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**Unit:** Research Process

**Class:** Ms. Carney’s 9th grade English

**Days:** approximately five

**Introduction:**

All ninth grade English classes are required to complete a research paper. Ms. Carney’s classes have just finished reading *Chew on This* and they discussed the various issues surrounding food including production and consumption. Students will choose an issue relating to food that interests them to use as their research project culminating in a 4-6 page persuasive essay and a multimedia project highlighting their findings.

Ms. Carney and I will use this project to introduce the idea that research is a process that is recursive. We will also introduce the use of a class blog and a wiki to encourage collaboration and a wider audience for their research efforts. Prior to their first visit to the library, Ms. Carney will have laid out the parameters for the paper and the presentation. During the unit, I will use screencasts of the lessons wherever I can for differentiated instruction and allowing students to review a particular skill that I taught. My high school has a 1:1 laptop program, so every student has a laptop which encourages the use of all kinds of technology.

As the librarian, my responsibilities for grading will include the blogging, the wiki creation, and the research and citation portion of the paper. Ms. Carney will grade the paper itself.

**Lesson 1: Selecting a topic**

**Day 1**

**Objectives: Students will be able to:**

* Select a general topic of interest from *Chew on This* discussions. (i.e., childhood obesity; advertising junk food to children; soda in schools; taxing junk food, etc.)
* Develop essential questions they are interested in researching for the paper
* Understand that sharing their topics and other work on a class blog will encourage collaboration in their research
* Contribute to the class blog following different prompts: Today’s: What topic are you considering for your research project

**Standards:**

**AASL:** 1.1.1 Follow an inquiry-based process in seeking knowledge in curricular subjects and make the real world connection for using this process in own life.

**ELA Common Core:** CC.9-10.W.7 Research to Build and Present Knowledge: Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

**Procedure:**

1. We will discuss what some of the general topics students are thinking about for their persuasive paper.
2. Give out Graphic Organizer – Developing an Essential Question. It contains space for My General Subject; boxes for listing the facts you know about your subject and questions you have about your subject.
3. We will discuss how essential questions do not have easy yes or no answers and often begin with Why, How, Should we, etc., not simple what or who questions that are easily answered. We will also discuss how your question may change as you go through the research process.
4. Allow time for students to fill in the graphic organizer.
5. I will walk students through how to find the blog on [Blogger](http://bookdiva84.blogspot.com/) and then how to register to participate. I will create a screencast of this part of the lesson and post it on my [web page](http://www.riverdell.org/221420310111116403/site/default.asp?2214Nav=%7C&NodeID=891) for students to go back to if they feel the need.
6. Students will be directed to the class blog to answer the simple question, What topic are you considering for your persuasive research paper? Which they will complete for homework.
7. At this time students will not be required to comment on the blog, just take a look at what other students are considering researching.
8. Ms. Carney and I will check students’ graphic organizers for formative assessment.

**Lesson 2 Essential Questions and Supporting Questions**

**Day 2**

**Objective/s: Students will be able to:**

* Develop supporting questions for their essential question/s for the research paper
* Understand that sharing their essential questions and supporting questions on a class blog will encourage collaboration in their research
* Respond to at least two other students’ essential question and supporting questions

**Standards:**

**AASL:** 1.1.1 Follow an inquiry-based process in seeking knowledge in curricular subjects and make the real world connection for using this process in own life.

1.1.3 Develop and refine a range of questions to frame search for new understanding.

1.1.9 Collaborate with others to broaden and deepen understanding.

1.2.1 Display initiative and engagement by posing questions and investigating the answers beyond the collection of superficial facts.

1.2.5 Demonstrate adaptability by changing the inquiry focus, questions, resources, or strategies when necessary to achieve success.

1.3.4 Contribute to the exchange of ideas within the learning community.

1.4.2 Use interaction with and feedback from teachers and peers to guide own inquiry process.

**ELA Common Core:** CC.9-10.W.7 Research to Build and Present Knowledge: Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

CC.9-10.SL.1 Comprehension and Collaboration: Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9–10 topics, texts, and issues, building on others’ ideas and expressing their own clearly and persuasively.

**Procedure:**

1. Discuss with students that when you begin research on your topic, you may have some basic questions about your topic. For example, what is obesity? how many children are obese? where is childhood obesity the worst?
2. These supporting questions will contribute to some of the background information for their topic and also be used for some keywords when searching.
3. Have students look at their essential question and come up with a list of supporting questions about their topic. When they are done, they should post their essential questions and supporting questions to the blog. Blog Prompt: What is your essential question and at least 3 supporting questions.
4. You should read your classmates’ posts and make appropriate comments or suggestions of constructive criticism to at least 2 other students. Maybe you can make a suggestion for more questions.
5. Formative assessment will include me and Ms. Carney monitoring the blog comments before they are posted for appropriateness and helpfulness.

**Lesson 3 – Advanced Searching and Subscription Databases**

**Day 3**

**Objective/s: Students will be able to:**

* Access and search a subscription database such as SIRS using advanced search techniques
* Understand that advanced search techniques use Boolean logic with the operators AND, OR, NOT.
* Create advanced searches using the keywords they generated from their essential question and supporting questions

**AASL Standards**

1.1.4 Find, evaluate, and select appropriate sources to answer questions.

1.1.5 Evaluate information found in selected sources on the basis of accuracy, validity, appropriateness to needs, importance, and social and cultural context.

1.1.8 Demonstrate mastery of technology tools to access information and pursue inquiry.

**ELA Common Core:** CC.9-10.SL.2 Comprehension and Collaboration: Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.

CC.9-10.R.I.7 Integration of Knowledge and Ideas: Analyze various accounts of a subject told in different mediums (e.g., a person’s life story in both print and multimedia), determining which details are emphasized in each account.

CC.9-10.W.6 Production and Distribution of Writing: Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology’s capacity to link to other information and to display information flexibly and dynamically.

CC.9-10.W.8 Research to Build and Present Knowledge: Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.

**Procedure:**

1. Direct students to the subscription database page on my school web site.
2. Open SIRS. Point out the various features of the database that aid students in searching such as subjects, Topic Browse, Pro/Con, etc.
3. Ask them to click on Advanced Search at the top of the page and we will do an example together.
4. Type in obesity and use the pull down menu and choose subject.
5. In the next box type in children. Notice what the results are and how the database helps students see what type of source the article is (newspaper, magazine, reference, etc.)with an icon. They will need this information when we do NoodleTools and citing our sources.
6. Also notice that students can get more search terms from the subject headings at the bottom of each abstract.
7. Students should save at least 3 articles to their documents folder, which Ms. Carney and I will check.
8. Tomorrow we will introduce the Research Wiki, and students will be placing interesting articles or web sites they find on the wiki.

**Lesson 3 Searching Continued – Evaluating Free Web Sites**

**Day 4**

**Students will be able to:**

Apply the advanced search techniques they used yesterday for searching the free web

Evaluate the information they find using a checklist provided by me

Share interesting web sites with their peers on the Research Wiki on [Wikispaces](http://www.wikispaces.com/)

**AASL Standards**

1.1.4 Find, evaluate, and select appropriate sources to answer questions.

1.1.5 Evaluate information found in selected sources on the basis of accuracy, validity, appropriateness to needs, importance, and social and cultural context.

1.1.8 Demonstrate mastery of technology tools to access information and pursue inquiry.

1.1.9 Collaborate with others to broaden and deepen understanding.

2.1.1 Continue an inquiry-based research process by applying critical thinking skills (analysis, synthesis, evaluation, organization) to information and knowledge in order to construct new understandings, draw conclusions, and create new knowledge.

**ELA Common Core:** CC.9-10.SL.2 Comprehension and Collaboration: Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.

CC.9-10.SL.1 Comprehension and Collaboration: Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9–10 topics, texts, and issues, building on others’ ideas and expressing their own clearly and persuasively.

CC.9-10.R.I.7 Integration of Knowledge and Ideas: Analyze various accounts of a subject told in different mediums (e.g., a person’s life story in both print and multimedia), determining which details are emphasized in each account.

CC.9-10.W.6 Production and Distribution of Writing: Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology’s capacity to link to other information and to display information flexibly and dynamically.

CC.9-10.W.8 Research to Build and Present Knowledge: Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.

**Procedure:**

1. Hand out the Web Site Evaluation Checklist and go over the details.
2. Remind students that they should be honest about their evaluation as they weigh each for credibility, accuracy, currency, etc.
3. Remind students that they can use advanced search techniques with Boolean operators and quotation marks for a phrase to search with the search engine of their choice (Google, Yahoo, Infotopia, Dogpile, etc.)
4. Allow students time to begin and spend time working as Ms. Carney and I circulate giving assistance.
5. In the middle of the period, stop students and introduce the Research Wiki.
6. Students will place interesting web sites or articles they find and have evaluated on the wiki they will also annotate the web site or article explaining what is on it, how it is helpful and why it is credible.
7. I will walk students through how to sign into the wiki and how to edit. As I do this I will make a screencast of the lesson and students can also access a tutorial [here.](http://www1.teachertube.com/viewVideo.php?video_id=185) Students can access the screencast on my web page if they need to.
8. All students are expected to sign in to the wiki and this will be recorded as participation for today, but they do not have to contribute a web site. I would like students to look at the wiki and help edit the page.
9. I will ask students to place any problems or issues they are having with their topics on the blog. I will respond to them and students are more than welcome to help out also.
10. These activities will continue for 2 more days. Students will be sharing problems or asking questions on the blog and interesting research web sites on the wiki.

**Lesson 4 – Citing Sources using** [**NoodleTools**](http://noodletools.com/)

**Day 5 and 6**

**Students will be able to:**

* Apply the advanced search techniques they used yesterday for searching the free web
* Evaluate the information they find using a checklist provided by me
* Share interesting web sites with their peers on the Research Wiki on [Wikispaces](http://www.wikispaces.com/)
* Cite their sources using the research management tool NoodleTools.

**AASL Standards**

1.1.4 Find, evaluate, and select appropriate sources to answer questions.

1.1.5 Evaluate information found in selected sources on the basis of accuracy, validity, appropriateness to needs, importance, and social and cultural context.

1.1.8 Demonstrate mastery of technology tools to access information and pursue inquiry.

1.1.9 Collaborate with others to broaden and deepen understanding.

2.1.1 Continue an inquiry-based research process by applying critical thinking skills (analysis, synthesis, evaluation, organization) to information and knowledge in order to construct new understandings, draw conclusions, and create new knowledge.

2.1.2 Organize knowledge so that it is useful.

2.1.4 Use technology and other information tools to analyze and organize information.

3.1.2 Participate and collaborate as members of a social and intellectual network of learners.

3.1.4 Use technology and other information tools to organize and display knowledge and understanding in ways that others can view, use, and assess.

3.1.6 Use information and technology ethically and responsibly.

**ELA Common Core:** CC.9-10.SL.2 Comprehension and Collaboration: Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.

CC.9-10.SL.1 Comprehension and Collaboration: Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9–10 topics, texts, and issues, building on others’ ideas and expressing their own clearly and persuasively.

CC.9-10.R.I.7 Integration of Knowledge and Ideas: Analyze various accounts of a subject told in different mediums (e.g., a person’s life story in both print and multimedia), determining which details are emphasized in each account.

CC.9-10.W.6 Production and Distribution of Writing: Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology’s capacity to link to other information and to display information flexibly and dynamically.

CC.9-10.W.8 Research to Build and Present Knowledge: Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.

CC.9-10.L.3.a Knowledge of Language: Write and edit work so that it conforms to the guidelines in a style manual (e.g., MLA Handbook, Turabian’s Manual for Writers) appropriate for the discipline and writing type.

**Procedure:**

1. Walk students through a sample citation for a magazine article identifying all of the relevant bibliographic information that is needed for proper MLA citation using NoodleTools. (Students already have accounts from middle school.)
2. I will make screencasts of the different citation types (book, reference source, magazine, newspaper, etc.) that most students will need which will be available for viewing as needed on my web page.
3. Students will have saved their work from the previous days on their laptops and can make their citations for each source of information.
4. I will show students how to share their works cited pages on NoodleTools with Ms. Carney and me. This will be how we assess them for this portion of the work.
5. Ms. Carney and I will circulate and give assistance where needed.
6. Students should work on whatever part of the process they need to work on, i.e., finding and evaluating free web sites, finding database articles, making citations, looking and commenting on the blog, etc.
7. Formative assessment will be ongoing as I check the citations and make comments for corrections.

**Lesson 5 – Note Cards and Sharing them with each other**

**Day 7**

**Students will be able to:**

* Determine what information they need to take notes on in order to answer their essential and supporting questions
* Reevaluate their essential and supporting questions in light of the information they are finding
* Collaborate with other students by sharing their note cards and citations
* Share interesting web sites on the class wiki

**AASL Standards**

2.1.1 Continue an inquiry-based research process by applying critical thinking skills (analysis, synthesis, evaluation, organization) to information and knowledge in order to construct new understandings, draw conclusions, and create new knowledge.

2.1.2 Organize knowledge so that it is useful.

2.1.4 Use technology and other information tools to analyze and organize information.

**ELA Common Core**

CC.9-10.R.I.3 Key Ideas and Details: Analyze how the author unfolds an analysis or series of ideas or events, including the order in which the points are made, how they are introduced and developed, and the connections that are drawn between them.

CC.9-10.R.I.5 Craft and Structure: Analyze in detail how an author’s ideas or claims are developed and refined by particular sentences, paragraphs, or larger portions of a text (e.g., a section or chapter).

CC.9-10.R.I.8 Integration of Knowledge and Ideas: Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient; identify false statements and fallacious reasoning.

CC.9-10.R.L.1 Key Ideas and Details: Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

CC.9-10.W.2.b Text Types and Purposes: Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience’s knowledge of the topic.

CC.9-10.W.8 Research to Build and Present Knowledge: Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.

CC.9-10.W.9 Research to Build and Present Knowledge: Draw evidence from literary or informational texts to support analysis, reflection, and research.

CC.9-10.W.6 Production and Distribution of Writing: Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology’s capacity to link to other information and to display information flexibly and dynamically.

**Procedure:**

1. On NoodleTools each student works from a dashboard where they can view their citations and note cards, place their note cards on a virtual tabletop, and create an outline from the note cards.
2. They can also share their work with other students. It works best when they are actually collaborating on a project but it can be helpful to look at someone else’s work, especially if some students understand the research process a little better than others they can be used as examples to follow.
3. Model the thought process for beginning to take notes on an article or web site.
4. In NoodleTools you can take direct quotations in one card and then paraphrase on a second card. You can also make notes for yourself of things to do or think about on a third card.
5. You do not have to use all three cards but my method was always to take direct quotations as my notes and then got back to paraphrase.
6. Have a discussion about what paraphrasing is.
7. This will be students’ last day working with me. The actual writing of the paper will be done with Ms. Carney and on their own.
8. Review ongoing work that students need to do: finish and make corrections I suggest on NoodleTools for their citations; submitting questions to the blog and reviewing what their classmates write; submitting or organizing and editing the wiki.

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|  | **NOVICE** **Getting Started** | **APPRENTICE****On Your Way** | **PRACTITIONER****You Made It!** | **EXPERT****Above & Beyond** | Points Earned |
| Research Questions*What do I need to find out* | asks who, what,when, where, how questions related to topic | Asks essential question/s that:* Lead to at least one answer or outcome
* Relate to the topic
 | Asks essential question/s and supporting questions that:* Lead to more than one possible answer/outcome
* Focus the topic and information search
 | All of Practitioner plus* Asks questions that look for connections
 |  |
| **Search** **Strategy** *How will I find* *out?*  | 1 search term  search tools: * Google
 | 2 to 3 search terms  search tools: * Internet search engine
* Library catalog (OPAC) to find books
 | * 4 to 7 effective search

 terms – in notes * search tools:

 1. Library catalog (OPAC)  2. RD eBooks  3. BCCLS  4. Subscription databases 5. free web using any search  engine  | All of Practitioner plus* ***Search Strategy Worksheet***

Complete and handed in with project |  |
| **Sources***What are the best sources for my research?**How will I decide?* | Selects sources to answer research questions:* **Variety –** uses at least 2 sources of the from any of the following categories:
* Book or other print source
* Subscription database article
* Free web site
 | Selects sources to answer research questions:* **Variety -** uses at least 2 sources of the from any of the following categories:
* Book or other print source
* Subscription database article
* Free web site
* **Quality –** Uses ***Checklist for Evaluation Web Sites***
 | Selects a variety of good quality sources to answer research question/s and/or solve problems:* **Variety -** uses at least 2 sources of the from any of the following categories:
* Book or other print source
* Subscription database article
* Free web site
* **Quality –**
* Evaluates information to select high quality and relevant information
* Uses ***Checklist for Evaluation Web Sites*** for each web site cited
 | All of *Practitioner* plus* Includes an additional type of high-quality information source (example: a scholarly journal)
 |  |
| **Note-taking***How will I record and organize my information?*(25) | * Records the minimum number of note cards (10) in NoodleTools
* Selects mostly relevant facts
 | * Records between 15-20 note cards in NoodleTools
* Selects facts to answer essential and supporting question/s
 | Extracts relevant information and synthesizes to answer essential and supporting question/s:* Records between 20-25 note cards
* Selects facts to answer essential and supporting question/s
* Summarizes and paraphrases using all of the tools in NoodleTools
* Uses “quotable” quotes
 | All of *Practitioner*plus* Records more than 25 cards
* Notes show evidence of new connections, ideas and/or questions
 |  |
| **Citation – MLA format***What are my responsibilities when I use information and technology for school work?* | * Sources listed
 | * All sources listed
* MLA Works Cited list created with NoodleTools; may contain errors
 | * Cites all sources in MLA Works Cited list created with NoodleTools citation builder; few or no errors
 | All of Practioner plus* Annotated Works Cited
 |  |
| **Class Blog** | * Posts topic
* Posts essential question but no supporting question
* Comments one time on classmates’ entries
* No questions about the research process
 | * Posts topic
* Posts essential question and 1-2 supporting questions
* Comments on the minimum of 2 classmates’ entries
* Asks one question about the research process
 | * Posts topic
* Posts essential question and 3 or more supporting questions
* Makes helpful comments such as more questions on 3 or more classmates’ essential and supporting questions
* Asks at least one question about the research process
 | All of Practitioner plus:* Asks more than one question that will help class members in addition to yourself
 |  |
| **Research Wiki** | * Contributes to the wiki minimally with one edit but no submissions of web sites or articles
 | * Contributes to the wiki with 3 edits
* Makes one submission of web site or articles
 | * Contributes to the wiki with 4 or more edits
* Makes 2 or more submissions of web sites or articles to the wiki
* Effectively organizes at least 2 categories of web sites or articles
 | All of Practitioner plus:* Effectively organizes at least 3 categories of web sites or articles
 |  |