

PLANNED INSTRUCTION

A PLANNED COURSE FOR:

AP Research

Curriculum writing committee:
Jessica Hubal

Grade Level: 12th Grade

Date of Board Approval: _____

AP Research Course Weighting

Major Assessments (PREP Checks/WIP Presentations & Paper/Performance Assessments)	65%
Minor Assignments (Skills Applications) (Research Activities/Schedule Checks)	35%
Total	100%

Curriculum Map

1. Marking Period One – Overview with time range in days:

UNIT ONE: An Introduction to Academic Writing and Advanced Placement Research

- Day 1 – 3: Introduce AP Research Course Goals, Task Descriptions and Process Reflection Portfolio (PREP).
- Day 4 - 5: Review ethical research practices (Academic Honesty, Plagiarism, IRBs and Turnitin).
- Day 6 - 7: Identify a topic of interest and an area of inquiry using summer work.
- Day 8 – 25: Conduct preliminary research. Develop research question and select appropriate methods for the inquiry process. Begin developing an annotated bibliography.

UNIT TWO: From Topic to Proposal - An Integrated Plan

- Day 26 – 35: Present preliminary inquiry proposal for peer review. Find and secure expert advisor.
- Day 36 - 45: Finalize and submit Inquiry Proposal Form (and IRB form if applicable).

2. Marking Period Two – Overview with time range in days:

UNIT TWO: From Topic to Proposal - An Integrated Plan

- Day 1 – 5: Reflect on feedback and complete background component of inquiry through annotated bibliographies.
- Day 6 – 10: Finalize the choice and design of the inquiry method, as well as the research question.
- Day 11 – 15: Submit a revised version of proposal (if necessary) and give formal poster presentation and elevator speech.

UNIT THREE: Implementing the Inquiry Plan – Methods, Mentors, and the Literature Review

- Day 16 – 30: Implement the inquiry plan through continued research, data collection, etc. (experiments, surveys, products, and interviews). Write a literature review.

UNIT FOUR: Preparing the Academic Paper – Drafting Components, Presentation Preparation, and Utilizing Peer Reviews

- Day 31 – 45: Continue researching. Begin draft of academic paper, focusing first on revised literature review and methodology sections of the paper.

3. Marking Period Three – Overview with time range in days:

UNIT FOUR: Preparing the Academic Paper – Drafting Components, Presentation Preparation, and Utilizing Peer Reviews

- Day 1 – 25: Complete any additional experiments, surveys, products, and interviews used for support of research focus.

UNIT FIVE: Wrapping Up the Deliverables – Academic Paper, Presentation, and Oral Defense

- Day 25 – 40: Complete full rough draft of academic paper.
- Day 40 – 45: Submit academic papers to the College Board Digital Portfolio for teacher assessment.

4. Marking Period Four – Overview with time range in days:

UNIT FIVE: Wrapping Up the Deliverables – Academic Paper, Presentation, and Oral Defense

- Day 1 – 20: Prepare, practice and deliver presentation with oral defense. Submit presentation with oral defense to the College Board Digital Portfolio for teacher assessment.

UNIT SIX: Moving Beyond the Advanced Placement Research Course

- Day 20 – 30: Deliver final, curated copy of the PREP which articulates moments of insight, challenge, and change experienced in the course as well as implications for further research or study; complete additional Advanced Placement exams to qualify for the AP Capstone Diploma.
- Day 30 – 40: Update and practice presentation to present at AP Research Presentation Dinner (Note: Parents, expert advisers, administrators, school board members and teachers are invited).
- Day 40 – 45: Present work and discuss the AP Research course with current AP Seminar students.



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Curricular Requirements

- CR1a Students develop and apply discrete skills identified in the learning objectives within the Big Idea 1: Question and Explore.
- See pages 5, 6, 10
- CR1b Students develop and apply discrete skills identified in the learning objectives within the Big Idea 2: Understand and Analyze.
- See pages 6, 10
- CR1c Students develop and apply discrete skills identified in the learning objectives within the Big Idea 3: Evaluate Multiple Perspectives.
- See page 10
- CR1d Students develop and apply discrete skills identified in the learning objectives within the Big Idea 4: Synthesize Ideas.
- See pages 7, 10
- CR1e Students develop and apply collaboration skills identified in the learning objectives within the Big Idea 5: Team, Transform, and Transmit.
- See pages 7, 8, 9, 11
- CR1f Students develop and apply reflection skills identified in the learning objectives within the Big Idea 5: Team, Transform, and Transmit.
- See page 9
- CR1g Students develop and apply written and oral communication skills identified in the learning objectives within the Big Idea 5: Team, Transform, and Transmit.
- See pages 7, 11
- CR2a Students develop an understanding of ethical research practices.
- See pages 2, 3, 4, 8
- CR2b Students develop an understanding of the AP Capstone™ Policy on Plagiarism and Falsification or Fabrication of Information.
- See page 4
- CR3 In the classroom and independently (while possibly consulting any expert advisors), students learn and employ research and inquiry methods to develop, manage, and conduct an in-depth investigation of an area of personal interest, culminating in an academic paper of 4,000-5,000 words that includes the following elements:
- Introduction
 - Method, Process, or Approach
 - Results, Product, or Findings
 - Discussion, Analysis, and/or Evaluation
 - Conclusion and Future Directions
 - Bibliography
- See pages 2, 8



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- CR4a Students document their inquiry processes, communicate with their teachers and any expert advisors, and reflect on their thought processes.
- See pages 2, 6, 7
- CR4b Students have regular work-in-progress interviews with their teachers to review their progress and to receive feedback on their scholarly work as evidenced by the PREP.
- See page 7
- CR5 Students develop and deliver a presentation (using an appropriate medium) and an oral defense to a panel on their research processes, method, and findings.
- See page 9



AP Research Syllabus

Content Overview

AP (Advanced Placement) Research allows students to deeply explore an academic topic, problem, or issue of individual interest. Through this exploration, students design, plan, and conduct a year-long research-based investigation to address a research question. In the AP Research course, students further their skills acquired in the AP Seminar course by understanding research methodology; employing ethical research practices; and accessing, analyzing, and synthesizing information as they address a research question. Students explore their skill development, document their processes, and curate the artifacts of the development of their scholarly work in a portfolio. The course culminates in an academic paper of approximately 4000–5000 words (accompanied by a performance or exhibition of product where applicable) and a presentation with an oral defense.

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; “What students will demonstrate...”) of the Enduring Understandings (EU; “What students will remember in the long term...”) within the five big ideas represented by the acronym QUEST introduced in the prerequisite AP Seminar course:

- **Question and Explore:** Read critically; pose questions and identify issues that compel you to want to explore further.
- **Understand and Analyze:** Use specific tools – such as re-reading, questioning in the text, and considering multiple perspectives – to break down an idea or argument into parts that make sense to you.
- **Evaluate Multiple Perspectives:** Identify a variety of perspectives, viewpoints, and/or arguments of an issue and consider any bias to determine the validity of that point of view.
- **Synthesize Ideas:** Create new perspectives after evaluating other varying perspectives and establishing a unique position or claim using a variety of resources designed for a specific audience.
- **Team, Transform, and Transmit:** Communicate the message clearly and effectively so as to transform both participants and audience.

Advanced Placement Performance Task

While the topic of each research study will vary, the course requires students to plan and conduct a study or investigation. The course provides opportunities (activities/assignments) for students to understand principles of discipline-specific research methods (e.g., qualitative, quantitative, mixed) to develop, manage, and conduct an in-depth study or investigation in an area of student’s own interest in order to fill a gap in the current field of knowledge. The final output of these efforts includes:

- **A 4,000 – 5,000 word Academic Paper [75 percent of the grade]** that includes several components as follows:
 - ◇ **Introduction:** This section introduces and contextualizes the research question and initial student assumptions and/or hypotheses. Additionally it reviews the previous work in the field to synthesize information and a range of perspectives related to the research question (e.g., literature review) to allow for the student to identify the gap in the current field of knowledge to be addressed.
 - ◇ **Method, Process, or Approach:** This section explains and provides justification for the chosen method, process, or approach.

- ◇ **Results, Products, or Findings:** This section presents the findings, evidence, results, or product from the student’s work.
- ◇ **Discussion, Analysis, and/or Evaluation:** This section interprets the significance of the findings, results, or product and explores connections to the original research question while discussing the implications and limitations of the research or creative work.
- ◇ **Conclusion and Future Directions:** This section reflects on the process and how this project could impact the field while discussing the possible next steps and/or future directions.
- ◇ **Bibliography:** This section provides a complete list of sources cited and consulted in the appropriate disciplinary style.
- **A 15-20 minute Presentation and Oral Defense [25 percent of the grade]:** This presentation may be accomplished in a variety of formats, so long as it reflects the depth of their research. Prior to this performance, the students whose academic paper was accompanied by an additional piece of scholarly work (e.g., performance, exhibit, etc.) will arrange for the teacher and panelists to view the scholarly work. The defense will include up to four questions from a panel consisting of the AP Research teacher and two additional members (chosen at the AP Research teacher’s discretion).

Inquiry Proposal Form

Prior to engaging in their research, students must submit to the AP Research Teacher an Inquiry Proposal Form that clearly identifies the topic of study, research question, preliminary research, and the relevant 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 (e.g., involvement of human subjects), approval will not be granted until the inquiry proposal has also passed review by an Institutional Review Board (IRB). [CR2a] [CR3]

[CR2a] — Students develop an understanding of ethical research practices.

[CR3] — In the classroom and independently (while possibly consulting any expert advisors), students learn and employ research and inquiry methods to develop, manage, and conduct an in-depth investigation of an area of personal interest, culminating in an academic paper of 4,000-5,000 words that includes the following elements:

- Introduction
- Method, Process, or Approach
- Results, Product, or Findings
- Discussion, Analysis, and/or Evaluation
- Conclusion and Future Directions
- Bibliography

Process and Reflection Portfolio (PREP)

AP Research is not merely about collecting evidence or facts and then piecing them together. Instead, the research process is about true 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 a 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, 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. Specifically to keep track of the inquiry process, students are required to keep a digital Process and Reflection Portfolio (PREP)—a formative assessment tool that will be shared in real time with their AP Research Teacher. [CR4a]

The PREP will allow students to document their experiences in the course and to manage specific checkpoints along the way. In any given week, students should expect to make five or more entries in their PREP to document their engagement with the QUEST ideas, with special attention paid to the following:

- Choice of the research question and interest in the subject matter
- Research process, including resources (documents, people multimedia), analysis of evidence, directions in which the inquiry or project seems to lead, changes to initial assumptions, etc.
- Ways in which students have worked both on their own and as a part of a larger community
- Challenges encountered and solutions attempted

[CR4a] — Students document their inquiry processes, communicate with their teachers and any expert advisors, and reflect on their thought processes.

The final version of the PREP will be due the Friday following the April 30 grading submission. It will include the following:

- Title page and table of contents
- Copy of the completed and approved Inquiry Proposal Form
- PREP entries made throughout
- Specific pieces of work the student feels best showcases his/her work, including
 - ◊ Annotated bibliography of sources important to the student’s work
 - ◊ Photographs, charts, spreadsheets, and/or links to videos or other relevant visual research/project artifacts
 - ◊ Draft versions of selected portions of the paper
 - ◊ Notes in preparation for the presentation and oral defense
 - ◊ Copy of the academic paper
- Documentation of permission(s) received from primary sources, if required, such as IRB permission [CR2a]
- Documentation or log of the student’s interactions with expert advisor(s) and the role the expert advisor(s) played in the student’s learning and inquiry process (e.g., what areas of expertise did they have, did they give the help the student needed, areas the expert advisor was able to help, etc.)
- Questions asked to and feedback received from peer and adult reviewers both in the initial stages and at key points
- Reflections on whether or not the feedback was accepted or rejected and why
- Attestation signed by the student which states, “*I hereby affirm that the work contained in this Process and Reflection Portfolio is my own and that I have read and understand the AP Capstone Policy on Plagiarism and Falsification or Fabrication of Information.*”

[CR2a] — Students develop an understanding of ethical research practices.

Classroom Rules and Expectations

There is a single rule governing conduct in this class. *Be respectful to your classmates and to your instructor.* A productive and respectful classroom atmosphere is essential for learning. Individual behavior can support or undermine the learning environment for everyone. You are an important part of your class and have a stake in its success. The key to your individual success is developing good work habits and a solid work ethic. If problems emerge like underperformance, excessive absences/tardiness, chronic inattentiveness/sleepiness, or disruptive behavior, I will petition to have you removed from the course.



You can get the most from this course by doing the following:

- Come into class each day with the intent to improve and master the concepts and ideas in this course. That will not happen without your active participation each day.
- Prior to class, think about what your questions are and then ask them. Due to the pace of this course, if you fall behind, you will have a difficult time getting caught up, so you must proactively raise your questions/concerns as they occur.
- Expect that there will be things you do not get immediately—this is an AP course! Its college-level expectations and material are by definition more difficult than that in a regular high school classes. Learn to be persistent in your thinking and problem solving, and you will overcome.
- Do not get in a cycle of falling behind and catching up or wondering what is due next. If you simply do what you are supposed to do, to the best of your ability, your grade and your AP score will take care of itself.
- Even the best students will have a bad day occasionally, but that will average itself out over time. If you come to class unprepared, you are letting yourself and your classmates down, and you are failing yourself. A mark in the grade book just makes that more visible.

AP Capstone Policy on Plagiarism and Falsification or Fabrication of Information

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 course work. 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 Task. In AP Seminar, a team of students that fails to properly acknowledge sources or authors on the Team Multimedia Presentation 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 Task. In AP Seminar, a team of students that incorporates falsified or fabricated information in the Team Multimedia Presentation will receive a group score of 0 for that component of the Team Project and Presentation. **[CR2b]**

AP Capstone students will be held to exceptionally 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. Keep track of all the sources used to ensure you do not misattribute information. As an additional safeguard against plagiarism, Advanced Placement Research work—even the drafts—will be submitted to Turnitin.com. **[CR2a]**

Success in AP Capstone—and in life—is not about reporting information, it is about synthesizing and creating new ideas. Your work in this class is the doorway to that reality.

[CR2b] — Students develop an understanding of the AP Capstone Policy on Plagiarism and Falsification or Fabrication of Information.

[CR2a] — Students develop an understanding of ethical research practices.

Course Textbook, Readings, and Supplementary Materials

- Creswell, J. W., & Creswell, J. D. (2018). *Research design: qualitative, quantitative, and mixed methods approaches*. Fifth edition. Los Angeles: SAGE.
- Salkind, N. J. (2012). *100 questions (and answers) about research methods*. Thousand Oaks, CA: SAGE.
- *AP Research Course and Exam Description*
- Various academic papers (philosophical texts, writing guides, peer-reviewed articles) for specific lessons. Some student research will be directed to/accomplished in EBSCOhost.

Summer Assignment – “Finding Your Motivation and Starting Your Process and Reflection Portfolio (PREP)”

Enduring Understanding 1.1 – Personal interest and intellectual curiosity inspire investigation of topics or issues that may or may not be clearly defined. A well-crafted investigation explores the complexity of an issue or topic. Further inquiry can lead to unexpected conclusions, resolutions, innovations, or solutions.

In order to streamline progress towards your respective academic paper, presentation, and subsequent oral defense, the summer is a great time to begin exploring potential research topics and begin building some baseline knowledge for this course and the required performance tasks. In assessing these topics, the student should be able to answer—in the affirmative—each of the following questions:

- "Will it keep me interested for a long period?"
- "Can I answer it with the time and resources I have?"
- "Is there someone (an expert advisor) who can—and is willing to—supervise me?"
- "Do I have some idea of how to go about answering it?"

With three possible topics chosen, using the background resources provided on the course website, the student will develop—and then electronically submit—three topics of interest for the research project, and generally discuss his/her:

- Initial curiosity that led to this inquiry
- Lenses from AP Seminar that he/she is planning to look into
- Anticipated potential sources of information
- Research question, based upon his/her current understanding of that idea
- Criteria used to develop the question [CR1a]

The summer assignment will represent the student’s first entries into his/her PREP (Process and Reflection Portfolio). The PREP is designed to document the student’s development as he/she investigates his/her research questions, thereby providing evidence he/she has demonstrated a sustained effort during the entire inquiry process. Additionally, the PREP will prove to be a great tool for the student to show academic counselors, college admission officers, scholarship committees, and faculty members as he/she works through the college admission process.

As such, throughout the year, the student will document his/her research, his/her artistic/product progress, communication with his/her teachers and expert advisors, and reflections on his/her thought processes. The student should also examine his/her strengths and weaknesses with regard to implementing their plan and in developing their arguments or aesthetic rationales. From time to time, the instructor will provide the students with

specific topics relevant to that phase of the class. Finally, the feedback students receive from their Harkness-style peer reviews should equally find itself in the PREP. [CR4a]

To help in the process of developing this research question, the student will be given some preliminary materials/readings on building this academic paper and oral presentation.

[CR1a] — Students develop and apply discrete skills identified in the learning objectives within the Big Idea 1: Question and Explore.

[CR4a] — Students document their inquiry processes, communicate with their teachers and any expert advisors, and reflect on their thought processes.

Pacing Guide

UNIT ONE: An Introduction to Academic Writing and Advanced Placement Research

June–August (Summer Work): Develop research ideas and identify three topics of interest; begin cursory exploration of the research process with an introduction to the course.

Formative: Problem Statement and Topic Ideas; start PREP

August–September: Choose a topic/issue; carry out preliminary research; begin developing an annotated bibliography; finalize research questions and proposals.

Summative and Formative Assessments: [CR1a] [CR1b]

- Summative: Annotated Bibliography #1 where students will identify the research question, variables, measurements, and limitations within published quantitative, qualitative, and mixed-methods research studies. Students will differentiate between the purpose and components of quantitative, qualitative, and mixed-methods studies; describe procedures used for analysis in sufficient detail to permit understanding of how the data were analyzed and the processes and assumptions underlying specific techniques; and evaluate the fit between the purpose of the proposal, its research design, and its data collection strategy as it pertains to their inquiry (at least two sources) by August 31.
- Formative: Identify and refine research question prior to September 15.
- Summative: Annotated Bibliography #2 where students will identify the research question, variables, measurements, and limitations within published quantitative, qualitative, and mixed-methods research studies. Students will differentiate between the purpose and components of quantitative, qualitative, and mixed-methods studies; describe procedures used for analysis in sufficient detail to permit understanding of how the data were analyzed and the processes and assumptions underlying specific techniques; and evaluate the fit between the purpose of the proposal, its research design, and its data collection strategy as it pertains to their inquiry (at least four additional sources) by September 15.
- Additional Formative Assessments: Ways of Knowing; Color Wheel of Disciplinary Understanding; Types of Researchers; Transforming a Topic or Issue into a Problem Statement; Transforming Research Article Text into a Problem Statement; Transforming a Topic or Problem Statement Into a Research Question; Putting It All Together; Evaluating and Revising Research Questions; Crafting Annotated Bibliography Entries; SMARTER Searches; Does it Pass the Credibility Test; The Differences and Similarities Among Definitions, Assumptions, and Hypotheses; The Importance of Definition in Research; The Right Way to Cite; and Cohesive, Coherent, Concise.

[CR1a] — Students develop and apply discrete skills identified in the learning objectives within the Big Idea 1: Question and Explore.

[CR1b] — Students develop and apply discrete skills identified in the learning objectives within the Big Idea 2: Understand and Analyze.

UNIT TWO: From Topic to Proposal - An Integrated Plan

October–November: Present preliminary inquiry proposal via a single PowerPoint slide for peer review; identify the type of expert advisor needed and begin seeking assistance; finalize and submit proposals; reflect on feedback provided; complete the background component of inquiry through annotated bibliographies; finalize the choice and design of the inquiry method, as well as the research question; (if necessary) submit a revised version of proposal and give formal poster presentation and elevator speech.

Summative and Formative Assessments:

- Formative: Draft of inquiry proposal by October 12
- Summative: Formal poster presentation and elevator speech (#2) starting October 26 [CR1d] [CR1g]
- Formative: Peer review of poster proposal with discussion starting October 26 [CR1e]
- Summative: Final version of inquiry proposal by November 30
- Formative: PREP Monday check-ins [CR4b]
- Additional Formative Assessments: Hopping on Board; From Passenger to Participant; Taking the Helm from Participant to Captain; Common Knowledge, Copyright, and Plagiarism; Approach, Design, and Method in Inquiry; Choose a Method; Check Your Alignment; Healthy Halos Experiment; Evaluating and Revising Surveys; Qualitative Research Techniques; Implementing a Mixed Method; Articulating Rationale for Method Choices; Checking for Ethical and Safe Research Practices; Introducing the Proposal Form; Bridging AP Seminar to AP Research and Beyond; Preparing to Cross the Bridge from AP Seminar to AP Research; The Top 10 Peer-Review Personalities; We’re All in This Together; What Makes a Good Presentation?; The Best and Worst Presentations; and review Leedy Chapters 4-5.

[CR1d] — Students develop and apply discrete skills identified in the learning objectives within the Big Idea 4: Synthesize Ideas.

[CR1g] — Students develop and apply written and oral communication skills identified in the learning objectives within the Big Idea 5: Team, Transform, and Transmit.

[CR1e] — Students develop and apply collaboration skills identified in the learning objectives within the Big Idea 5: Team, Transform, and Transmit.

[CR4b] — Students have regular work-in-progress interviews with their teachers to review their progress and to receive feedback on their scholarly work as evidenced by the PREP.

UNIT THREE: Implementing the Inquiry Plan – Methods, Mentors, and the Literature Review

November–December: Implement the inquiry plan while engaging in PREP conversations with the AP Research Teacher and/or expert advisor (summaries of conversations, ongoing concerns, insights, research commentary and artifacts should be included in the PREP); complete draft of literature review; identify and implement discipline-specific documentation style that matches the planned inquiry. [CR1e]

[CR1e] — Students develop and apply collaboration skills identified in the learning objectives within the Big Idea 5: Team, Transform, and Transmit.

Summative and Formative Assessments:

- Formative: PREP Monday check-ins [CR4a]
- Summative: Literature review draft by December 18 [CR1d]

[CR4a] — Students document their inquiry processes, communicate with their teachers and any expert advisors, and reflect on their thought processes.

[CR1d] — Students develop and apply discrete skills identified in the learning objectives within the Big Idea 4: Synthesize Ideas.

UNIT FOUR: Preparing the Academic Paper – Drafting Components, Presentation Preparation, and Utilizing Peer Reviews

January–February: Complete drafts of the methods (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); complete any original work (interviews, surveys, additional products, products, or performances) required to support the paper; complete remaining portions of their paper with peer review; present poster to justify their choices and to stimulate additional discussion about their topics and about AP Capstone; engage in peer reviews of student work. [CR3]

[CR3] — In the classroom and independently (while possibly consulting any expert advisors), students learn and employ research and inquiry methods to develop, manage, and conduct an in-depth investigation of an area of personal interest, culminating in an academic paper of 4,000-5,000 words that includes the following elements:

- Introduction
- Method, Process, or Approach
- Results, Product, or Findings
- Discussion, Analysis, and/or Evaluation
- Conclusion and Future Directions
- Bibliography

Summative and Formative Assessments:

- Formative: Peer review of literature reviews discussion (using rubric) starting January 5 [CR1e]
- Summative: Methods drafts by January 13
- Formative: Peer review of methods Harkness discussion (using rubric) starting January 14 [CR1e]
- Summative: Results, products, or findings draft by January 22
- Formative: Peer review of results, products, or findings draft Harkness discussion (using rubric) starting January 26 [CR1e]
- Summative: Analysis and/or evaluations draft by February 3
- Formative: Peer review of analysis and/or evaluations draft starting February 4 [CR1e]
- Summative: Conclusions and future directions draft by February 12
- Formative: Peer review of conclusions and future directions draft starting February 16 [CR1e]
- Summative: Bibliography draft by February 24
- Formative: Peer review of bibliography draft Harkness discussion starting February 25 [CR1e]

[CR1e] — Students develop and apply collaboration skills identified in the learning objectives within the Big Idea 5: Team, Transform, and Transmit.

UNIT FIVE: Wrapping Up the Deliverables – Academic Paper, Presentation, and Oral Defense

March: Write, proof, peer review, and submit academic papers ensuring all components are present and meet rubric criteria; utilize TurnItIn.com to ensure against misattribution and/or plagiarized work; submit additional scholarly work used to support the paper (e.g., project, product, or performance). [CR2a]

[CR2a] — Students develop an understanding of ethical research practices.

Summative and Formative Assessments:

- Summative: Academic paper draft due by March 4
- Formative: Peer review of academic paper draft Harkness discussion starting March 7 [CR1e]
- Final Summative: Final academic paper due by March 28

[CR1e] — Students develop and apply collaboration skills identified in the learning objectives within the Big Idea 5: Team, Transform, and Transmit.

April: Presentations and oral defense peer review and delivery. **The AP Research teacher finalizes scores and uploads the results to the College Board prior to April 30.**

Summative and Formative Assessments: [CR5]

- Summative: Oral defense questions due by April 1
- Formative: Videotaped presentation peer review Harkness discussion starting April 12 [CR1e]
- Formative: Oral defense practice in groups of four starting April 15
- Final Summative: Oral presentations and defense given on April 21 and 22

[CR5] — Students develop and deliver a presentation (using an appropriate medium) and an oral defense to a panel on their research processes, method, and findings.

[CR1e] — Students develop and apply collaboration skills identified in the learning objectives within the Big Idea 5: Team, Transform, and Transmit.

UNIT SIX: Moving Beyond the Advanced Placement Research Course [CR1f]

May: Deliver final, curated copy of the PREP which articulates moments of insight, challenge, and change experienced in the course as well as implications for further research or study; present their work and discuss the AP Research course with current AP Seminar students; complete additional Advanced Placement exams to qualify for the AP Capstone Diploma.

[CR1f] — Students develop and apply reflection skills identified in the learning objectives within the Big Idea 5: Team, Transform, and Transmit.

Summative and Formative Assessments:

- Summative: PREP due by third week of May
- Summative: AP Research presentations at AP Research Presentation Dinner, as well as presentations to current sophomores/juniors (AP Seminar Class)

Sample Activities Mapped to the Big Ideas

While each of the big ideas in this course are covered in a number of ways in the Pacing Guide above, below is a small subset of activities that are mapped to each.

Question and Explore

- **Color Wheel of Disciplinary Understanding:** Students explore a specific discipline (art, social studies, etc.) and search for “dimensions for understanding,” focusing in on the components of forms, knowledge, methods, and purpose.
- **Types of Researchers:** Students answer survey questions to determine the types of inquiries and methods that best align to who they are and how they process the world around them.

Understand and Analyze

- **Crafting Annotated Bibliographies:** Students are given sample articles from which they create annotated bibliographies and then evaluate the cited sources within each resource as potential future targets for additional research.
- **SMARTER Searches:** Students are introduced to the SMARTER acronym for evaluating sources and then examine five sample annotated bibliography entries to determine where the author went wrong in that process.
- **Does It Pass the PAARC Test?:** Students use the credibility test to evaluate provided sources. [CR1b]

[CR1b] — Students develop and apply discrete skills identified in the learning objectives within the Big Idea 2: Understand and Analyze.

Evaluate Multiple Perspectives

- **Hopping on Board:** Using an excerpt from Graff and Birkenstein’s *They Say, I Say: The Moves that Matter in Academic Writing* (New York: W.W. Norton & Co., 2010), students choose three phrases and discuss how each phrase challenges new researchers and how a literature review can address each of these challenges.
- **From Passenger to Participant:** Students are given a research question and a related article and then use the “They Say/I Say” template to identify and report out on specific elements that address the research question.
- **Taking the Helm from Participant to Captain:** Students are given two articles to read and then use a “Constructing Meaning from Multiple Sources” template to practice evaluating articles and building meaning from each. [CR1c]

[CR1c] — Students develop and apply discrete skills identified in the learning objectives within the Big Idea 3: Evaluate Multiple Perspectives.

Synthesize Ideas

- **The Differences and Similarities Among Definitions, Assumptions, and Hypotheses:** Using a story that appears straightforward at first glance, students are asked to indicate the validity of specific statements. This exercise is designed to help students realize the power of their own definitions and assumptions, which leads into a further analysis of journal articles.
- **Cohesive, Coherent, Concise:** Students are given a research question and an excerpt from a relevant source to provide the opportunity to practice determining the appropriate documentation style as well as creating citations/bibliographic entries.
- **Preparing All Students to Cross the Bridge from AP Seminar to AP Research:** Students explore the differences between the AP Seminar and AP Research course descriptions/rubrics to determine what skills and essential knowledge are needed to “cross the bridge” with specific attention given to the difference between creating new knowledge and reporting existing knowledge. [CR1d]
- **Common Knowledge, Copyright, and Plagiarism:** Students are given a series of scenarios/situations that represent common knowledge, violation of copyright/intellectual property, and/or plagiarism to allow for opportunities to identify specific research ethics problems in context. [CR1a]

[CR1d] — Students develop and apply discrete skills identified in the learning objectives within the Big Idea 4: Synthesize Ideas.

[CR1a] — Students develop and apply discrete skills identified in the learning objectives within the Big Idea 1: Question and Explore.

Team, Transform, and Transmit

- **Call Outs!:** Students examine short academic paper excerpts pertaining to specific learning objectives and then discuss (as a group) the paper’s achievement level and what would improve upon that rating.
- **The Top Ten Peer Review Personalities:** Students view and evaluate specific peer reviewer personality types and then identify peer review best practices using a variety of web resources. **[CR1e]**
- **What Makes a Good Presentation?:** Students review the presentation and oral defense task description/rubric and evaluate video presentations based upon a small subset of that rubric. **[CR1g]**
- **Components of the Paper:** Students review the components of a research essay (introduction/thesis, body, conclusion, bibliography) and make a list of effective qualities for each. **[CR1g]**
- **Structuring the Paper:** Students review some common rhetorical patterns for organizing an essay and parts of an essay (problem-solution, cause-effect, definition, process, description, and so on). **[CR1g]**

[CR1e] — Students develop and apply collaboration skills identified in the learning objectives within the Big Idea 5: Team, Transform, and Transmit.

[CR1g] — Students develop and apply written and oral communication skills identified in the learning objectives within the Big Idea 5: Team, Transform, and Transmit.

Checklist to Complete and Submit:
(Scan and email)

- _____ Copy of the curriculum using the template entitled "Planned Instruction," available on the district website.

- _____ The primary textbook form(s).

- _____ The appropriate payment form, in compliance with the maximum curriculum writing hours noted on the first page of this document.

Each principal and/or department chair has a schedule of First and Second Readers/Reviewers. Each Reader/Reviewer must sign & date below.

First Reader/Reviewer Printed Name _____

First Reader/Reviewer Signature _____ Date _____

Second Reader/Reviewer Printed Name _____

Second Reader/Reviewer Signature _____ Date _____