

Summer Assignment: AP Capstone Seminar (2025)

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At its core, AP Seminar is a research course in which you will explore a variety of real-world issues through various lenses. Within those lenses, you will analyze a range of perspectives from stakeholders concerned with the issue in question and formulate your own arguments and solutions for those issues.

As an introduction to the course and to practice your skill in academic research, your task is to analyze a source on our first topic of food and to research and briefly analyze an additional article of your own that deals with an issue related to food.

Once the school year begins, your researched article will be shared and discussed with your classmates. These discussions will serve as a springboard to the process of inquiry, leading the class to further research a real-world problem and come up with a reasonable, logical solutions to solve it.

Below you will find the steps to completing this assignment.

Assignment

1. Read the attached article titled by Jessica Fu. Then, write a 250-word, one-paragraph summary and analysis in a Word document that includes:
 - A summary of the article's **main idea/central thesis**.
 - A summary of the article's **primary reasons** used to support that central idea.
2. Research the internet for an additional contemporary article (published within the last ten years) that offers a single perspective (one person's unique opinion/argument) about issues related to food. In short, make sure it's a perspective about food where the writer is making an argument. Consider topics like:
 - Ultra-processed foods
 - Gene-edited crops
 - Space agriculture
 - Personalized nutrition
 - Biotechnology and food production
 - Functional Beverages and Gut Health
 - Sustainable Nutrition
 - 3D Food Printing/Alternative Proteins
 - Policy Shifts in Dietary Guidelines
 - Food as Medicine

There are no specific requirements regarding where to get your source nor how long it should be, but use your best judgment.

3. Print out your source. Annotate the margins of the document for its **claims** and **evidence**. Keep your annotated source for future reference in class.
4. In the same Word document used for #1 above, start a new section with the title and author of your own researched article and write a paragraph that **summarizes the main idea/central thesis** of the source.
5. In a second paragraph, **explain the article's reasons** that support the main idea of the source. You may use direct quotes or summaries of specific points made in the article as support.
6. At the end of the word document, compose a **bibliographic entry** for your researched article, such as one you would include on a MLA or APA Works Cited page.
7. Save this document digitally so that you can access it during the first week of class.

A new California bill takes aim at the use of food additives in school meals. On 12 March, Democratic state lawmaker Jesse Gabriel introduced a proposal that would prohibit the state’s public schools from offering items that contain any of a medley of dyes and colorants.

The targeted additives may appear vaguely recognizable to anyone who’s ever read an ingredients label: blue 1, blue 2, green 3, red 40, yellow 5, yellow 6 and the white pigment titanium dioxide. These substances can be found in a wide range of products, from brightly colored Froot Loops cereal and sports drinks to less obvious fare such as cake mix and canned peas.

Public interest and consumer safety groups have long called for mandatory warning labels or bans on food additives, citing a body of research that has drawn potential links between consumption and behavioral issues in children, specifically increased hyperactivity.

If passed, the bill, known as [AB 2316](#), could effectively compel food manufacturers to phase out these ingredients, given the size of California’s public school system and its food programs.

Gabriel said the targeted chemicals “all are nonessential ingredients”, in a phone interview. “The whole point of it is to make food appear more vibrant.”

He said that the aim of AB 2316 wasn’t to pull products off of shelves, but to encourage food manufacturers to replace synthetic dyes with alternatives. He cited Pepperidge Farms Goldfish crackers as a popular snack that doesn’t rely on synthetic dyes for its eye-catching colors. (The company uses extracts from paprika, turmeric, beet, watermelon and the huito berry to color its products.)

Brian Ronholm, director of food policy for Consumer Reports, said: “This is a good opportunity to get some chemicals that have been linked to behavioral problems in children out of public schools. [Young students are] at an age in which their brains are still developing, so limiting their consumption ... is certainly critical. This bill is a step in the right direction to help fix this problem.”

AB 2316 comes on the heels of the successful passage of the California Food Safety Act, a separate piece of legislation that banned four common additives: red 3, potassium bromate, brominated vegetable oil and propyl paraben. Also sponsored by Gabriel, the law passed with bipartisan support, and California’s governor, Gavin Newsom, signed it into law in October. It takes effect in 2027. After its passage, a number of other state legislatures introduced similar bills, including in Illinois, Missouri, New York and Washington.

Researchers first started probing the relationship between the consumption of additives and hyperactivity in the 1970s. Since then, a growing number of studies have found potential links between the consumption of colorants and adverse behavioral outcomes in children, including a worsening of symptoms related to attention deficit hyperactivity disorder (ADHD).

In 2011, the US Food and Drug Administration (FDA) – which regulates food additives under the Food, Drug and Cosmetic Act – convened a panel to review existing research on the link between dyes and children’s behavior. The panel ultimately found no causal relationship, though it did concede that some children sensitive to food dyes could see ADHD symptoms worsen with exposure. The panel recommended further study on the subject, but rejected mandatory warning labels on foods containing dyes.

Other jurisdictions have gone further to highlight the association between dyes and hyperactivity. In the European Union and the United Kingdom, food containing synthetic dyes must carry warning labels indicating the ingredients “may have an adverse effect on activity and attention in children”.

Advocates say that the FDA should do more to re-evaluate previously approved food additives given the latest research into their potential links to hyperactivity, among other negative health outcomes.

“Consumers can’t feel assured that the FDA is making sure that the chemicals that they eat every day, that they feed their family, are safe,” said Melanie Benesh, vice-president of government affairs at the Environmental Working Group, an advocacy group focused on issues related to agriculture and public health. The group is a co-sponsor of AB 2316. “That’s why states have had to step in.”

AB 2316 was shaped in part by a recent analysis conducted by the California environmental protection agency. In 2021, it conducted a review of existing literature on the neurobehavioral effects of FDA-approved food dyes, finding potential connections.

“Overall, our review of human studies suggests that synthetic food dyes are associated with adverse neurobehavioral effects, such as inattentiveness, hyperactivity and restlessness in sensitive children,” the report found. “The evidence supports a relationship between food dye exposure and adverse behavioral outcomes in children, both with and without pre-existing behavioral disorders.”

Color manufacturers challenged the report, arguing it was based on insufficient scientific evidence and that it failed to find a causal relationship between additives and behavior.

“Colors are safely used in a wide variety of consumer products, are among the most widely studied food ingredients, and are subject to strict global regulatory requirements,” read the statement from the International Association for Color Manufacturers. “Parents of children who may be sensitive to food ingredients, including colors, can avoid such foods in consultation with their doctor based on existing ingredient declarations and labeling requirements.”

In response to a request for comment on AB 2316, the National Confectioners’ Association, which represents candy producers, issued a statement denouncing ongoing campaigns to curtail food additives at the state level, calling on the FDA to intervene. It read: “These activists are dismantling our national food safety system state by state in an emotionally driven campaign that lacks scientific backing. FDA is the only institution in America that can stop this sensationalistic agenda which is not based on facts and science.”

The bill could also raise legal challenges over the power to regulate food at the state level, given that additives are generally regulated by the federal government.

“This is an interesting situation where California is proposing to regulate food additives that the FDA has approved as safe and appropriate,” said David Abramowitz, an attorney specializing in FDA regulation. “That does bring in questions of whether California might be pre-empted from such things.”

On the flip side, Abramowitz pointed, there’s an argument that could be made that AB 2316 isn’t so much regulating additives as it is simply setting its own school meal standards, which localities are allowed to do, so long as they continue to meet federal school food program standards as well.

For the bill’s primary sponsor, Assemblymember Gabriel, the issue is a personal one. He himself has ADHD, as does one of his children.

“We put so much love and so much energy and a lot of the time, so much public investment into supporting [kids who have challenges],” he said, citing therapy and classroom support for students with ADHD and other behavioral challenges. “To think that we would be doing all of this in the morning, and then feeding them food at lunch that would undo all of that good work and exacerbate their challenges just absolutely makes no sense.

“The idea here that we would protect them from those chemicals at school so that they can learn and perform at their highest level just made a lot of sense to me.”

Jessica Fu is a freelance reporter based in New York, focused on agriculture, policy and the environment.