

Title of Unit: Senior Research Project

Symbol key:

Differentiation considerations	STAGE 1 – DESIRED RESULTS
<p><i>While the established goals will remain the same for all students, (exception: some IEP's), it is important at the outset of planning to consider the range of students likely to be in the class in terms of their backgrounds, readiness, needs, interests and learning profiles.</i></p> <p><u>Other notes :</u></p>	<p>Content Standard (s)</p> <p>CCSS English Writing (W.9; W.10; W.11; W.12 - all grades) 7. 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. 8. 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. Draw evidence from literary or informational texts to support analysis, reflection, and research.</p> <p>CCSS Science and Technical Subjects (RST.9-10; WHST.9-10; RST.11-12; WHST.11-12 - all grades) RST.3. Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text. RST.7. Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. WHST.7. 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.</p> <p>AASL Standards for the 21st Century Learner (Library Standards)</p> <p>1.1.2 Use prior and background knowledge as context for new learning. 1.3.3 Follow ethical and legal guidelines in gathering and using information. 1.4.2 Use interaction with and feedback from teachers and peers to guide own inquiry process. 1.4.3 Monitor gathered information, and assess for gaps or weaknesses. 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. 2.2.2 Use both divergent and convergent thinking to formulate alternative conclusions and test them against the evidence. 2.2.3 Employ a critical stance in drawing conclusions by demonstrating that the pattern of evidence leads to a decision or conclusion. 2.3.1 Connect understanding to the real world. 3.3.5 Contribute to the exchange of ideas within and beyond the learning community.</p>

Think about ways in which you might link the essential understandings and questions to the lives and experiences of students, and how exploration of the understandings and questions could help build community in the classrooms.

Other notes:

Understanding (s): *Students will understand that....*

1. There are basic principles to the research process and the research design process builds upon these basic principals.
2. There are different types of research design processes.
3. The qualitative design process can be implemented to answer questions that relate to their learning communities and beyond.
4. The qualitative research design process is fluid and flexible
5. Technology is a tool for learning, not the end of learning.

Essential Question(s)

1.Goals:

- Why is your study worth doing?
- What issues do you want it to clarify, and what practices and policies do you want it to influence?
- Why do you want to conduct this study, and why should we care about the results?

2.Conceptual Framework

- What do you think is going on with the issues, settings, or people you plan to study?
- What theories, beliefs, and prior research findings will guide or inform your research, and what literature, preliminary studies, and personal experiences will you draw on for understanding the people or issues you are studying?

3.Research Questions:

- What, specifically, do you want to learn or understand by doing this study?
- What do you not know about the things you are studying that you want to learn?
- What questions will your research attempt to answer, and how are these questions related to one another?

4.Methods

- What will you actually do in conducting this study?

	<p>-What approaches and techniques will you use to collect and analyze your data, and how do these constitute an integrated strategy?</p> <p>5.Validity</p> <p>-How might your results and conclusions be wrong?</p> <p>-What are the plausible alternative interpretations and validity threats to these, and how will you deal with these?</p> <p>-How can the data that you have, or that you could potentially collect, support or challenge your ideas about what's going on?</p> <p>-Why should we believe your results?</p>	
<p><i>What precursor knowledge and skills are you expecting students to have in preparation for this set of knowledge and skills? Begin thinking about ways you can support students in developing "missing" knowledge and what you can do to extend the knowledge and skill of students who already show mastery.</i></p> <p>Other notes:</p> <p>Differentiated Instruction</p> <ul style="list-style-type: none"> ● scaffolding ● modeling ● graphic organizers ● research strategies ● peer tutoring 	<p>Students will know....</p> <p>-The importance of conducting pre-search to gain understanding about a topic.</p> <p>-The ethical considerations when conducting a research design project.</p> <p>-Develop a cohesive research design project and implement it.</p> <p>-Document their fieldwork experiences.</p> <p>-To properly analyze data once it's produced.</p> <p>-Write a professional report to share their information, data, and their thoughts on the results.</p>	<p>Students will be able to...</p> <p>-How to properly identify and develop a question for implementing their own research design project.</p> <p>-Perform adequate pre-search techniques in order to further develop their research question.</p> <p>-How to develop a research question that is informative, cohesive, and that is applicable to the needs of the larger population.</p> <p>-How to structure questions for the use of surveys, perform interviews, learn how to write field notes (qualitative data).</p> <p>-How to use technology to properly analyze data and synthesize data in order to report on it through their paper.</p>

		<p>-How to recognize how conducting their own research design project relates to other areas of their life.</p>
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Differentiation considerations	STAGE 2 – ASSESSMENT EVIDENCE	
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<p>Are there students who will need support with reading/searching a text? With writing?</p> <p><u>Other notes:</u></p> <ul style="list-style-type: none"> - Students who need more assistance will be assisted with selecting topics to research based on their interests/abilities and current issues of the community. - Chunking of the project to meet deadlines. - One-on-one assistance when needed 	<p>Performance Task</p> <p>Note:</p> <ul style="list-style-type: none"> □ Please indicate differentiated tasks / products with (DI) <p>-Research design outline -Reflection Journal -Research paper</p> 	
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<p>Would it be helpful to some students to see models projects that do and don't meet these criteria? Would it be helpful to advanced students to see advanced models? Do rubrics provide something for highly able students to aim for?</p> <p><u>Other notes:</u></p> <ul style="list-style-type: none"> ● Different rubrics were utilized. ● Provided examples of papers that reflect the different levels of proficiency. ● Ruberic https://docs.google.com/document/d/1lvaoKtGwA25OkIT 	<p>Key Criteria</p> <p><u>Rubric</u></p> <ul style="list-style-type: none"> -Establish question or topic of study. -Conduct pre-search to gain more understanding on topic. -Synthesize information. -Cite information. -Establish ethical method of acquiring data to answer question using various means: survey, field observations, interviews, etc. -Analyze data. -Create report synthesizing question, pre-search, data, and further investigation or actions. <p>Advanced Guidance Rubric</p> 	
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[1SlzqF9EZTHiDQIDPvSGxNWmUa9E/edit?usp=sharing](https://www.gdocs.com/document/d/1SlzqF9EZTHiDQIDPvSGxNWmUa9E/edit?usp=sharing)

- Question and logic behind question clearly stated.
- The need for additional research information clearly stated (what does the student know and what more do they need to know)
- Tone
- Sources
- Coherent data analysis
- Organization
- Point of View
- Conclusion
- Spelling/Grammar

Would it be helpful for struggling students to have an option for later quizzes to demonstrate ultimate mastery of content?

Other notes:

Other evidence

- Reflection journal (Use either Evernote, Seesaw, or student blogs to document information).
- Google's Contextual tool, Mind maps, or Popplet (Mind maps application).
- CRAAP worksheet
- Duke University PDF for constructing a good research question.
https://twp.duke.edu/uploads/media_items/research-questions.original.pdf
- Template for Research Question:
https://docs.google.com/document/d/1Rum_hkczFLNsnZaxMjesYTX4ecwvCPsVrNWPvQ85uC4/edit?usp=sharing
- Introduction to research and ethics handout:
<http://individual.utoronto.ca/sadaf/resources/parhandout1.pdf>
- Field notes template:
https://docs.google.com/document/d/1xJGCKH8CvP0GeXhh_v4Jt8LG_tJQpcZw2qhefKHdlj0/edit?usp=sharing
- Coding field notes PDF
https://researchrundowns.files.wordpress.com/2009/07/rrqu_alcodinganalysis_7_19_09.pdf
- Interview questions guideline and sample questions
http://sociology.fas.harvard.edu/files/sociology/files/interview_strategies.pdf
- Survey questions guideline and sample questions
<https://zapier.com/learn/ultimate-guide-to-forms-and-surveys/writing-effective-survey/>
- Plagiarism Tutorial
- My Editing Checklist:
https://docs.google.com/document/d/1zq_FYfmroHg2eMa-pjtigd8tH0Xz-SCgQbxSyyJhhp4/edit?usp=sharing



Differentiation considerations

STAGE 3 – LEARNING PLAN

Be sure to introduce important vocabulary and key concepts up front. Ensure that students have an accurate context for unit of study.

Other notes:

Learning activities:

Notes:



- ❑ **indicate differentiated activities with: (DI)**
- ❑ **indicate AVID strategies with : (AV)**

1. Introduce students to the action research design process.
2. The librarian will indicate to students the proper structure of the report: Title, Introduction of issue, question posed, background research with citations, method for discovery of information, what the student found and how it ties in with background information, what action they could take, description of artifact, conclusion and reflection on the research process.
3. Students identify community issues or issues that are affecting their community. These could be environmental, health, social issues or issues within their school. Typically students will gravitate towards an issue they have background knowledge on or one that directly affects them.
4. Once the student identifies an issue the librarian will direct the student to begin thinking about information they already know about the issue and what other questions they have regarding the issues (What further information do they need to know? Are their connected issues or topics?). A thought web template will be used during this process to have students generate ideas and make connections. Use either paper mind maps, Google's contextual tool or Popplet).
5. Librarian will instruct students to write down one to two broad questions about their issue in a reflective journal as evidence of their thought process. This reflective journal will be part of the assessment for the project. Students must produce quality entries and show to the teacher and/or librarian that they are utilizing critical thinking skills and expressing deep thinking about the issue they have chosen.
6. Librarian will have students begin the pre-search phase of their project. Based on the issue, related issue, and terms created during Step 2. Students will find resources that will be help to build their knowledge on the issue. The CRAAP test should be utilized during this phase. Quality sources are vital for future utilization. The goal is to have students become an expert on their issue.
7. Once enough pre-search is conducted the librarian and/or teacher will instruct students to begin thinking of and formulating a questions that could be used to

generate qualitative research data. The students can look at their broad questions from step 3 to begin this process. Have students look at Duke PDF on designing a good research question. The librarian and teacher need to relay to students that the question generate for their research needs to be able to move the researcher toward discovering what is happening in a particular situation with a particular person or group. The question cannot be too vague or too descriptive. Consider having students fill in a template.

https://docs.google.com/document/d/1Rum_hkczFLNsnZaxMjesYTX4ecwvCPsVrNWPvQ85uC4/edit?usp=sharing Have students reflect on their question and process in their journals. Librarian and teacher see link below as a reference.

<http://www.tandfonline.com/doi/pdf/10.1080/09518390902736512>

8. Have students begin chunking process by having them write their introduction paragraph stating their question. Turn in for revisions or have students perform peer revision. Use peer revision checklist: https://docs.google.com/document/d/1zq_FYfmroHg2eMa-pjtigd8tH0Xz-SCgQbxSyuJhhp4/edit?usp=sharing
9. The librarian will go over the difference between a works cited and works consulted.
10. Have students do second part of chunking by writing the background information portion of their paper. Make sure work is cited and works cited page included. Turn in for revision or have students perform peer revision.
11. Have students begin thinking about the way in which they wish to go about finding the data to help answer their question. Start introducing the concept of ethics to students. Provide introduction to research and ethics handout.
12. Have students consider the ethics of their question. Have them write up or research consent forms and create one. Turn in for peer reflection.
13. The librarian in conjunction with teacher should conduct a brainstorming session for further discussion on research methods. Discuss field observation and note taking, surveys, and interviews. (DI) Field notes template: goo.gl/PIGrAi

Coding field notes PDF:

https://researchrundowns.files.wordpress.com/2009/07/rrqualcodinganalysis_7_19_09.pdf

Interview questions guideline and sample questions
http://sociology.fas.harvard.edu/files/sociology/files/interview_strategies.pdf

Survey questions guideline and sample questions
<https://zapier.com/learn/ultimate-guide-to-forms-and-surveys/writing-effective-survey/>

14. Have students pick one research method and reflect in their journal how they would implement it. Make suggestions on applications that could be used to help them, such as Google forms for a survey.
15. Allow students a long enough period to build their interview or survey questions or perform field observations. Three weeks at the most, maybe more depending on time constraints.
16. Have students periodically reflect in their journals during this period. At least two reflections per week. Turn in reflection journals to monitor progress. Journal entries should include: date, time, method used, information found, thoughts about information found.
17. Have students write the portion of their paper dealing with the method used and justification for decision. Turn in for revision
18. The librarian will walk the students through the process of analyzing their data. Questions to ask are: are there certain phrases or words they repeatedly came across, were there certain sentiments or attitudes that were routinely expressed, were there specific times when things happened?
19. Have students write up this portion of their paper and turn in for revisions or peer review.
20. The librarian will help students to synthesize their background information with the new information they found and help them to establish what should be done next. Should they start an initiative? Should they petition the school or community officials? Should they start a new system.
21. Create an artifact they could show to people in order to make their vision happen. In other words, create something that is meaningful to them. What should they create? Should they make a video to express their research and what they found? A song, a public service announcement, a drawing or infographic. The student (s) must create one artifact to show to the public in addition to their written report.
22. Have students create artifact and write up final portion of their paper and turn in for revision. The artifact should reflect the paper and findings.

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| | <p>23. The students should have two rounds of peer reflection to look at their final pieces. Comments and suggestions are required to show that the student has read the report. Have examples of good comments for students to view.</p> <p>24. Turn in assignment and present artifact and report in a class environment. Before students do their final presentations give them multiple opportunities to practice their presentations. Have students vote on project (s) they want to carry out.</p> |
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