AP Research: Summer Assignment 26-27

From Discipline to Research Gap: A Topic Discovery Worksheet

Goal: To arrive on the first day of class with a defined **Discipline**, a **Problem Space** validated by a mainstream source, and a specific **Research Gap** identified in an academic journal.

Task #1: Defining Your Research Lens

The first step in AP Research is deciding **how** you want to look at the world. Your choice of discipline dictates the types of questions you ask and the methods you use to find answers.

Step 1: Understand the Disciplines

- **Humanities:** Focuses on the interpretive or analytical study of the human condition (texts, artifacts, cultural products).
    - *Example:* How has the portrayal of mental health in Disney films evolved from the 1990s to the 2020s?
- **Social Sciences:** The study of people as individuals or groups using qualitative or quantitative data (surveys, observations).
    - *Example:* How does a "four-day school week" policy impact the retention rates of veteran teachers in rural districts?
- **Natural Sciences:** Dedicated to understanding the physical world through observation and experimentation.
    - *Example:* The Impact of Salt Concentration on FAST-PETase Enzyme Activity Using p-Nitrophenyl Butyrate as a Model Substrate.
- **Applied Sciences:** Taking existing scientific knowledge and developing practical applications or technology.
    - *Example:* Which type of low-cost, 3D-printed water filtration system is most effective at removing microplastics?

Step 2: Select a Branch Within Your Discipline

Discipline	Branch Examples
Humanities	*Art, History, Languages, Literature, Music, Philosophy, Religion, Theater*

Natural & Applied Sciences	*Biology, Chemistry, Computer Science, Engineering, Geology, Mathematics, Physics, Medicine*
Social Sciences	*Anthropology, Education, Geography, Law, Political Science, Psychology, Sociology*

Review the branches (e.g., Psychology, History, Biology, etc.) and complete your declaration:

> For the 25-26 school year, I plan to research in the discipline of _____. Specifically, I will pursue a topic in the area of _____.

Task #2: The Topic Scout (AI & Periodicals)

Goal: Use AI to identify modern problems, then verify them with a mainstream source.

Step 1: The AI Brainstorm

Use an AI tool (Gemini or ChatGPT) to help you see the landscape of your chosen branch. Copy/paste this prompt:

> *"I am a high school student in AP Research. My chosen discipline is **[Insert Discipline]** and my branch is **[Insert Branch]**. Provide a list of 5 modern, specific 'problem spaces' or 'unresolved tensions' in this field that could be investigated in a typical high school laboratory environment. For each, suggest 3-4 keywords I should use to search for academic journal articles."*

Step 2: Periodical Verification

Pick **one** problem space from the AI list. Find **one** article from a mainstream periodical (NYT, The Atlantic, Scientific American, etc.) that discusses this issue. Remember that you have access to many of these periodical sites through the AP Seminar/Research Lib-Guide.

- **Article Citation (APA):** * **The "Problem Space":** In 3–4 sentences and in your own words, what is the real-world tension or issue this article describes? Do not use the AI for this.

Task #3: The Gap Hunt (Academic Journals)

Goal: Find a "Research Gap" using a peer-reviewed source.

Step 1: Database Search

Using the keywords from Task #2, go to the school's Research Lib-Guide and search an academic database (**JStor, PsycArticles, or Academic Search Complete**). Find **one** peer-reviewed journal article related to your topic. Remember that you have access to many of these databases through the AP Seminar/Research Lib-Guide.

Step 2: Identifying the Gap

Read the article. Look specifically at the **"Conclusion"** or **"Suggestions for Future Research"** sections. Researchers usually end by saying, *"We studied X, but someone still needs to look at Y."* That **"Y"** is your gap.

Provide the following:

1. **Citation (APA):** 2. **The Research Goal:** What were these specific researchers trying to find out?
2. **The Findings:** In simple terms, what did they discover?
3. **The Gap (Crucial):** What do the authors suggest for future research? What is a specific group, variable, or geographic location they *didn't* look at that you could?

Task #2 & #3 Submission Workspace (TYPE YOUR RESPONSES BELOW)

- **AI Use Disclosure:** (e.g., *I used Gemini to help me find the topic of "Micro-transactions in gaming."*)
- **Periodical Summary & Citation:**
- **Journal "Gap" Analysis & Citation:**