing them to endure dangerous and sometimes deadly conditions. However, conservation efforts for this group are working well – at one time it was thought that they would be extinct by the end of the 20th century; instead the gorilla population increased from 620 animals in 1989 to around 786 today.⁵

Rhinos

One of the biggest threats to all species of rhinos is poaching - between 1970 and 1992, 96 percent of Africa's remaining black rhinos were killed. A total of 333 rhinos were killed in South Africa in 2010 – almost one a day – and it is all to provide the horn, which is believed in some Eastern cultures to have medicinal value. Javan rhinos are the most threatened of the five rhino species, with as few as 35 individuals surviving in Ujung Kulon National Park in Java, Indonesia. Until the late 19th century and early 20th century, Javan rhinos existed from northeast India and the Sunderbans, throughout mainland Southeast Asia, and on the island of Sumatra. If we lose the population in Java, the entire species will disappear. Sumatran rhinos compete with the Javan rhino for the unenviable title of most threatened rhino species. While surviving in greater numbers than the Javan rhino, Sumatran rhinos are more threatened by poaching – they are the only Asian rhinos with two horns.⁶

Other threatened mammals:

Saola: often called the Asian unicorn, little is known about this animal since its discovery in 1992. Meaning “spindle horns” in Vietnamese, they are a cousin of cattle but resemble an antelope. The current population is thought to be a few hundred at a maximum and

possibly only a few dozen at a minimum. None exist in captivity and this rarely-seen mammal is already critically endangered. Scientists have documented saola in the wild on only four occasions to date. Hunting is the greatest threat to the survival of this species: hunting pressures from humans have been described as "intense", including chases with dogs. In addition to eating the meat, villagers may use the facial glands of the saola for medicinal purposes.⁷

South China Tiger: The South China tiger population was estimated to number 4,000 individuals in the early 1950s. In the next few decades, thousands were killed as the subspecies was hunted as a pest. In 1996 it was estimated that the population in the wild was between 30 and 80, and today the South China Tiger is considered "functionally extinct" as it has not been seen in the wild in over 25 years. This tiger now exists only in zoos, although there are plans in South Africa to reintroduce captive-bred tigers to the wild.

Porpoises:

The Yangtze River, the longest river in Asia, used to be one of the only two rivers in the world that was home to two different species of dolphin—the Yangtze finless porpoise and the Baiji dolphin. However, in 2006 the Baiji dolphin was declared functionally extinct. This was the first time in history that an entire species of dolphin had been wiped off the planet because of human activity. Its close cousin, the Yangtze finless porpoise, is known for its mischievous smile and has a level of intelligence comparable to that of a gorilla.

The vaquita, the world's most rare marine mammal, is on the edge of extinction. This little porpoise wasn't discovered until 1958 and a little over half a century later, we are on the brink of losing them forever. Vaquitas are often caught and drowned in gillnets used by illegal fishing operations in marine protected areas within Mexico's Gulf of California. More than half of the population has been lost in the last three years. With likely fewer than 100 left, the species will become extinct without a fully enforced gillnet ban throughout their entire range.

Strategies

Think, pair, share

Think, pair, share is a strategy used to help students collaborate with their peers and share their thoughts on the content being addressed. Students first think about the content and make their own generalizations about the content. Next, students will pair up with a peer to both share their thoughts on the content. This way they can learn new information from hearing someone else's thinking. Lastly, the pair will share their overall thoughts with the entire class.

Students will examine websites individually and then pair up to compare the information they found.

Graphic Organizers

Graphic organizers are a visual tool that helps display the relationship amongst facts and ideas. It allows the content to become easier to break down because you are able to categorize related information and it becomes more visually organized and comprehensible. For the unit, we will use graphic organizers to organize the information they find on endangered animals as well as a tool to compare different websites.

Activities

Activity One: Analyzing websites for accuracy

Vocabulary:

- Geographical location
- Habitat
- Tentacles
- Reproductive cycle
- Predators
- Website URL
- Cyberspace

The first activity students will be doing will be examining a website about the endangered Pacific Northwest Tree octopus. I have used this site to get students to take a closer look at the information that is on the internet. Prior to introducing the site, a short discussion can be held to find out what students already know about the octopus as a species. Then tell students they are going to learn about one particularly endangered species of octopus. Try to do this as seriously as possible to get students to believe that the species really exists.

Students can use the worksheet in appendix B to find answers to questions about the species and the site. Once students have completed the worksheet, ask students whether they think the Pacific Northwest tree octopus really exists. Even if they have realized the site is a spoof (you may need to explain that word), ask students to carefully analyze what makes this site so convincing and also point out some of the things that make it questionable. Students will usually be quick to find the convincing arguments, so you may need to point out items such as links to “GreenPeas” and the list of other “endangered” animals.

Activity Two: Website Comparisons

Now that students know they can't trust every website, it's time to give them some practice with comparing websites to determine accuracy.

Part A: Vocabulary

In order to be able to compare the websites, students will need to understand these terms. As a group, we will define the following on a pre-created graphic organizer:

- Tone
- Elements of Parody
- Satire
- Irony

Part B: Comparison of Websites

Students are given two websites and asked to examine both to determine accuracy and validity. One of the websites is genuine, one is a spoof, or bogus, website. In choosing these, I tried to select two websites that both dealt with a similar subject. Some suggestions include:

Pair one: Explorers

All about explorers: www.allaboutexplorers.com

Famous explorers: http://www.kidinfo.com/american_history/explorers.html

Pair two: Dogs

Dog Island: www.thedogisland.com

Dog breeds: <http://www.akc.org/breeds/index.cfm>

Pair three: Water

Dehydrated water: www.buydehydratedwater.com

International Water Association: www.iwahq.org/1nb/home.html

Pair four: Chemistry

Dihydrogen Monoxide Research Division: www.dhmo.org

Carbon Monoxide: www.carbonmonoxidekills.com

The first of each pair is a spoof site, but some of them are very convincing. A useful tool for students during this analysis is the "Is this a Hoax?" worksheet (see appendix C). Here are some links to some other spoof websites, so you can tailor the websites to the interest level of your class.

1. [California's Velcro Crop Under Challenge](#)

2. [Feline Reactions to Bearded Men](#)
3. [Aluminum Foil Deflector Beanie](#)
4. [British Stick Insect Foundation](#)
5. [The Jackalope Conspiracy](#)
6. [Republic of Molossia](#)

Activity Three: Research of Endangered Species

Vocabulary:

- Geographical location
- Habitat
- Anatomy/Appearance
- Locomotion
- Diet
- Reproductive cycle
- Adaptions
- Predators

Researching critically endangered animals: to use their newly acquired research skills, student will research one animal from the World Wildlife Fund's critically endangered species list. Each student will do their research and be required to complete the following:

- Description of the animal
- Describe what makes this animal unique
- Description of its habitat
- Diet
- Reproductive Cycle
- Survival techniques/adaptions
- Explanation of why it is endangered.
- Human impact on the animal and its habitat
- Include a picture of the animal

After researching, students will prepare a PowerPoint presentation to share the information with the rest of their class.

Bibliography:

Burnie, David. *Endangered Planet*. Boston: Kingfisher, 2004.

This book, aimed at students, shows how natural habitats and cycles are threatened by human behavior and explores possible solutions.

Fleischman, Paul. *Eyes Wide Open: Going Behind the Environmental Headlines*. Massachusetts: Candlewick Press, 2014.

We're living in an aha moment. Take 250 years of human ingenuity. Add abundant fossil fuels. The result: a population and lifestyle never seen before. The downsides weren't visible for centuries, but now they are. Suddenly everything needs rethinking - suburbs, cars, fast food, cheap prices. It's a changed world. This book explains it.

Huffman, Brent. "Saola (*Pseudoryx Nghetinhensis*) - Quick Facts." Saola (*Pseudoryx Nghetinhensis*) - Quick Facts. February 20, 2013. Accessed January 16, 2015.
http://www.ultimateungulate.com/artiodactyla/pseudoryx_nghetinhensis.html

This site gives more details about one of the endangered animals students will be researching.

Lavietes, Stuart. "Garrett Hardin, 88, ecologist dies." *New York Times*.
<http://www.nytimes.com/2003/10/28/science/28HARD.html> (accessed October 24, 2014).

This article explained the end of Garrett Hardin's life.

US Fish & Wildlife Service. "Find Endangered Species." *Endangered Species*.
<http://www.fws.gov/endangered/> (accessed October 26, 2014).

Excellent website for endangered species, especially in Delaware.

Vogel, Carole. *The Restless Sea: Human Impact*. New York: Franklin Watts, 2003.

Chronicles the discoveries scientists have made about the oceans in the last half of the twentieth century and discusses how those discoveries have affected the world's views about the sea.

World Wildlife Fund. "Species Directory." *WorldWildlife.org*.
https://www.worldwildlife.org/species/directory?direction=desc&sort=extinction_status (accessed October 25, 2014).

This site gives a list of the most endangered species worldwide. Also excellent resource for researching the animals.

Zapato, Lyle. "The Pacific Northwest Tree Octopus." Save The Pacific Northwest Tree Octopus. Created March 8, 1998, updated October 20, 2014. Accessed December 1, 2014. <http://zapatopi.net/treeoctopus/>.

This is the “spoof” website about the tree octopus used to “hook” students.

Appendices:

Appendix A: Library Literacy Standards

In this unit I will be using the media literacy skills established by the American Library Association. Standards are as follows:

1. Learners use skills, resources, and tools to: inquire, think critically, and gain knowledge
2. Draw conclusions, make informed decisions, apply knowledge to new situations and create new knowledge
3. Share knowledge and participate ethically and productively as members of our democratic society.

Appendix B: Common Core Standards

- CCSS.ELA-Literacy. R.16.1 Key idea and details: cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
- CCSS.ELA-Literacy.RI.6.9 Compare and contrast one author's presentation of events with that of another (e.g., a memoir written by and a biography on the same person).
- CCSS.ELA-Literacy.RI.6.7 Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.
- CCSS.ELA-Literacy.SL.6.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.

Appendix C:

Name: _____

Pacific Northwest Tree Octopus

Visit a website about the endangered Pacific Northwest tree octopus (<http://zapatopi.net/treeoctopus>) to find out more about it. Make notes in the table below.

Geographical location	
Habitat	
Average size	
Use of tentacles	
Usual skin color	
Reproductive cycle	
Predators	
Other tree octopus species	
Choose one way you can help save the species	

Adapted from The Consultants-E Online Training & Development Consultancy,
www.theconsultants-e.com

Appendix D:

Name: _____ Website URL or name: _____

Is This a Hoax?

1. Scan the perimeter of the page and look for answers to these questions, using the 5 W's of Cyberspace:	
Who created the page? <ul style="list-style-type: none"> • Is there an “about us” section? • Do they list credentials? • Is there contact information? • Who is the intended audience? 	
What information are you getting? <ul style="list-style-type: none"> • Are there multiple points of view represented? • Does the author use OPINION words, such as <i>always, never, least, greatest, best worst, all, none, should, or most</i>? • What is the tone? Is it serious? Does it contain elements of parody, satire or irony? • Can the information be verified through other sources? 	
When was the article posted? <ul style="list-style-type: none"> • Is it current? • Has it been updated recently? 	
Where is this webpage located? <ul style="list-style-type: none"> • Look at the URL. Is this a personal page or site? • What is the domain (.com, .org, .net, .edu, .gov)? 	
Why would I use this site as a source of information? <ul style="list-style-type: none"> • Can I verify this information? • Why was this site published? Was it to entertain, to inform, to explain, to persuade, to sell, or some combination of these things? 	
2. Look for quality, asking yourself the following questions:	
Does the overall design look professional?	
Are there any spelling mistakes or other writing errors?	
Are links credible or broken?	
Are there any advertisements?	
3. Look at the images, asking yourself the following questions:	

Who created the images? Is credit given?	
Do they look like they have been changed with a photo-enhancing program? <ul style="list-style-type: none"> • Are shadows consistent? • Are there jagged edges? • Are there identical objects in the photograph? • Could the scene in the photo really have happened? 	

Appendix D

Hoax websites that can be used to teach internet literacy (some of these are included in the lesson already).

7. [All About Explorers](#)
8. [Dihydrogen Monoxide Research Division](#)
9. [California's Velcro Crop Under Challenge](#)
10. [Feline Reactions to Bearded Men](#)
11. [Pacific Northwest Tree Octopus](#)
12. [Aluminum Foil Deflector Beanie](#)
13. [British Stick Insect Foundation](#)
14. [The Jackalope Conspiracy](#)
15. [Buy Dehydrated Water](#)
16. [Republic of Molossia](#)
17. [Dog Island](#)

Endnotes

¹ Lavietes, Stuart. "Garrett Hardin, 88, ecologist dies." New York Times. <http://www.nytimes.com/2003/10/28/science/28HARD.html> (accessed October 24, 2014).

² World Wildlife Fund. "Species Directory." WorldWildlife.org. https://www.worldwildlife.org/species/directory?direction=desc&sort=extinction_status (accessed October 25, 2014).

³ The Columbia Electronic Encyclopedia Copyright © 2004.

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⁴ "Species List." WorldWildlife.org. Accessed January 16, 2015.

http://www.worldwildlife.org/species/directory?sort=extinction_status&direction=desc.

⁵ Ibid.

⁶ Ibid.

⁷ Huffman, Brent. "Saola (*Pseudoryx Nghetinhensis*) - Quick Facts." Saola (*Pseudoryx Nghetinhensis*) - Quick Facts. February 20, 2013. Accessed January 16, 2015.

http://www.ultimateungulate.com/artiodactyla/pseudoryx_nghetinhensis.html

Curriculum Unit
Title

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KEY LEARNING, ENDURING UNDERSTANDING, ETC.

Evaluating information found in sources on the basis of accuracy, validity, and appropriateness. Comparing websites to determine the best sources for information.

ESSENTIAL QUESTION(S) for the UNIT

- How can I evaluate information found on the internet on the basis of accuracy, validity, importance, and appropriateness for my needs?
- How can I refine my search questions to get better results?

CONCEPT A

Human impact on endangered species

CONCEPT B

Search competency

CONCEPT C

Website Comparisons

ESSENTIAL QUESTIONS A

What species are currently critically endangered?
How has man had an impact on these animals?

ESSENTIAL QUESTIONS B

What do I know about the octopus? How do I know if the information I am reading is accurate?

ESSENTIAL QUESTIONS C

Looking at two websites on the same subject, how do I analyze which of them is accurate?

VOCABULARY A

Endangered Species
Geographical location/Habitat
Anatomy/Appearance
Locomotion, Diet, Reproductive cycle
Adaptions, Predators

VOCABULARY B

Octopus
Hoax
Bogus

VOCABULARY C

Website URL
Cyberspace
Tone
Elements of parody, satire or irony

ADDITIONAL INFORMATION/MATERIAL/TEXT/FILM/RESOURCES

Worksheets: 1) The Pacific Northwest Tree Octopus, 2) Is this a Hoax? 3) Endangered Species Graphic Organizer