

Dear Researcher,

1 May 2017

We must first and foremost congratulate you on your interest in challenging yourself with the AP Capstone program. The skills that you have and will continue to acquire due to the Capstone program are paramount in your post-high school success. So, to your dedication, we salute you!

Now, down to business. The following summer work has been created after much consideration and discussion with other AP Research colleagues as well as input from this year's AP Research students who all wished they had started the year with this work already completed. I realize this looks like a lot for the summer, but we know that if you frontload before the year starts you will alleviate some stress later when you also have other classes to contend with. I am NOT about busy work, but there are some concepts and items that you need to establish for yourself prior to starting AP Research. One such concept is that this course is more **self-directed** than your other high school classes; this should make you realize then that this course is not about your grade but about learning. Consequently, when we recommend you complete work—instead of require it for a grade—you need to be motivated enough to actually do it because it will help you be successful.

These concepts, and others, should be considered while taking long walks on the beach, while sitting in the back of the car on a road trip, while trying to fall asleep at camp, while playing video games, or whatever summer activity enhances your life. Know that you will be asked to dig deep, so please start now. You are NOT required to have written response to the following questions; however, we recommend you to spend some time thinking about them before you start the actual assignment: What is “research”? Who is the audience for published research articles? Who is the audience for my research project? Why did I choose to take AP Research? How do I think AP Research will be different than AP Seminar? How **intrinsically motivated** am I to be successful in a **self-directed** course?

Our second recommendation for the summer is that you read Part I and II of *The Craft of Research* by Booth, Colomb, and Williams. Simply do a Google search for the title to find a free pdf file for either the 2<sup>nd</sup> or 3<sup>rd</sup> edition. If you prefer reading a hard copy book, see if you can check it out of the library. Reading these 100 pages will give you a considerable advantage when you go to complete the required written assignment. It would be even better to read the whole book.

Here is the URL: <http://course.sdu.edu.cn/G2S/eWebEditor/uploadfile/20140306165625006.pdf>

## Required Summer Research Question Work PART I:

Similar to AP Seminar, the College Board wants you to start your AP Research project with a leading question. The following concepts are things to consider when attempting to build an AP Research leading question. As resources you have been given a separate handout about **research questions** and the list of research questions from this year's research projects. However, it is essential that you realize not all **research questions** are created equal (hint: some of the ones from this year are better than others).

Remember, the **discipline**, specific **topic**, and **research question** you decide to work with must hold your interest for the entire year. Sit and reflect about your true interests for this course prior to settling on a **discipline**, specific **topic**, and **research question**; you must be passionate about your choice. Also, please realize that this is just an initial **research question**; by the time you actually start the **methods-driven** study portion of your project, you may have revised your question numerous times, and no one will be able to proceed past this basic assignment without teacher approval for your **research question**.

The following elements are critical when attempting to build your **research question**. As you proceed it is essential that you consider these four major concepts in connection to your research project: **focus**, **scope**, **value**, and **feasibility**. Use the table below as a guide to help you develop a solid initial **research question**. You are not required to have written answers for the reflection questions, but it is highly recommended that you be able to articulate an answer for each one. If you cannot, perhaps there is a problem with your chosen **topic** and **research question**.

By the end of the process for PART I you should be ready to start putting your ideas down in black and white. Create a document that includes the following information:

Your name  
Date  
AP Research Summer Assignment

**PART I**  
Your Discipline  
Your Specific Topic  
Your Research Question

Example

Jane Doe  
14 August 2017  
AP Research Summer Assignment

**PART I**  
Discipline: Psychology  
Specific Topic: Social Stigma for Mental Disabilities  
[Type in the research question you developed]

Concept	Description	Reflection Questions
<p style="text-align: center;"><b>Focus</b></p> <hr/> <p style="text-align: center;"><b>Research Discipline &amp; Topic</b></p>	<p><i>Discipline:</i> Lens or section of focus</p> <ul style="list-style-type: none"> <li>• Art</li> <li>• History</li> <li>• Humanities</li> <li>• Hard Sciences</li> <li>• Social Sciences</li> <li>• Mathematics</li> </ul> <p><i>Topic:</i> Specific interest within a <b>discipline</b> that creates the basics of your <b>research question</b></p>	<ol style="list-style-type: none"> <li>1. What <b>discipline</b> would you enjoy working in during your research?</li> <li>2. What specific topic are you interested in examining?</li> <li>3. Why are you interested in this particular <b>topic</b>?</li> <li>4. What can you add to the <b>body of knowledge</b> that already exist on the <b>topic</b>?</li> </ol>
<p style="text-align: center;"><b>Scope:</b></p> <hr/> <p style="text-align: center;"><b>Depth &amp; Size of Your Research Project</b></p>	<p><i>Depth:</i> The level of detail</p> <p><i>Breadth:</i> The number of topics discussed (i.e., all people, teenagers, infants, etc.)</p> <p><i>Context:</i> The specific setting of your research (i.e., a lab, a classroom, a sound booth, etc.)</p> <p><i>Variables:</i> The items/people/situations/issues/concepts being studied and/or manipulated (i.e., blood pressure &amp; music selection; IQ, personality type, &amp; instructional method)</p>	<ol style="list-style-type: none"> <li>1. What specific things will you study? People? Animals? Concepts? Theories?</li> <li>2. How can you limit the <b>scope</b> of your <b>research question</b> to make your project more <b>feasible</b>?</li> <li>3. How and/or where will you work with these variables?</li> </ol>
<p style="text-align: center;"><b>Value:</b></p> <hr/> <p style="text-align: center;"><b>Contribution to the Body of Knowledge</b></p>	<p>The value or significance of your research is determined by how your contribution enhances what is already known about the <b>topic</b>. You are required to fill a <b>gap</b> in the <b>body of knowledge (BoK)</b> by either adding to the current conversation of the <b>discipline</b> or using multiple <b>discipline</b> conversations to create a new understanding. You are not merely compiling or rehashing information; you are bringing something new to the table.</p>	<ol style="list-style-type: none"> <li>1. How will your research change the way we currently see the <b>topic</b>? How will it fill a <b>gap</b>?</li> <li>2. What can you add to the <b>body of knowledge</b> that already exists on the topic?</li> <li>3. How will your research benefit society or your <b>discipline</b>?</li> <li>4. Will you create a new piece of art, music, dance, or theatre as part of your project?</li> <li>5. Will you design and create a new device or product as part of your project?</li> </ol>
<p style="text-align: center;"><b>Feasibility:</b></p> <hr/> <p style="text-align: center;"><b>Possibility of Research</b></p>	<p><i>Time, money, and resources</i> will play a major role in determining your ability to complete your research project. This may include a research lab, special software, access to secondary data, art supplies, special equipment, etc.</p> <p>You will be required to design a <b>research method</b> to answer your question. Once you have developed a <b>research methods</b>, you will actually only have about 2 to 3 months to complete the <b>methods-driven</b> research study portion of your research project.</p> <p>The time leading up to it will be filled with learning the basics of scholarly research, conducting a <b>review of the literature</b> to become an expert on your topic, and designing your <b>research methods</b> (i.e., quantitative vs. qualitative, mixed methods, correlational, action research, phenomenological, experimental, etc.).</p>	<ol style="list-style-type: none"> <li>1. What <b>method</b> will you need to use to answer your research question? How will you generate new data with your <b>method</b>? How will you analyze that data?</li> <li>2. What will you need, physically and/or monetarily, to complete your research project?</li> <li>3. How long will the <b>methods-driven</b> research study portion of your research project take?</li> <li>4. Do you have access to the things you need for your research? (Refer back to scope as you address this.)</li> <li>5. Who can help you with your research? Who might be potential <b>expert advisers</b>?</li> </ol>

## Required Summer Research Question Work PART II:

After you have completed the initial reflection and thinking required in PART I and created the brief written portion for PART I, you are ready to complete the written work for PART II on the same document.

Explain the **focus**, **scope**, **value**, and **feasibility** of your **research question**. Write a detailed paragraph for each (for a total of 4 paragraphs) and include a subheading above each paragraph that identifies which element you are addressing (i.e., **focus**, **scope**, **value**, **feasibility**). The reflection questions included in the above table should help you with each explanation. In a 5<sup>th</sup> detailed paragraph under the subheading “Potential Challenges & Problems,” address this question: What challenges or problems do you anticipate as you proceed with this project?

## Required Summer Research Question Work PART III:

Now it is time to start gathering sources and building an understanding of the **body of knowledge** and how scholarly research works. Use the research skills you gained in AP Seminar to gather 10 sources that will help support you in this process. Use the table below to help you understand the 2 types of sources you will be using this year: **Anchor Sources** and **Mentor Sources**. You are required to find 7 to 8 **Anchor Sources** and 2 to 3 **Mentor Sources** for a total of 10 sources.

Type Of Source	Explanation	# Required
<b>Anchor Sources</b>	These are sources: <ul style="list-style-type: none"> <li>• in your <b>discipline</b></li> <li>• about your specific <b>topic</b></li> <li>• that are most often scholarly, peer-reviewed articles</li> <li>• that address differing perspectives on your topic</li> <li>• that include contrasting views about your topic</li> <li>• that include information you may include in your <b>literature review</b></li> <li>• that teach you about your specific <b>topic</b></li> <li>• that help you become an expert on your specific <b>topic</b></li> <li>• that help you improve your <i>ethos</i></li> <li>• that help you identify the <b>gap</b> in the research</li> <li>• that help you understand the significance of your <b>research question</b></li> <li>• that <b>ANCHOR</b> your understanding of the <b>body of knowledge</b> in your <b>discipline</b></li> </ul>	6 to 7
<b>Mentor Sources</b>	These sources: <ul style="list-style-type: none"> <li>• may or may not be in your <b>discipline</b></li> <li>• may or may not be about your specific <b>topic</b></li> <li>• are most often scholarly, peer-reviewed articles</li> <li>• may include similar variables as your research project</li> <li>• include a <b>research design or method</b> similar to what you might use to answer your question</li> <li>• include similar data analysis methods</li> <li>• teach you how to conduct a research study</li> <li>• teach you about a particular element of the research process</li> <li>• help you improve your <i>ethos</i></li> <li>• do NOT necessarily help you identify the <b>gap</b> in the research</li> <li>• do NOT necessarily help you learn about your specific <b>topic</b></li> <li>• act as a <b>MENTOR</b> to you as a researcher</li> </ul>	2 to 3

## Required for each of the 10 sources:

- Bibliographic information in either MLA or APA documentation style (use the one most common in your discipline)
- A detailed paragraph that summarizes the sources in your own words
- Identify what type of source it is (i.e. **Anchor** or **Mentor**) and address why the source is valuable to your success; this should be completed in one or three sentences at the end of the paragraph that complete the appropriate statement for the source:
  - “This **ANCHOR SOURCE** is valuable to my research project because . . .”
  - “This **MENTOR SOURCE** is valuable to my research project because . . .”

### ***NOTE FOR STUDENTS COMPLETING SCIENCE FAIR PROJECTS:***

If you are continuing a project from a previous year, the College Board requires that your project—and ultimately, your paper and presentation—for AP Research be new; in other words, there must be a new research question and research method/design to generate new data. You are NOT allowed to merely rehash what you have already done or use the same data you have already generated or use the same paper you have already written. Additionally, any project that complies by ISEF rules is allowed as long as it can get IRB/IACUC approval. The College Board is not going to restrict your research as long as you follow the rules established by the university & ISEF; this includes projects involving working in a lab at UL, cell cultures, recombinant DNA, or any sort of chemical.

### ***NOTE ABOUT EXPERT ADVISERS AND MENTORS:***

We highly recommend that every student in AP Research locate an expert adviser or mentor, even if you are not working in a lab at U of L. This can be a difficult process, so we have included some resource materials about the do's and don'ts of contacting professors and other potential mentors. We will eventually address this in class, but some of you may want to get a head start. We do NOT recommend that you actually contact them over the summer before school starts unless you have a contact that will make the introduction for you. However, compiling a list of potential mentors and drafting email communications over the summer would help you feel more confident about asking professors for assistance. If you have the messages written when we start school, you can set up a conference with your AP Research teacher to read over your messages and give you some feedback before you actually send them.

If anyone wants to work in a lab at U of L, the optimal time to search for one is August; this is when the graduate student rotation opens up lab spots. Sometimes professors are willing to take on students in their labs only if the student has some pre-existing connection to the university. Lucky for you we have a current AP research student who has such a connection: Madison Sneve. She directs a STEM lecture series with U of L professors, and as a result she knows some faculty members in most science departments, especially neuroscience. She is willing to correspond with you over the summer: [madison.sneve@gmail.com](mailto:madison.sneve@gmail.com). Please be respectful of her time and realize she is not going to do all of the work for you; she is merely willing to help you.

You may email me during the summer if you have questions, but I do not check my school email regularly.

[alesia.williams@jefferson.kyschools.us](mailto:alesia.williams@jefferson.kyschools.us)

### **Other resources you may find helpful:**

1. *Practical Research: Planning and Design* by P.D. Leedy and J.E. Ormrod
2. *Students and Research: Practical Strategies for Science Classrooms and Competitions*, Second Edition, by Julia H. Cothron, Ronald N. Giese, and Richard J Rezba
3. *The Bedford Researcher* by Mike Palmquist
4. USC's Library Guides at <http://libguides.usc.edu/>
5. AP Research Course and Exam Description Book at <https://secure-media.collegeboard.org/digitalServices/pdf/ap/ap-research-course-and-exam-description.pdf>

## **DUE ON THE 1<sup>ST</sup> DAY OF CLASS**

### **Remember:**

## **Research is a recursive process.**

## **This is only one small step in that quest.**

*Adapted from an assignment originally created by Emily Lott.*

**from the AP Research Course and Exam Description Book**