**Pearland ISD AP Capstone – Research**

Course Syllabus

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**Overview**

[Taken and adapted from AP Research Course and Exam Description (2015-16)]

AP Research, the second course in the AP Capstone program (AP Seminar is a pre-requisite course), allows students to deeply explore an academic topic, problem, issue, or idea of individual interest. Students design, plan, and implement a year-long investigation to address a research question. Through this inquiry, they further the skills they acquired in AP Seminar course by learning research methodology, employing ethical research practices, and accessing, analyzing, and synthesizing information. Students reflect on their skill development, document their processes, and curate the artifacts of their scholarly work through a process and reflection portfolio (PREP). The course culminates in an Academic Paper (AP) of approximately 4,000-5,000 words (accompanied by a performance, exhibit, or product where applicable) and a Presentation with an Oral Defense (POD).

As students come to the AP Research course with varied skill sets and abilities, it is necessary to classify what research really entails and to build competence in dealing with academic and college-level sources (such as peer-reviewed journal articles and research studies; foundational, literary, and philosophical texts; personal sources such as reports, speeches, and interviews), and to include the use of artistic works and performances to gain a rich appreciation and understanding of the issues that they will explore in the course. The use of these resources is essential in ensuring students get at the expected rigor of the AP Capstone program generally and the AP Research course specifically. Through scaffolded in-class activities and regular meetings with the AP Research Teacher and/or consultant, students will develop greater confidence in using these sources as the course progresses.

The AP Research course will be the primary course in which research skills are taught and practiced. Though AP Research is not linked thematically to a specific course, students should endeavor to practice what they are learning in AP Research in their other AP and non-AP courses as well. Transference of AP Research skills to other fields of student and/or extra-curricular groups (e.g. Debate, Model United Nations, speech contests, TEDx talks, summer research internships, publication of scholarly articles, DECA, Academic Decathlon, etc.) is strongly encouraged.

 **Big Ideas and Enduring Understandings**

AP Research is not tied to a specific content area. Rather, it emphasizes, and strives for competency in core academic skills. Students gain Essential Knowledge (EK) (“What students will know…”) and develop and apply discrete skills identified in the Learning Objectives (LO’s) (“What students will demonstrate…”) of the Enduring Understandings (EU’s) (“What students will remember in the long-term…”) within the following five Big Ideas, represented by the acronym QUEST. The meaning of QUEST is outlined on the following page with associated essential questions.

1. **Q**uestion and Explore (challenge and expand the boundaries of the students’ current knowledge)
	* How might others see the problem or issue differently?
	* What questions have yet to be asked?
	* What do I want to know, learn, or understand?
	* How does my research question shape how I try to answer it?
	* How does my project goal shape the research or inquiry I engage in to achieve it?
2. **U**nderstand and Analyze Argument (contextualize arguments and comprehend author’s claims)
	* What strategies will help me comprehend a text?
	* What is the main idea of the argument or artistic work and what reasoning does the author use to develop it?
	* What biases may the author have that influence his or her perspective?
	* Does this argument acknowledge other perspectives?
	* How can I assess the quality or strength of others’ research, products, or artistic works?
3. **E**valuate Multiple Perspectives (consider individual perspectives and the larger conversation of varied points of view)
	* What patterns or trends can be identified among the arguments about the issue?
	* What are the implications and/or consequences of accepting or rejecting a particular argument?
	* How can I connect the multiple arguments? What other issues, questions, or topics do they relate to?
	* How can I explain contradictions within or between arguments?
	* From whose perspective is this information being presented, and how does that affect my evaluation?
4. **S**ynthesize Ideas (combine knowledge, ideas, and the student’s own perspective in to an argument)
	* How do I connect and analyze the evidence in order to develop an argument and support a conclusion?
	* Are there other conclusions I should consider?
	* How does my scholarly work emerge from my perspective, design choices, or aesthetic rationale?
	* How do I acknowledge and account for my own biases and assumptions?
	* What is the most appropriate way to acknowledge and attribute the work of others that was used to support my argument?
	* How do I ensure the conclusions I present are my own?
5. **T**eam, Transform, and Transmit (collaborate, reflect, and communicate the student’s argument in a method suited to his/her audience).
	* How can I best appeal to and engage my audience?
	* What is the best medium or genre through which to reach my audience?
	* How might I adapt my written and oral presentations for different audiences and situations?
	* How might my communication choices affect my credibility with my audience?
	* Which revision strategies are most appropriate to developing and refining my project at different stages?
	* How do I provide feedback that is valuable to others? How do I act upon feedback I have received?
	* How can I benefit from reflecting on my own work?

**Formative and Summative Assessments:**

Just as the AP Seminar course helped students move from discussing and analyzing texts to building an argument through inquiry from sources, the AP Research course continues building upon AP Seminar skills to form new understandings of a topic selected by the student and deemed appropriate by the AP Research teacher through approval of an **Inquiry Proposal process** (see below). As in the AP Seminar course, students will present their findings in a written work (in AP Research, the Academic Paper) and through a Presentation and Oral Defense. Unlike AP Seminar, there is no formal group work or final written exam for AP Research: the AP Research summative assessment is based solely on the **Academic Paper (75%)** and the **Presentation and** **Oral Defense (25%)**.

The Academic Paper (**AP**) is an original 4,000 to 5,000 word academic paper that includes the following components: Introduction; Method, Process, or Approach; Results, Product, or Findings; Discussion, Analysis, and/or Evaluation; Conclusion and Future Directions; and Bibliography. While the AP Research Teacher and/or a consultant will provide guidance in the development of this paper, it is the student’s own work and clear guidelines regarding the roles of the Teacher and Consultant will be shared with the student at each step of the process. Students must understand that plagiarism will **NOT** be tolerated: any sources used by the student, through direct quotations and/or paraphrasing, must be properly cited. Failure to do so will result in a ZERO grade for that component of the course (See **“Plagiarism Policy”** below).

The research process in AP Research is not simply about collecting evidence or facts and then piecing them together. Instead, the research process is about *inquiry* – asking questions and coming to solutions and conclusions through serious thinking, discussion, and reflection. The student researcher will seek relevant information in articles, books, and other sources and develop an informed perspective built upon, but not merely derivative of, the ideas in the examined material. As a result, the research process is recursive, meaning that students will regularly revisit ideas, seek new information when necessary, and reconsider and refine their research question, topic, and/or approach. While the Academic Paper and Presentation and Oral Defense are the assessed manifestations of this process, other products, exhibits, and/or performances may be used by students to develop their ideas further.

To keep track of this process of inquiry, students are required to keep a Process and Reflection Portfolio (**PREP**) journal, a formative assessment tool which will be shared with the AP Research Teacher. The PREP will allow students to document their experiences in the course. Students can continually use the PREP to chart their engagement with the **QUEST** ideas, with special attention paid to:

* Their choice of a research question and what prompted their interest in the topic
* Their research process, including important sources (documents, people, multimedia)
* Analysis of evidence as it becomes available
* Changes in the direction of the project and/or initial assumptions
* Ways in which the students have worked on their own or as part of a larger intellectual community
* Challenges encountered and solutions attempted

To demonstrate these experiences, the PREP may include annotated bibliographic entries of important sources, conversations with the Teacher and Consultant, personal reflections, commentary about course assignments and class notes, and any other insights that contribute to a rich description of the development of the student in the course. As students will be required to have a one-on-one appointment with their AP Research Teacher bi-weekly to discuss their work, it is hoped that the student will be able to manage his or her time effectively and use these meetings to continue developing and revising their work throughout the year. In-class assignments may also be collected through the PREP.

Upon completion of the Academic Paper, students will be required to plan and deliver a final summative assessment in the form of a Presentation of their work and an Oral Defense (**POD**). The presentation is expected to use various media to support and enhance the student’s report of key findings, description of the chosen approach and challenges arising from the same, and a defense of the findings by answering questions posed by a panel of AP Research “experts” comprised of the AP Research teacher and the student’s consultant(s).

 **Inquiry Proposal Form**

Prior to engaging in their research, students will submit to the AP Research Teacher an Inquiry Proposal Form, which clearly identifies the topic of study, research question, preliminary research, and methodological and ethical considerations. Only once approval has been granted will the student be allowed to seek a consulting expert and begin the research process in earnest. If the proposed inquiry requires a more extensive consideration of ethics and potential harm (for example, involvement of human subjects), approval will not be granted until the Proposal has also passed review by an Institutional Review Board (IRB).

**AP Capstone Plagiarism Policy:**

Participating teachers shall inform students of the consequences of plagiarism and instruct students to ethically use and acknowledge the ideas and work of others throughout their coursework.  The student’s individual voice should be clearly evident, and the ideas of others must be acknowledged, attributed, and/or cited.

A student who fails to acknowledge the source or author of any and all information or evidence taken from the work of someone else through citation, attribution, or reference in the body of the work, or through a bibliographic entry, will receive a score of 0 on that particular component of the AP Seminar and/or AP Research Performance Assessment Task.  In AP Seminar, a team of students that fails to properly acknowledge sources or authors on the Written Team Report will receive a group score of 0 for that component of the Team Project and Presentation.

A student who incorporates falsified or fabricated information (e.g., evidence, data, sources and/or authors) will receive a score of 0 on that particular component of the AP Seminar and/or AP Research Performance Assessment Task.  In AP Seminar, a team of students that incorporates falsified or fabricated information in the Written Team Report will receive a group score of 0 for that component of the Team Project and Presentation.

AP Research students will be held to high standards of academic honesty and ethics. Preparing fairly and effectively for the completion of the paper and presentation tasks requires advanced planning and time management: many difficulties with plagiarism arise when students leave work to the last minute. Students should keep track of all sources used so that they do not misattribute information.

As an additional safeguard against plagiarism, AP Research work will be submitted to the TurnItIn program.

 **Non-AP Assessment**

The school follows a dual-curriculum and, as such, must also provide evidence of learning based on local standards not addressed in the AP Capstone Course and Exam Description (CED). Various in-class assessments (non-AP assessment) will provide students with varied opportunities (written and verbal) to practice, improve, and display the core academic skills that are central to the AP Research course. The classroom assessment and its corresponding criteria are intended to help prepare the student for the AP Research assessment tasks, including the Academic Paper and Presentation with Oral Defense. The class awarded mark used by the school will be based on the classroom assignments – including assessment of entries in the student Process and Reflection Portfolio (PREP) – one-on-one interview sessions, contributions to peer-review sessions, and written assignments.

 **AP Equity and Access Policy**

*The College Board strongly encourages educators to make equitable access a guiding principle for their AP programs by giving all willing and academically prepared students the opportunity to participate in AP. We encourage the elimination of barriers that restrict access to AP for students from ethnic, racial, and socioeconomic groups that have been traditionally underserved. Schools should make every effort to ensure their AP classes reflect the diversity of their student population. The College Board also believes that all students should have access to academically challenging course work before they enroll in AP classes, which can prepare them for AP success. It is only through a commitment to equitable preparation and access that true equity and excellence can be achieved.*

To help ensure Equity and Access are achieved, AP Capstone students are required to meet minimum academic standards, but all exam fees will be covered by the school and AP Capstone students will have full use of –onsite- computers and Internet access, as well as the support of our library system through which to access on-line databases of a wide range of peer-reviewed journals.

 **Course Textbooks and Resources:**

Introducing Research Methodology – Uwe Flick

MLA Handbook for Writers of Research Papers (7th ed.)

Practical Research – Planning and Design; Paul D. Leedy and Jeanne Ellis Ormrod

Publication Manual of the American Psychological Association (6th ed.)

Research Matters – A Guide to Writing Research – Rebecca Moore Howard and Amy Rupiper Taggart

Research Methods – Design and Analysis – Twelfth Edition; Larry B. Christensen, R. Burke Johnson and Lisa A. Turner

The Bedford Researcher (4th ed.) – M. Palmquist

The Craft of Research – Third Edition; Wayne C. Booth, Greegory G. Colomb and Joseph M. Williams

 **Overview of Reasoning Processes:** (adapted from p.7, Course and Exam Description)

The AP Capstone program allows students to develop and practice reasoning processes that help them make intentional, strategic decisions. These reasoning processes are embedded within the following learning objectives:

* Situating – being aware of the context of one’s own as well as others’ perspectives, realizing that individual bias can lead to assumptions
* Choosing – making intentional and purposeful choices, realizing that choices have both intended and unintended consequences
* Defending – being able to explain and justify personal choices, logic, line of reasoning, and conclusion
* Connecting – seeing similarities within and across disciplines, concepts, and cultures that may at first seem disparate

**General Timeline:**

June (end of AP Seminar Course) – AP Seminar students are introduced to an overview of the AP Research course and asked to collect ideas over the summer to identify topics of interest.

September – Students create and share their PREP journal with the teacher; discuss course expectations and the Performance Tasks using sample student papers (undergraduate college papers that were not scored based on the AP Research assessment rubric); choose a topic/issue; carry out preliminary research; begin to develop an annotated bibliography; and finalize their research questions and proposals.

September/October – Students present a preliminary inquiry proposal via a poster presentation (or a PowerPoint presentation) to their peers for peer review; identify the type of consultant they will need to begin seeking such assistance; finalize and submit their proposals; and reflect on feedback provided.

October/November – Students complete the background component of their inquiry through annotated bibliographies and finalize the choice and design of their inquiry method as well as their research question, with careful consideration of ethical issues that may arise. If necessary, they submit a revised version of their proposal for final approval. *All proposals should be approved by the teacher no later than November 30.*

December/January – Students implement their inquiry plan while engaging in progress and reflection interviews (one-on-ones) with the AP Research Teacher and/or consultant. Summaries of these sessions and ongoing concerns, insights, research commentary and artifacts should be included in the PREP journal throughout this process.

January/February – Students complete drafts of their literature review and methodology portions of their papers. In so doing, students should understand the methods they did not choose (and why) and how they will use their selected methods to support their inquiry. They should also be completing any original work (interviews, surveys, additional projects, products, or performances) required to support their papers. Students will be participating in Elevator Speeches and peer-review sessions to improve their research papers and their presentations along the way.

February/March – Students write, proof, peer-review, and submit their Academic Papers, ensuring all components are present and meet rubric criteria. Students will then use TurnItIn to ensure that they have not misattributed and/or plagiarized any pieces of their work. Additional scholarly work used to support the paper (project, product, or performance) will be turned in as well.

March/April – AP Research Teacher scores papers and students deliver their Presentations and Oral Defenses. The following dates are subject to change:

* Friday, March 11, 2016 – Academic Papers DUE
* March 21-April 15 – Students prepare, practice, and deliver their Oral Presentations and engage in Oral Defense of their work. Viewing of any additional scholarly work must be arranged by the student in consultation with the AP Research Teacher.
* April 15-30: AP Research Teacher finalizes scores and uploads the results to the College Board.

May – AP Research students present their work and discuss the AP Research course with current AP Seminar students; AP Research students being planning other ways in which to prepare their academic work for presentation in other venues (journals, performances, conferences, and Pearland ISD “Showcase”). Students will complete AP Exams in other subject areas to qualify for the AP Capstone Diploma. They will hand-in a final, curated copy of the PREP journal which articulates moments of insight, challenge, and change experienced in the course.

Late May/June – Revise (for different audiences) and submit scholarly work to journals, conferences, or other academic competitions. Exit interviews.

This unit will review skills already gained in AP Seminar while introducing several new core skills that will be used throughout the year. Students will be introduced to the Big Ideas and requirements of the AP Research course by examining various research disciplines through student samples from the National Conferences on Undergraduate Research (NCUR) database. Students will utilize the assessment rubric to identify areas of weaknesses and strengths of each NCUR article. Students will be advised to begin developing a timeline for their inquiry project and will begin creating their PREP document.

**(Weeks 1-3) Unit One: Introduction to the Core Skills of AP Research and Review of AP Seminar Skills carried forward into AP Research**

**Learning Objectives/Essential Knowledge:**

**EK:** 1.1C1; 1.1C2; 1.1C3; 1.1D3; 1.1E1; 1.1E2; 2.1B1; 2.1B2; 2.1C1; 2.1C2; 2.2A2; 2.2B1; 2.2B2; 2.2B3; 2.2B4; 2.2B5; 2.2B6; 4.1B1; 4.1B2; 4.1B3; 4.1B4

**LO:** 1.1C; 1.1D1; 1.1E; 2.1B; 2.1C; 2.2A; 2.2B; 4.1B

**Materials and Tools:**

* QUEST
* Rubrics
* Sample NCUR Student Research Papers – NCURproceedings.org
* PREP Journal
* Annotated Bibliography
* SMARTER Searchers
* PAARC Test
* Graphic Organizers

**Tasks and Assessments:**

* Formative Assessments:
	+ Rubric exploration with sample undergraduate research papers sourced from NCUR
		- Students will compare the Academic Paper rubric with the IWR rubric from Seminar.
		- Students will read several research papers from NCUR to identify research questions, thesis statements, and methods of inquiry.
		- Students will score NCUR papers using the Academic Paper rubric.
	+ RAVEN vs. PAARC Test
		- Students will discuss the differences between RAVEN and PAARC. They will learn how PAARC will build upon RAVEN to better suit the requirements of the AP Research course.
	+ Rubric in your own Words (RYW) Activity
		- Students will rewrite the Academic Paper rubric in their own words and develop a class version of the rubric in order to help their understanding of the course requirements.
	+ SMARTER Searches Activity
		- Students will decide on their initial topic of inquiry and conduct research using SMARTER. This research will be used to help students develop their first draft of their research question.
	+ Writing Problem Statements
		- Students will practice writing problem statements to help them take their topics of inquiry and turn them into rough drafts of research questions.
* Summative Assessments:
	+ PAARC Test
		- Students will PAARC test five resources regarding their initial topic of inquiry.
	+ Problem Statement Draft
		- Students will create a problem statement over their initial topic of inquiry.
	+ PREP entries
		- Academic Paper rubric rewrite
		- 5 PAARC test entries
		- Short journal entry regarding their initial topic of inquiry, why they are choosing this topic, and possible ways they could research this topic. By the end of this unit, students should update and add to this journal entry several times.
		- Problem Statement draft
	+ Scholarly Writing analysis assignment
		- Students will grade NCUR papers using the Academic Paper rubric.
		- Students will also identify the perspectives mentioned in the paper and/or possible perspective the paper did not cover. Students will evaluate these perspectives based on who the stakeholders are and the issue at hand.

**Sources:**

* “Gender and BAC: A Predictor of Risky Behavior Among College Students?” – Madeline McDonough, Miami University, Oxford Ohio (from NCUR)

**(Weeks 4-8) Unit Two: Choosing your Topic, Question and Methods**

This unit will look at various ways of knowing to help choose, focus, and align a research topic, question, and methods of selecting for and collecting data for analysis.

**Learning Objectives/Essential Knowledge:**

**EK:** 1.1E1; 1.1E2; 1.2A1; 1.2A2; 1.2A3; 1.3A1; 1.3A2; 1.3A3; 2.1B1; 2.1B2; 4.1B1; 4.1B2; 4.1B2; 4.1B3; 4.1B4; 4.3A1; 4.3A2; 4.3A3; 4.3A4; 4.3A5; 5.1E2; 5.1F1; 5.1F2; 5.3A2; 5.3A3; 5.4A1; 5.4B1; 5.4B2

**LO:** 1.1E; 1.2A; 1.3A; 1.3B; 2.1B; 4.1B; 4.3A; 5.1E; 5.1F; 5.3A; 5.4A; 5.4B

**Materials and Tools:**

* “Source Mining”
* Elevator Speech
* Annotated Bibliography
* PREP Journal and Commentary
* Style Guides for major styles (MLA, APA, Chicago, etc.)
* PowerPoint one-slide/poster Presentation

**Tasks and Assessment:**

* Formative Assessments:
	+ Refresh library/research skills and tools
	+ Annotated Bibliography
		- Students will use the sources they found in Unit 1 to construct an annotated bibliography.
		- Students will take notes over the necessary components students will need in their annotated bibliography.
		- Students will compare those requirements to the Academic Paper rubric so they can connect how their annotated bibliography will eventually turn into their literature review.
	+ Research Question Refresher Notes
		- Students will go over the components of a good research question focusing on scope, feasibility, and value.
	+ Research Question Drafts
		- Students will take their problem statements from Unit 1 to develop a draft of their research question.
		- Students will share their research questions with their classmates and evaluate each other’s work based on requirements from notes.
	+ Color Wheel Activity
		- Students will complete the color wheel activity to learn what the goals of research, knowledge gained, forms, and citation styles are for different academic disciplines.
	+ Introduction to Peer Review Activity
		- Students will list in small groups what they expect to gain from peer review activities and what a peer review should not be.
		- Students will complete a structured peer review of a partner’s annotated bibliography.
	+ Qualitative vs. Quantitative Activity
		- Students will be introduced to the different types of research methods and identify those methods within several papers from NCUR.
			* “Aligning Methods” Chart – AP Research Training Activity
			* Students will use the chart to assess the NCUR papers.
		- Students will discuss what research method matches best with different academic disciplines using the color wheel activity.
		- Students will brainstorm possible methods of research they could use with their topic/research question.
* Summative Assessments:
	+ Annotated Bibliography entries using proper citation style
		- Students will complete an annotated bibliography in the correct style for their discipline. This will be used to help track their research before writing their Academic Paper.
	+ Elevator speech/poster “slide” presentation
		- Students will take their problem statements and research questions to create a poster presentation. Students will then present their posters by giving short speeches on their topic.
	+ Peer-Review Activity
		- Students will peer-review their annotated bibliographies as well as poster presentations and elevator speeches.
	+ PREP Entries
		- Annotated bibliographies
		- Research question drafts
		- Journal entries over their method of inquiry and initial ideas for conducting research
		- Peer review entries
		- Poster presentation slides – Power Point slides

**Sources:**

* Style Guides
	+ APA Style – <http://www.apastyle.org>
	+ Chicago Style – <http://www.chicagomanualofstyle.org/home.html>
	+ CSE Style – <http://www.scientificstyleandformat.org/Home.html>
	+ Turabian Style – <http://www.press.uchicago.edu/books/turabian/turabian_citationguide.html>
* Color Wheel Activity developed by V. Boix Mansilla, Interdisciplinary and Global Studies Project, Harvard Project Zero
* Documentation Styles (2015)
	+ Columbia College <http://columbiasc.edu/wid/documentation-styles>
* Palmquist, M. (2012). *The Bedford Researcher* (4th ed.). Boston: Bedford/St. Martin’s.
* Developing Research Questions PowerPoint presentation from AP Research Teacher Community

**(Weeks 9-13) Unit Three: Finalize Research Proposal and Plan; Plagiarism**

This unit will assist students in their planning and completion of a formal research proposal and plan to be completed, revised via peer-review and individual meetings with the teacher, and submitted by the November 30 deadline. In class, we will be discussing plagiarism in this unit to ensure that students are planning and collecting initial information with full-credit given to the authors of the sources they plan to use.

**Learning Objectives/Essential Knowledge:**

**EK:** 1.1C2; 1.1E2; 1.4B1; 1.4B2; 1.4B3; 1.4B4; 1.4B5; 1.4B6; 1.4B7; 1.4B8; 1.4B9; 1.4D1; 1.4D3; 5.4A1; 5.4B1; 5.4B2

**LO:** 1.1C; 1.1E; 1.4B; 1.4D; 5.4A; 5.4B

**Materials and Tools:**

* AP Capstone Plagiarism Policy
* Indiana University Plagiarism Certificate
* Citation examples/scenarios
* Inquiry Proposal Form and Exemplars
* PREP Journals and Commentary

 **Tasks and Assessment:**

* Formative Assessments:
	+ Multiple Perspectives Activity
		- Students will brainstorm multiple perspectives on their research question.
		- Students will then use the research they have collected to formulate their own perspective of their research question. Their goal is to add to the conversation relating to their topic.
	+ Peer-Review of Inquiry Proposal
		- Students will create a first draft of their inquiry proposals.
		- Students will trade and peer-review their inquiry proposals multiple times to edit their drafts.
		- Students will adjust their inquiry proposals based on peer-reviews.
	+ One-on-One interviews with students
		- Teachers will sit down with students to discuss their progress and their inquiry proposals.
* Summative Assessments:
	+ Plagiarism Certification
		- Students will complete an online plagiarism prevention course through Indiana University and print the certificate of completion.
	+ Inquiry Proposal Form – Submission by Nov. 30
		- Students will submit drafts of the inquiry proposal form to their teacher for review. Students will make any necessary edits
		- Students will submit their final drafts before November 30.
	+ PREP Entries
		- Peer Reviews
		- Plagiarism Certificates
		- Inquiry Proposal Forms
		- Journal Entries: Students will add in weekly progress entries to their PREP journal.

**(Weeks 14-16) Unit Four: Methods and Mentor Interaction**

This unit will focus on students developing their methods in consultation with the AP Research teacher and consultant to ensure alignment between question type and collection method(s). We will also revisit ethics requirements of selected methods to ensure that proper guidelines are followed in all cases.

**Learning Objectives/Essential Knowledge:**

**EK:** 1.1D1; 4B1; 1.4B2; 1.4B3; 1.4B4; 1.4B5; 1.4B6; 1.4B7; 1.4B8; 1.4B9; 1.4B10; 1.4C1; 1.4C2; 1.4C3; 1.4D1; 1d; 1.4.4D2; 1.4D3

**LO:** 1.1D; 1.4B; 1.4C; 1.4D; 4.1B

**Materials and Tools:**

* Ethics Guidelines Presentation – AP Research Teacher Community
* PREP Journal Entries and Commentary

**Tasks and Assessments:**

* Formative Assessments:
	+ If necessary, Mentor Contract completion
	+ Peer-Review
		- As students develop their specific method of inquiry and research study, they will complete peer-review activities to assess whether or not their chosen style and method match their academic discipline.
	+ One-on-One Interviews
		- Progress interviews between teacher and students
* Summative Assessments:
	+ Justification for selected inquiry method
		- Students will complete write an in-depth explanation of what their inquiry method is as well as why/how they chose this method.
	+ PREP Entries
		- Mentor contracts
		- Mentor communications
		- Peer-review forms
		- Inquiry method writing assignment
		- Journal entries

**Sources:**

* Course and classroom text books

**(Weeks 17-20) Unit Five: Complete Literature Review and Conduct Research**

This unit will continue focusing on alignment of method with the literature currently available on the topic and see the students forming complete drafts of their literature review component of their final papers. Revisions may be necessary throughout as new sources provide new insights, but at some point the students will need to know when they have collected enough data and are ready to focus on collecting data that addresses identified gaps on the literature review.

**Learning Objectives/Essential Knowledge:**

**EK:** 1.4D1; 1.4D2; 1.4D3; 2.1B1; 2.1B2; 2.1C1; 2.1C2; 2.2A1; 2.2A2; 2.2A3; 2.2B1; 2.2B2; 2.2B3; 2.2B4; 2.2B5; 2.2B6; 2.2C2; 2.2C3; 2.2D1; 3.1A1; 3.1A2; 3.1A3; 3.2A1; 3.2A2; 4.4A1; 4.5A1

**LO:** 1.4D; 2.1B; 2.1C; 2.2A; 2.2B; 2,2C; 2.2D; 3.1A; 3.2A; 4.4A; 4.5A

**Materials and Tools:**

* Literature Review exemplars
* Students’ Alignment Work
* “They Say, I Say” template – AP Research Training Activity
* “Constructing Meaning” template – AP Research Training Activity

**Tasks and Assessments:**

* Formative Assessments:
	+ PREP Journal entries
		- Weekly progress entries to discuss their revision/additions, changes in thought-processes, and any other issues that may arise.
	+ Peer-Review of Literature Review
		- Students will use their annotated bibliographies (which they should be adding to, amending, and updating throughout weeks 4 – 20) to construct the literate review portion of their academic paper.
	+ One-on-one teacher interviews
* Summative Assessments:
	+ Complete draft form of the literature review submitted
		- Students will submit their drafts to Turn It In.
		- Students will also submit their drafts to at least two classmates for peer-review. Peer reviews will be based off the Academic Paper scoring rubric.
	+ PREP Entries
		- Journal entries
			* Should include reflection on the significance or contribution of their work to the larger context (big picture). This will reflect on how their literature review connects to their research.
		- Peer-review forms
		- Literature review draft

**Sources:**

* Classroom texts and books
* Graff, G., & Berkenstein, C. (2007). They say, I say: The moves that matter in academic writing. New York: W.W. Nortan and Company.

**(Weeks 21-25) Unit Six: Complete Research and Conduct Peer-Review**

This unit will focus on students independently completing their own research and conducting in both formal and informal peer-review opportunities to revise their writing and ensure communication is clear and consistent. Students will also begin planning their oral presentations as they develop conclusions from their inquiries.

**Learning Objectives/Essential Knowledge (All of the previous and the following):**

**EK:** 2.3A2; 2.3B1; 4.1A1; 4.1A2; 4.1A3; 4.1A4; 4.1A5; 4.1A6; 4.1A7; 4.1A8; 4.1A9; 4.1A10; 4.1A11; 4.1A12; 4.2A1; 4.2A2; 4.2A3; 4.2B1; 5.1A1; 5.1A2; 5.1B1; 5.1B2; 5.1B3; 5.1B4; 5.1C1; 5.1C2; 5.1C3; 5.1D1; 5.1D2; 5.1E1; 5.1E2; 5.1E3; 5.1F1; 5.1F2

**LO:** 1.4C; 2.3A; 2.3B; 4.1A; 4.2A; 4.2B; 5.1A; 5.1B; 5.1C; 5.1D; 5.1E; 5.1F

**Materials and Tools:**

* PREP Journal Entries and Commentary
* Graphic organizers
* One-on-one Interviews
* Presentation Tips
* Oral Defense Questions

 **Tasks and Assessments:**

* Formative Assessments:
	+ Weekly Peer-Review
		- Students will conduct weekly peer-reviews using the Academic Paper rubric to make necessary editions to their paper.
	+ Weekly One-on-One teacher interviews
	+ Peer-Review with Rubrics
* Summative Assessments:
	+ Peer-Review Assessments (assessing the reviewer)
		- Students will use a peer-review guide and the Academic Paper rubric to complete this.
	+ PREP Entries
		- Weekly journal entries
		- Peer-review forms
		- Self-grade and peer-graded rubrics

**Sources:**

* <http://www.lifehack.org/articles/communication/6-secrets-of-bad-presentations-and-how-to-avoid-them>
* <http://techspeaking.denison.edu/Technically_Speaking/Delivery>
* [www.gvsu.edu/ours/oral-presentation-tips-30.htm](http://www.gvsu.edu/ours/oral-presentation-tips-30.htm)

 **Timeline and Overview:**

**(Weeks 26-28) AP Research Course Assessment**

(Learning Objectives and Essential Knowledge carried over from previous Unit.)

1. **Academic Paper (AP)**
	1. **Weight:** 75% of the AP Research Score
	2. **Recommended Completion Date:** mid-March
	3. **The paper includes the following:**
		1. Introduction (Including the Literature Review)
		2. Method, Process or Approach
		3. Results, Product or Findings
		4. Discussion, Analysis, and/or Evaluation
		5. Conclusion and Future Directions
		6. Bibliography
	4. **Task Overview:** Students design, plan, and implement a year-long, in-depth study or investigation in an area of personal interest through a chosen or designed inquiry method and develop a well-reasoned argument based on the evidence collected in an academic paper of 4,000-5,000 words. Throughout the inquiry process, students communicate regularly with their teacher and, when appropriate, consult with an internal or external expert (their consultant).
2. **Presentation and Oral Defense (POD):**
	1. **Weight:** 25% of the AP Research Score
	2. **Recommended Completion Date:** Early April
	3. **The POD includes the following:** Individual Multimedia Presentation; and Oral Defense.
	4. **Task Overview:** As a culmination of their research, students deliver (using appropriate media) a 15-20 minute presentation about their research design, approach, and findings to a panel of three evaluators. Students whose academic paper is accompanied by an additional piece of scholarly work (e.g., performance, exhibit, product, etc.) must arrange for the teacher and panelists to view this work prior to the presentation and oral defense. After the presentation, each student defends his or her argument/aesthetic rationale or design choices, inquiry process, use of evidence or discipline-specific information, analysis, evaluation, and conclusions through oral responses to three or four questions posed by the oral defense panel. Three of these questions must be chosen from the oral defense question list, which is provided to students in advance (but the specific questions will NOT be shared with the students in advance).

**(Week 29-End of Year) Beyond AP Research**

Students will be preparing for and writing AP exams during this period, but after completing their exams, the remainder of the year will focus on how to use the academic work done in this course in other contexts. This includes applying the intellectual skills gained, but also allows students to modify their own work for presentation in other venues, i.e. the Pearland ISD AP Capstone – Research Showcase.

**Learning Objectives/Essential Knowledge (All of the previous skills, with particular focus on):**

**EK:** 5.3A1; 5.3A2; 5.3A3; 5.3A4; 5.3C1; 5.3C2

**LO:** 5.3A; 5.3C

**Materials and Tools:**

* Practice Presentations

**Sources:**

* Survey for Research Students