AP Research Course Syllabus

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**Course Description:**

AP Research is the last of two courses comprising the AP Capstone program. In the first course, AP Seminar, students learned to evaluate multiple sources in order to develop a reasoned argument on significant topics. They situated their perspectives as well as others and recognized how bias leads to assumptions. When identifying and choosing source materials for their group and individual papers, students weighed the important information available from various sources and understand the intended and unintended implications. Students defended and justified their personal choices using logical reasoning that lead to cogent conclusions while making connections within and across disciplines. Students connected themes and ideas among cultures and disciplines that, seemingly, had contrasting ideas. The process of making connections is recursive in nature; thus, students venture through the framework cyclically as they encounter new perspectives in research and information. While students learned various perspectives and arguments and used the source material as evidence in their Seminar course, the AP Research class allows students to become source material for the great conversations that perpetuate in their chosen field of study. During the yearlong Research course, students will apply new skills identified in the QUEST framework, including conducting independent research where they will design, plan, conduct, and evaluate their investigation that addresses their research question. From the start of the course, students will access, analyze, and synthesize information peer reviewed research sources in their discipline. They will study ethics in research and further their skills in ethical research practices. As each discipline has a specialized method for organizing literature reviews, methods, and conclusions and limitations of a study, students will learn the specific style sheet for their discipline in order to produce an academic paper of 4,000 – 5,000 words and submit the paper for assessment in April. Also, in April, students will give an oral defense of their work in a 15-20 minute presentation (which will be recorded and archived). Students will participate in a question-and-answer portion after their presentation comprised of three adults (mentor, instructor, and layperson) who will pose no less than 4 questions to the student regarding his or her academic research.

**Texts and Required Items:**

AP Capstone Research Course and Exam Description (2018). New York: College Board. (link provided)

AP Research Student Workbook (2018). New York: College Board.(link provided)

AP Capstone Digital Portfolio (2018). Instructions given by instructor in September. Use to submit final work in April.

Levitt, S. D., & Dubner, S. J. (2014). *Think like a freak: The authors of Freakonomics offer to retrain your brain*. New York, N.Y.: William Morrow/HarperCollins.

Purdue Online Writing Lab (n.d.). *General Writing FAQs.* Retrieved from <https://owl.purdue.edu/owl/general_writing/general_writing_faqs.html>

**Plagiarism Policy:**

 AP® Research Course and Exam Descriptions: The AP Capstone™ Plagiarism Policy has been clarified and expanded to include language addressing Falsification or Fabrication of Information. From page 26: “Plagiarism is a serious offense that occurs when a person presents another’s ideas or words as his or her own. Plagiarism may be avoided by acknowledging sources thoroughly and accurately.” AP Capstone™ Policy on Plagiarism and Falsification or Fabrication of Information “Students are hereby informed of the consequences of plagiarism (from page 43): 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 clear, 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.” AP Research students are held to the highest standard of academic integrity, honesty, and ethics. All AP Research students will submit work in the Turnitin.com program, which helps guard against plagiarism. Academic honesty is integral to the research process. Always keep in mind that the work researchers do and report to the academic community can affect future studies. Ensure that the sources students choose to include in their research have been evaluated using the RAVEN and PAARC evaluations. Never report falsified information and understand that there are no right or wrong answers in research – it’s all research. Not supporting your hypothesis is, in fact, valuable research.

**Course Framework:**

Big Ideas, Enduring Understandings, Learning Objectives, and Essential Knowledge:

While AP Research is not a specific content course, it requires students to practice competency in core academic skills. Students will gain ESSENTIAL KNOWLEDGE (EK) and hone their skills that are identified in LEARNING OBJECTIVES (LO). The over-arching ENDURING UNDERSTANDINGS (EU) are developed from the five BIG IDEAS known by the acronym QUEST, which is a recursive framework.

Q – Question and Explore (Big Idea 1) Enduring Understandings 1.1, 1.2, 1.3, 1.4

U – Understand and Analyze Arguments (Big Idea 2) Enduring Understandings 2.1, 2. 2, 2.3 P a g e 3

E – Evaluate Multiple Perspectives (Big Idea 3) Enduring Understandings 3.1, 3.2

S – Synthesize Ideas (Big Idea 4) Enduring Understandings 4.1, 4.2, 4.3, 4.4, 4.5

T – Team, Transform, and Transmit (Big Idea 5) Enduring Understandings 5.1, 5.2, 5.3, 5.4 Course Goals and Task Description: AP Research requires students to learn research methodology;

**Course Goals and Task Description:**

AP Research requires students to learn research methodology; employ ethical research practices; and access, analyze, and synthesize information to address a research question. Students will investigate scholarly sources and write a review to be included in the first part of their 5,000-word research project. Next, they will identify a gap in the research in their chosen field and chose an ethical research methodology where they will design, plan, and conduct an in-depth investigation including gaining approval via the school system’s Institutional Review Board (IRB) when necessary. Once the research study has concluded, students will analyze their data, including identifying limitations of their study and directions for future studies on the topic.

Their paper will have the following sections: Introduction (Review of the Literature), Methods, Process, or Approach (and rationale), Results, Products, or Findings Discussion, Analysis, and/or Evaluation Conclusion and Future Directions, and Bibliography.

Throughout the course, students will document and reflect upon their progress by employing a process and reflection portfolio (PREP) journal. In addition, students may contact an expert in their field of study to be their mentor. The student will be responsible for presenting the mentor with a list of duties (teacher/student generated) in addition to inviting their mentor to their oral defense in April. Students will complete the research paper and then deliver an oral defense of their work using appropriate media. Their defense must include justification for their research design, approach, and findings; at the conclusion of their oral defense, students will be asked no less than 4 questions by a 3-person panel comprised of the instructor, their mentor (if available), and one additional academically qualified person of the student’s choosing.

**Course Requirements:**

* 5,000-word research paper with the specific six sections identified above (final submission date is April 30, 2020).
* Oral defense lasting 15-20 minutes and will include a Q&A from three panelists (Present April, 2020).
* Students must record their oral presentation and archive it, providing access to the instructor.
* Process and Reflection Portfolio (PREP) journal, which is regular work-in progress interviews with their teachers to review their progress and to receive feedback on their scholarly work.
* Research Topic Poster Presentation (due November 2019)
* Inquiry Proposal Form (includes topic of study, research question, a preliminary review of sources, methods and IRB form, if applicable) (due December 2020).
* Mentor Agreement, if applicable (due December 2020)
* The cost to submit your AP Research paper and oral presentation to the Digital portfolio is $140 (exam / scoring fee).

**Equity and Access Policy:**

Equitable access is given to each recipient of the AP Research course, computers may be taken home and used for AP Research allowing every student opportunity to work on their own time. Students on free/reduced lunch are eligible for AP exam discounts.

**Resources:**

The College Board grants access to EBSCO and Turnitin.com to students enrolled in AP Research. Additional GOOGLE suggested resources include www.scholar.google.com and https://www.googlesciencefair.com/en/. Students will watch TED talks and read articles from credible and relevant periodicals including but not limited to www.scientificamerican.com, www.nytimes.com, and other sources identified by the instructor.

**Teacher and Mentor’s role:**

Once the instructor has approved the research question, the mentor is in-place, and the student is ready to begin data collection via ethical research method, then the instructor will become hands-off in providing specific project feedback. Students may seek guidance from various sources, but instructor and mentor feedback will be provided in a general manner. The instructor will continue to provide support in teaching whole-class lessons on topics such as APA format, questionnaire methodologies, and data analysis, but no feedback will be provided to students specifically as relating to their topic and research question. Please review mentor guidelines as well, as mentors are also limited in the type of feedback they can give to their mentee.

**AP Examinations:**

 April 26, 2020 Students submit final research paper of 5,000 words (75% of AP score). April, 2020 students give oral defense in front of 3-person panel (25% of AP score). April 30, 2020, final deadline for instructor to upload papers and oral defense for scoring (scores reported in July).

**Process and Reflection Portfolio (PREP) Journal**

Students will 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. The PREP work students will be completing is found in the AP Research Timeline table below.

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. 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. The academic paper, presentation, and oral defense comprises the final assessment. And to keep track of the inquiry process, students are required to keep a digital PREP journal which is a formative assessment tool that will be shared in real time with their AP Research Teacher. 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 entries in their PREP to document

their engagement with the QUEST ideas.

**AP Research Timeline:**

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| --- | --- | --- |
| Week(s) | Topic | Required Reading/Course Activity/Source Material |
| 1-3 | Connecting Seminar to Research; moving the connecting forward | * QUEST framework and discussion of BIG IDEAS, EUs, LOs, and EKs. Research Circle of Truth exercise (pg. 10 of Teacher Workshop Guide) “Ways of Knowing” pages 2-16 in Student Workbook (LO1.1D; EK1.1D3; EK 1.1E1)
* Color Wheel of Disciplinary Understanding (EU5.1, LO5.1A, LO5.1C, EK5.1C1; EU5.3, EK5.3A3) – pages 2-11
* Myers-Briggs Self-Examination (LO 1.1C, EK 1.1C3; EU3.1, LO3.1A, EK3.1A1)
* Sample student papers: low, medium, high (LO2.1B; EK2.1B1, EK2.1B2; LO2.1C; EK2.1C1; EU4.1, LO4.1A, EK4.1A5) – use samples provided by the College Board and also some from NCUR.org (instructor will screen)
* PAARC (aka CRAAP) test vs. RAVEN test handout (LO2.2B, EK2.2B1, EK2.2B2; EK2.2B3))
* PREP journal (overview of the process, answer “2 things I know for sure, where you got these ideas, how you may be wrong, what you need to know, and where to go to get additional information) PREP journal Write a thesis statement summarizing the problem you are interested in solving.
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| 4-9 | Choosing Topic, Question, and Methods | * Looking at the process of retrieving, questions, and using prior knowledge to learn about the topic; look at different studies to test assumptions via TedTalks (http://bit.ly/1MBQ0Vg) (LO1.2A, EK1.2A1, EK1.2A2, EK1.2A3)
* Examine Style Guides for disciplines (MLA, APA, Chicago, AMA) – refer back to Color Wheel activity; students find different examples
* Read pgs. 37 – 40 in Research Student Handbook (LO 1.1C, EK1.3A6) Identifying Good Research Questions (pages 11 - 21 in AP Research Student Workbook) (LO1.1D, EK1.1D1, Ek1.1D2, LO1.1E) Developing Research Question (LO1.1C, EK1.1E2)
* P a g e 6 PREP Journal (Find an interesting article that sparks an idea for your research)
* Transforming Research Article Text into a Problem Statement (pgs. 12-21 in Research Student Workbook) (LO 1.1C, LO 1.1D, LO 1.1E) EK 1.1C2, EK 1.1D2, EK 1.1E1, EK1.1E2)
* Writing an annotation / moving beyond summary and clarify research & method (LO 1.1E, EK1.1E1) (pgs. 22-27 in Research Student Workbook)
* Peer Review CRAAP test (teacher-generated handout and Research Student Manual sheet pg. 29-30) (LO 2.1A, LO2.2A, EK2.2A1; LO3.1A, EK3.1A1, LO3.2A, EK3.2A1; EK1.3B3) Credibility Test (McCarthy piece on vaccinations) pgs. 28 – 31 in Research Student Manual (EK2.2B4, LO3.2A, EK3.2A1, EK3.2A2, EK4.3A4) Ethics in Research: Students view teacher-created PPT on issues in Research Ethics (adapted from Leedy and Ormrod. (2015). Practical Research: Planning and Design. (11th ed.). (102-107). Pearson.)
* Topics of discussion: informed consent (children, teens, adults) and voluntary/informed participation, experimental research, honesty, boundaries of competence, Internal Review Board (IRB) forms, protect from harm, right to privacy Students read articles and/or case studies regarding ethical practices in research: Carey, B. (2011, November 3). “Fraud case seen as red flag for psychology research.” The New York Times. Retrieved from http://www.nytimes.com/2011/11/03/health/research/noted-dutchpsychologist-stapel-accused-of-research-fraud.html. http://www.hsl.virginia.edu/historical/medical\_history/bad\_blood/. Zimbardo, P.G. (1999). Stanford prison experiment: A simulation study of the psychology of imprisonment conducted at Stanford University. Retrieved from http://prisonexp.org/. Objective test over sources; reflective paper on and upload to Digital Portfolio. Socratic Seminar on Ethics in Research (e.g., Is it ethical to allow children to play contact sports such as soccer or football, considering the nature of injuries that can occur?)
 |
| 10 – 14 | Finalize Research Proposal and Plan; mentor; submit IRB forms and await approval | * Plagiarism policy: Is this plagiarism activity` (pgs. 70 – 78 in Research Student Workbook) (LO1.4D, EK1.4D1, EK1.4D2, EK1.4D3; EK4.3A5) Re-writing sample student proposals (pgs. 87 – 89 in Research Student Workbook) (LO2.1A, EK2.1A1, EK2.1B1, LO2.1C, EK2.1C1, EK2.1C2, LO3.1A, EK3.1A3, LO4.1A, EK4.1A2, EK4.1A3, EK4.1A4)
* Familiarizing the IRB form (pgs. 170 – 176 in Research Student Workbook) (LO1.4D, EK1.4D1, EK1.4D2, EK1.4D3)
* Peer-reviewing of student proposals (elevator talk) – Guide for presentation (pgs. 94 – 99 in Research Student Workbook) (LO2.2B, EK2.2B6, LO2.2C, EK2.2C2)
* “There’s No Place Like Home” activity (from pg. 90 of Teacher’s Workshop Handbook and Resource) Focus on SCOPE, SEQUENCE, and FEASIBILITY (LO1.1C, EK1.1C2, EK5.1A1[R])
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| 15 – 16 | Methods and Mentor Interaction | * Aligning question to collection methods (LO4.2A, EK4.2A3, LO4.2B, LO4.2B, EK4.2B1)
* PREP journal: Describe the most unusual idea or method you’ve though of so far or even have read about. Was this idea useful in helping you set up your methods?
* PREP journal after one-on-one interviews: Consider your research question. How might your personal bias impact the research and analysis of your research? How do you intend to address this? Justifying methods activity (EK4.1A11, LO4.2B, EK4.2B1)
* In your PREP journal, write about “Blue Sky”: If you could have access to any evidence or materials imaginable, what would they be and why?
* PREP Journal: Write your methodologies for your research project.
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| 17 – 20 | Complete Literature Review and Conduct Research | * Finalizing Individual Data Collection (EU4.2, LO4.2A, EK4.2A1; EK4.2A2)
* PREP journal: Identify which of your sources or resources was the most influential for you and in what way is this apparent in your research? Explain.
* Writing Lit Review (LO4.1B, EK4.1B1)
* PREP Entries (update the annotated bibliography – shed new light on an issue or discuss how different methods would render different results)
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| 21 – 25 | Complete Research and Conduct Peer-Review | * One-on-One interview with instructor for final discussion of process / project (before final submission – general feedback only)
* Complete a reflection via PREP journal about the data collection process that will result in a 2-minute oral presentation w/ visual on your findings (EK5.3A3, EK5.3A4)
* Peer review Oral Defense run-throughs and complete self-evaluation over the process in PREP journal (EK5.3C2; LO5.4A, Ek5.4A1, LO5.4B, EK5.4B1, EK5.4B2)
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| 29 – 26 | Research Wrap-Up | * PREP Journal: Explain how you have grown as a researcher / writer as a result of this inquiry process AP Instructor finalizes AP & POD scores / uploads results to College Board Peer mentoring with upcoming AP Research students PREP Journal: Reflect and examines your research and identify possible future directions (EK5.3C1).
* Creating a digital portfolio of your work for interviews, scholarships, and college admissions
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