

IMPORTANT INFORMATION ABOUT AP SEMINAR:

In order to offer AP Seminar, schools must apply through the AP Program to participate and teachers must attend mandatory training.

See collegeboard.org/apcapstone for details.

Revised September 2014



Course and Exam Description

AP[®] Seminar

Part of the AP Capstone[™] Program

REVISED SEPTEMBER 2014

Effective for the **2014-15** School Year



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About the College Board

The College Board is a mission-driven not-for-profit organization that connects students to college success and opportunity. Founded in 1900, the College Board was created to expand access to higher education. Today, the membership association is made up of over 6,000 of the world's leading educational institutions and is dedicated to promoting excellence and equity in education. Each year, the College Board helps more than seven million students prepare for a successful transition to college through programs and services in college readiness and college success — including the SAT® and the Advanced Placement Program®. The organization also serves the education community through research and advocacy on behalf of students, educators, and schools. For further information, visit www.collegeboard.org.

AP® Equity and Access Policy

The College Board strongly encourages educators to make equitable access a guiding principle for their AP® programs by giving all willing and academically prepared students the opportunity to participate in AP. We encourage the elimination of barriers that restrict access to AP for students from ethnic, racial, and socioeconomic groups that have been traditionally underserved. Schools should make every effort to ensure their AP classes reflect the diversity of their student population. The College Board also believes that all students should have access to academically challenging course work before they enroll in AP classes, which can prepare them for AP success. It is only through a commitment to equitable preparation and access that true equity and excellence can be achieved.®™

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About AP[®]

The College Board's Advanced Placement Program[®] (AP[®]) enables students to pursue college-level studies while still in high school. Through more than 30 courses, each culminating in a rigorous exam, AP provides willing and academically prepared students with the opportunity to earn college credit, advanced placement, or both. Taking AP courses also demonstrates to college admission officers that students have sought out the most rigorous course work available to them.

Each AP course is modeled upon a comparable college course, and college and university faculty play a vital role in ensuring that AP courses align with college-level standards. Talented and dedicated AP teachers help AP students in classrooms around the world develop and apply the content knowledge and skills they will need later in college.

Each AP course concludes with a college-level assessment developed and scored by college and university faculty as well as experienced AP teachers. AP Exams are an essential part of the AP experience, enabling students to demonstrate their mastery of college-level course work. Most four-year colleges and universities in the United States and universities in more than 60 countries recognize AP in the admissions process and grant students credit, placement, or both on the basis of successful AP Exam scores. Visit www.collegeboard.org/ap/creditpolicy to view AP credit and placement policies at more than 1,000 colleges and universities.

Performing well on an AP Exam means more than just the successful completion of a course; it is a gateway to success in college. Research consistently shows that students who receive a score of 3 or higher on AP Exams typically experience greater academic success in college and have higher graduation rates than their non-AP peers¹. Additional AP studies are available at www.collegeboard.org/research.

¹See the following research studies for more details:

Linda Hargrove, Donn Godin, and Barbara Dodd, *College Outcomes Comparisons by AP and Non-AP High School Experiences* (New York: The College Board, 2008).

Chrys Dougherty, Lynn Mellor, and Shuling Jian, *The Relationship Between Advanced Placement and College Graduation* (Austin, Texas: National Center for Educational Accountability, 2006).

Offering AP Courses and Enrolling Students

Each AP course and exam description details the essential information required to understand the objectives and expectations of an AP course. The AP Program unequivocally supports the principle that each school implements its own curriculum that will enable students to develop the content knowledge and skills described here.

The College Board strongly encourages educators to make equitable access a guiding principle for their AP programs by giving all willing and academically prepared students the opportunity to participate in AP. We encourage the elimination of barriers that restrict access to AP for students from ethnic, racial, and socioeconomic groups that have been traditionally underserved. Schools should make every effort to ensure their AP classes reflect the diversity of their student population. The College Board also believes that all students should have access to academically challenging course work before they enroll in AP classes, which can prepare them for AP success. It is only through a commitment to equitable preparation and access that true equity and excellence can be achieved.

How AP Courses and Exams Are Developed

AP courses and exams are designed by committees of college faculty and expert AP teachers who ensure that each AP subject reflects and assesses college-level expectations. To find a list of each subject's current AP Development Committee members, please visit press.collegeboard.org/ap/committees. AP Development Committees define the scope and expectations of the course, articulating through a curriculum framework what students should know and be able to do upon completion of the AP course. Their work is informed by data collected from a range of colleges and universities to ensure that AP coursework reflects current scholarship and advances in the discipline.

The AP Development Committees are also responsible for drawing clear and well-articulated connections between the AP course and AP Exam — work that includes designing and approving exam specifications and exam questions. The AP Exam development process is a multiyear endeavor; all AP Exams undergo extensive review, revision, piloting, and analysis to ensure that questions are high quality and fair and that there is an appropriate spread of difficulty across the questions.

Throughout AP course and exam development, the College Board gathers feedback from various stakeholders in both secondary schools and higher education institutions. This feedback is carefully considered to ensure that AP courses and exams are able to provide students with a college-level learning experience and the opportunity to demonstrate their qualifications for advanced placement upon college entrance.

Using and Interpreting AP Scores

The extensive work done by college faculty and AP teachers in the development of the course and the exam and throughout the scoring process ensures that AP Exam scores accurately represent students' achievement in the equivalent college course. While colleges and universities are responsible for setting their own credit and placement policies, AP scores signify how qualified students are to receive college credit or placement:

AP Score	Qualification
5	Extremely well qualified
4	Well qualified
3	Qualified
2	Possibly qualified
1	No recommendation

Additional Resources

Visit apcentral.collegeboard.org for more information about the AP Program.

About the AP Capstone™ Program

AP Capstone™ is an innovative diploma program from the College Board that equips students with the independent research, collaborative teamwork, and communication skills that are increasingly valued by colleges. AP Capstone is built on the foundation of two AP® courses — **AP Seminar** and **AP Research** — and is designed to complement and enhance the in-depth, discipline-specific study experienced in other AP courses.

In AP Seminar, students investigate real-world issues from multiple perspectives, gathering and analyzing information from various sources in order to develop credible and valid evidence-based arguments. In AP Research, students cultivate the skills and discipline necessary to conduct independent research in order to produce and defend a scholarly academic thesis.

The AP Capstone program aims to empower students by

- ▶ engaging them with rigorous college-level curricula focused on the skills necessary for successful college completion;
- ▶ extending their abilities to synthesize information from multiple perspectives and apply skills in new situations and cross-curricular contexts;
- ▶ enabling them to collect and analyze information with accuracy and precision;
- ▶ cultivating their abilities to craft, communicate, and defend evidence-based arguments; and
- ▶ providing opportunities for them to practice disciplined and scholarly research skills while exploring relevant topics that appeal to their interests and curiosity.

Research Base

The big ideas and learning objectives in the AP Capstone program reflect the core academic skills needed for college, career, and life readiness identified by leading educational organizations and College Board membership, including the following:

- ▶ The American Association of Colleges and Universities (AAC&U), *College Learning for the New Global Century, Essential Learning Outcomes*
- ▶ Advanced Placement Program, skills and practices identified in AP courses
- ▶ Common Core State Standards Initiative, *Literacy in History/Social Studies, Science, and Technical Subjects 6–12*
- ▶ The Partnership for 21st Century Skills (P21), *A Framework for 21st Century Learning*
- ▶ Association of College and Research Libraries, *Information Literacy Competency Standards for Higher Education*
- ▶ Council of Writing Program Administrators, *Framework for Success in Postsecondary Writing*

The AP Capstone Diploma™ and AP Seminar and Research Certificate™

Students who earn scores of 3 or higher in AP Seminar and AP Research and on four additional AP Exams of their choosing will receive the AP Capstone Diploma™.

Students who earn scores of 3 or higher in AP Seminar and AP Research but not on four additional AP Exams will receive the AP Seminar and Research Certificate™.



AP Capstone Pedagogical Framework

Overview of the Pedagogical Framework

Throughout the program, students consider and evaluate multiple points of view to develop their own perspectives on complex issues and topics through inquiry and investigation. The AP Capstone program provides students with a framework that allows them to develop, practice, and hone their critical and creative thinking skills as they make connections between various issues and their own lives. Teachers should help students understand that this process is recursive, not linear. This recursive process allows students to go back and forth between the processes as they encounter new information.

Q	Question and Explore	Questioning begins with an initial exploration of complex topics or issues. Perspectives and questions emerge that spark one's curiosity, leading to an investigation that challenges and expands the boundaries of one's current knowledge.
U	Understand and Analyze Arguments	Understanding various perspectives requires contextualizing arguments and evaluating the authors' claims and lines of reasoning.
E	Evaluate Multiple Perspectives	Evaluating an issue involves considering and evaluating multiple perspectives both individually and in comparison to one another.
S	Synthesize Ideas	Synthesizing others' ideas with one's own may lead to new understandings and is the foundation of a well-reasoned argument that conveys one's perspective.
T	Team, Transform, and Transmit	Teaming allows one to combine personal strengths and talents with those of others to reach a common goal. Transformation and growth occur upon thoughtful reflection. Transmitting requires the adaptation of one's message based on audience and context.

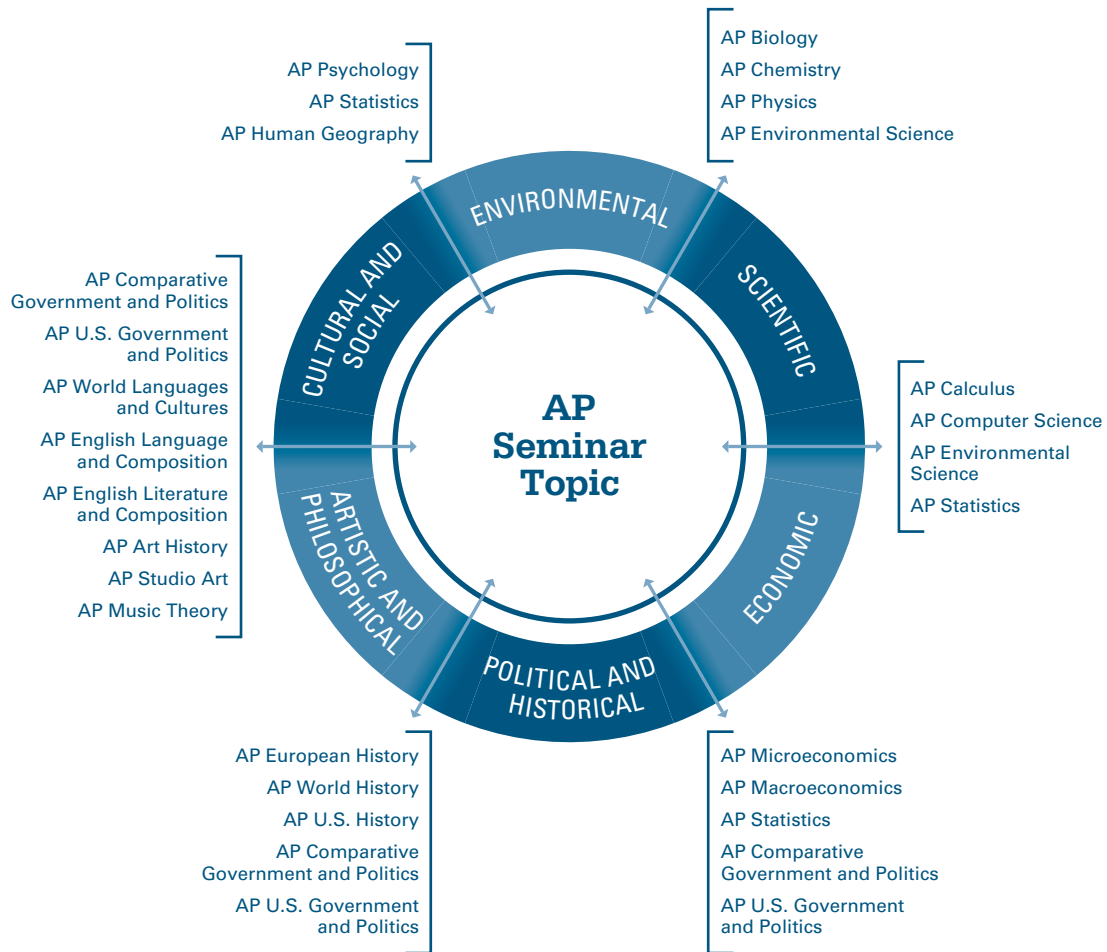
Reasoning Processes

The AP Capstone program allows students to develop and practice reasoning processes that help them to make intentional, strategic decisions. It is important for teachers to understand these reasoning processes, which are embedded within the learning objectives:

- ▶ Situating – being aware of the context of one’s own as well as others’ perspectives, realizing that individual bias can lead to assumptions
- ▶ Choosing – making intentional and purposeful choices, realizing that choices have both intended and unintended consequences
- ▶ Defending – being able to explain and justify personal choices, logic, line of reasoning, and conclusions
- ▶ Connecting – seeing similarities within and across disciplines, concepts, and cultures that may at first seem disparate

Making Connections within AP

Some teachers may wish to make cross-curricular connections with other AP courses, although there is no specific requirement to do so. The graphic below illustrates possible cross-curricular connections. The AP Seminar course topics can be viewed through different disciplinary lenses which relate to courses in the AP Program. Two additional lenses, Ethical and Futuristic, are not shown in the diagram below but have potential links with many AP courses.



AP Seminar Course Description

AP Seminar is a foundational course that engages students in cross-curricular conversations that explore the complexities of academic and real-world topics and issues by analyzing divergent perspectives. Using an inquiry framework, students practice reading and analyzing articles, research studies, and foundational, literary, and philosophical texts; listening to and viewing speeches, broadcasts, and personal accounts; and experiencing artistic works and performances. Students learn to synthesize information from multiple sources, develop their own perspectives in written essays, and design and deliver oral and visual presentations, both individually and as part of a team. Ultimately, the course aims to equip students with the power to analyze and evaluate information with accuracy and precision in order to craft and communicate evidence-based arguments.

AP Seminar Curricular Requirements

The curricular requirements are the core elements of an AP course. The curriculum framework and supporting documents provided during professional development serve as resources to assist teachers in determining the appropriate level of evidence to include within their syllabi to meet or exceed the requirements. (All AP Seminar teachers must attend College Board AP Seminar intensive training prior to their first year of teaching the AP Seminar course.)

Evidence of the following curricular requirements should be included in the course syllabus developed by the teacher and submitted to the College Board for review and approval.

- ▶ Students develop and apply discrete skills identified in the learning objectives of the enduring understandings within the following five big ideas:
 - › Question and Explore
 - › Understand and Analyze Arguments
 - › Evaluate Multiple Perspectives
 - › Synthesize Ideas
 - › Team, Transform, and Transmit
- ▶ Students explore the complexities of one or more themes by making connections within, between, and/or among multiple cross-curricular areas and by exploring multiple perspectives and lenses (e.g., cultural and social, artistic and philosophical, political and historical, environmental, economic, scientific, futuristic, ethical) related to those themes.
- ▶ Students read articles, research studies, and foundational, literary, and philosophical texts; view and listen to speeches, broadcasts, and/or personal accounts; and experience artistic works and performances to gain a rich appreciation and understanding of issues.
- ▶ Students work collaboratively with a team to identify, investigate, analyze, and evaluate a real-world or academic issue; consider options, alternatives, solutions, or resolutions; and develop a written report, multimedia presentation, and defense to communicate a conclusion or recommendation.
- ▶ Students work independently to identify a research question based on provided stimulus material; research the issue; analyze, evaluate, and select evidence to develop an argument; present and defend a conclusion; and produce a multimedia presentation to be delivered to their peers.

AP Seminar Curriculum Framework

Overview of the Curriculum Framework

Based on the Understanding by Design (Wiggins and McTighe) model, this curriculum framework is intended to provide a clear and detailed description of the course requirements necessary for student success. This conceptualization will guide the development and organization of learning outcomes from general to specific, resulting in focused statements about content knowledge and skills needed for success in the course. The curriculum framework will contain the following structural components:

- ▶ The course is organized around five **big ideas**. Tied to each big idea are several **essential questions**. These are open-ended questions that encourage students to think deeply about a topic, ask additional questions and investigate solutions, and develop the deeper conceptual understanding that the course seeks to foster.
- ▶ Additionally, within each big idea are several **enduring understandings**. These are the long-term takeaways related to the big ideas that a student should have after exploring the content and skills. These understandings are expressed as generalizations that specify what students will come to understand about the key concepts in the course. Enduring understandings are numbered to correspond to each big idea.
- ▶ Linked to each enduring understanding are the corresponding **learning objectives**. The learning objectives articulate what students need to be able to do in order to develop the enduring understandings. The learning objectives will become targets of assessment for the course. Learning objectives are numbered to correspond with the appropriate big ideas and enduring understandings.
- ▶ For each of the learning objectives, **essential knowledge** statements describe the facts and basic concepts that a student should know and be able to recall in order to demonstrate mastery of the learning objective. Essential knowledge components are numbered to correspond with the appropriate big ideas, enduring understandings, and learning objectives.

Big Idea 1: Question and Explore

Inquiry and investigation begin when students encounter information about complex issues and problems that stimulates their intellectual curiosity. They then continue the research process by developing a critical question about one or more of those complex issues. Seeking answers to such questions requires exploration of numerous, often competing, perspectives; the context surrounding those perspectives; and the reliability and credibility of the perspectives. Through this exploration, students begin to develop their own perspectives, rather than simply accept those of others. They consider the purpose of their research — what is supposed to be achieved and why. Ideally, they also develop additional questions that lead to further inquiry. The intrinsic value of asking and answering questions cannot be overstated. Giving students the opportunity to dig deeper and feed their curiosity makes for meaningful discoveries and discussions.

Essential Questions

- ▶ How does the context of a problem or issue affect how it is interpreted or presented?
- ▶ How might others see the problem or issue differently?
- ▶ What questions have others failed to ask?
- ▶ What voices or perspectives are missing from my research?
- ▶ What do I want to know, learn, or understand?
- ▶ How does my research question shape how I go about trying to answer it?
- ▶ What keywords should I use to search for information about this topic?

Enduring Understandings (Students will understand that . . .)	Learning Objectives (Students will be skilled at . . .)	Essential Knowledge (Students will know that . . .)
EU 1.1: Personal interest and intellectual curiosity lead to investigation of topics or issues that may or may not be clearly defined. A good question explores the complexity of an issue or topic. Further inquiry can lead to an interesting conclusion, resolution, or solution. Sometimes this inquiry leads to research and unexpected paths.	LO 1.1A: Identifying and contextualizing a problem or issue. LO 1.1B: Posing complex questions and seeking out answers that reflect multiple, divergent, or contradictory perspectives.	EK 1.1A1: Examining the perspectives and ideas of others often leads to questions for further investigation. Inquiry begins with narrowing scope of interest, identifying a problem or issue and its origins within that scope, and situating the problem or issue in a larger context. EK 1.1B1: Strong research questions are open-ended and lead to an examination, taking into account the complexity of a problem or issue. EK 1.1B2: The inquiry process allows one to draw upon curiosity and imagination to engage with ideas or explore approaches to complex issues.

Enduring Understandings (Students will understand that . . .)	Learning Objectives (Students will be skilled at . . .)	Essential Knowledge (Students will know that . . .)
EU 1.2: New knowledge builds on prior knowledge. Strengthening understanding of a concept or issue requires questioning existing knowledge, using what is known to discover what is not known, and connecting new knowledge to prior knowledge.	LO 1.2A: Retrieving, questioning, organizing, and using prior knowledge about a topic.	EK 1.2A1: Understanding comes not only through collection of information but also from a variety of other factors (e.g., experience, external sources, culture, assumptions). EK 1.2A2: A variety of tools (e.g., brainstorming, concept mapping, prewriting exercises) can be used to illustrate, organize, and connect ideas. EK 1.2A3: Research confirms or challenges one's existing understandings, assumptions, beliefs, and/or knowledge.
	LO 1.3A: Accessing information using effective strategies. LO 1.3B: Using technology to access and manage information.	EK 1.3A1: Information used to address a problem may come from various secondary sources (e.g., articles, other studies, analyses, reports) and/or primary sources (e.g., original texts and works or personally collected data such as from experiments, surveys, questionnaires, interviews). EK 1.3B1: Online databases (e.g., EBSCO, ProQuest, JSTOR, Google Scholar) and libraries catalog and house secondary and some primary sources. EK 1.3B2: Advanced search tools, Boolean logic, and key words allow researchers to refine, focus, and/or limit their searches based on a variety of factors (e.g., date, peer-review status, type of publication).
	LO 1.3C: Evaluating the relevance and credibility of information from sources and data.	EK 1.3C1: The scope and purpose of research and the credibility of sources determine the validity and reliability of the conclusion(s). EK 1.3C2: Credibility of an argument is established through the use of sources and data that are valid (relevant) and reliable (current, authoritative). EK 1.3C3: Determining the credibility of a source requires considering and evaluating the reputation and credentials of the author, publisher, site owner, and/or sponsor; understanding and evaluating the author's perspective and research methods; and considering how others respond to their work. Scholarly articles are often peer reviewed, meaning the research has been reviewed and accepted by disciplinary experts.

Enduring Understandings (Students will understand that . . .)	Learning Objectives (Students will be skilled at . . .)	Essential Knowledge (Students will know that . . .)
		EK 1.3C4: When gathering data on individuals' behaviors, attitudes, and preferences, the accuracy and validity of such data depends on the honesty, memory, and reliability of the respondents and/or observers as well as the design of the data collection instrument.
EU 1.4: There are multiple ways to investigate problems and issues. The question asked determines the kind of inquiry.	LO 1.4A: Identifying alternatives for approaching a problem.	EK 1.4A1: The way the problem is posed, situated, framed, or contextualized will guide the inquiry process and influence the way solutions are valued.

Big Idea 2: Understand and Analyze Arguments

Developing understanding starts with comprehension of the concepts and perspectives in question. Being able to summarize by identifying and explaining the salient ideas in a text is foundational. When students summarize and explain an author's perspective to others, they are building understanding. Students must comprehend a perspective or argument in order to be able to analyze it. That analysis, including consideration of the author's point of view and purpose, the reasoning and details the author selects, develops, and conveys, and the way the author chooses to situate those details, in turn leads to greater understanding of the topic or concept being explored. Students evaluate the strength of an argument by examining the line of reasoning and the quality of the evidence the author uses. This level of understanding allows students to recognize the implications and predict the consequences of an argument.

Essential Questions

- ▶ What strategies will help me comprehend a text?
- ▶ What is the argument's main idea and what reasoning does the author use to develop it?
- ▶ Why might the author view the issue this way?
- ▶ What biases may the author have that influence his or her perspective?
- ▶ Does this argument acknowledge other perspectives?
- ▶ How do I know whether something is true?
- ▶ What are the implications of these arguments?
- ▶ How does this conclusion impact me and my community? Or my research?

Enduring Understandings (Students will understand that . . .)	Learning Objectives (Students will be skilled at . . .)	Essential Knowledge (Students will know that . . .)
EU 2.1: Authors express their perspectives and arguments through their works. The first step in evaluating an author's perspective or argument is to comprehend it. Such comprehension requires reading and thinking critically.	LO 2.1A: Employing appropriate reading strategies and reading critically for a specific purpose.	<p>EK 2.1A1: Reading critically means reading closely to identify the main idea, tone, assumptions, context, perspective, line of reasoning, and evidence used.</p> <p>EK 2.1A2: Strategies active readers use to preview and prioritize a written text include skimming, scanning, rereading, and questioning.</p> <p>EK 2.1A3: Strategies active readers use to make meaning from texts include annotating, note-taking, highlighting, and reading aloud.</p> <p>EK 2.1A4: Perspectives are shared through written, spoken, visual, or performance texts. A perspective includes the writer's attitude/ tone regarding the subject and is expressed through an argument.</p>

Enduring Understandings (Students will understand that . . .)	Learning Objectives (Students will be skilled at . . .)	Essential Knowledge (Students will know that . . .)
	LO 2.1B: Summarizing and explaining the main idea and the line of reasoning, and identifying the supporting details of an argument, while avoiding generalizations and oversimplification.	<p>EK 2.1B1: The main idea of an argument is often stated in the thesis statement, claim, or conclusion, or implied throughout a work.</p> <p>EK 2.1B2: Authors use a line of reasoning to support their arguments. The line of reasoning is composed of one or more claims justified through evidence.</p> <p>EK 2.1B3: A lack of understanding of the complexities of an argument (tone, implications, limitations, nuance, context) can lead to oversimplification and/or generalization.</p>
EU 2.2: Authors choose evidence to shape and support their arguments. Readers evaluate the line of reasoning and evidence to determine to what extent they believe or accept an argument.	<p>LO 2.2A: Identifying, explaining, and analyzing the logic and line of reasoning of an argument.</p> <p>LO 2.2B: Describing and analyzing the relevance and credibility of evidence used to support an argument, taking context into consideration.</p>	<p>EK 2.2A1: An argument's context (time and purpose) and situation (relation to the other related arguments) inform its interpretation.</p> <p>EK 2.2A2: An argument's line of reasoning is organized based on the argument's purpose (e.g., to show causality, to define, to propose a solution).</p> <p>EK 2.2A3: Inductive reasoning uses specific observations and/or data points to identify trends, make generalizations, and draw conclusions. Deductive reasoning uses broad facts or generalizations to generate additional, more specific conclusions about a phenomenon.</p> <p>EK 2.2B1: Writers use qualitative and/or quantitative evidence (e.g., facts, data, facts, observations, predictions, explanations, opinions) to support their claims.</p> <p>EK 2.2B2: Authors strategically include evidence to support their claims.</p> <p>EK 2.2B3: Writers appeal to (or possibly manipulate) readers through a variety of strategies and techniques (e.g., language, authority, qualifiers, fallacies, emphasis).</p> <p>EK 2.2B4: Evidence may be used to identify and explain relationships (comparative, causal, or correlational) and/or patterns and trends.</p> <p>EK 2.2B5: Credibility is compromised when authors fail to acknowledge and/or consider the limitations of their conclusions, opposing views or perspectives, and/or their own biases.</p>

Enduring Understandings (Students will understand that . . .)	Learning Objectives (Students will be skilled at . . .)	Essential Knowledge (Students will know that . . .)
	LO 2.2C: Evaluating the validity of an argument.	EK 2.2C1: An argument is valid when there is logical alignment between the line of reasoning and the conclusion.
EU 2.3: Arguments have implications.	LO 2.3A: Connecting an argument to broader issues by examining the implications of the author’s claim. LO 2.3B: Evaluating potential resolutions, conclusions, or solutions to problems or issues in an argument.	EK 2.3A1: The implications and consequences of arguments may be intended or unintended. EK 2.3B1: Arguments are significant and have real-world impact because they can influence behavior (e.g., call one to action, suggest logical next steps).

Big Idea 3: Evaluate Multiple Perspectives

Evaluating arguments on a complex issue requires students to compare and contrast differing perspectives. These multiple perspectives, which may support, oppose, compete with, or otherwise vary from one another, come together to create the conversation on the issue. Students must consider the biases and assumptions behind those arguments in order to evaluate their relevance and importance in the conversation. Evaluating multiple perspectives and arguments allows students to better understand the complexities of an issue or topic.

Essential Questions

- ▶ What patterns or trends can be identified among the arguments about this issue?
- ▶ What are the implications and/or consequences of accepting or rejecting a particular argument?
- ▶ How can I connect these perspectives? What other issues, questions, or topics do they relate to?
- ▶ How can I explain contradictions within or between arguments?
- ▶ From whose perspective is this information being presented, and how does that affect my evaluation?

Enduring Understandings (Students will understand that . . .)	Learning Objectives (Students will be skilled at . . .)	Essential Knowledge (Students will know that . . .)
EU 3.1: Different perspectives often lead to competing and alternate arguments. The complexity of an issue emerges when people bring these differing, multiple perspectives to the conversation about it.	LO 3.1A: Identifying and interpreting multiple perspectives on or arguments about an issue.	EK 3.1A1: An individual's perspective is influenced by his or her background (e.g., experiences, culture, education), assumptions, and world view, as well as by external sources. EK 3.1A2: Perspectives are not always oppositional; they may be concurring, alternating, or competing.
EU 3.2: Not all arguments are equal; some arguments are more credible/valid than others. Through evaluating others' arguments, personal arguments can be situated within a larger conversation.	LO 3.2A: Evaluating objections, implications, and limitations of alternate, opposing, or competing perspectives or arguments.	EK 3.2A1: Critical thinkers are aware that some arguments may appeal to emotions, core values, personal biases and assumptions, and logic for the purpose of manipulation. EK 3.2A2: When evaluating multiple perspectives or arguments, consideration must be given to how personal biases and assumptions influence a reader's judgment.

Big Idea 4: Synthesize Ideas

Once enough information is gathered and evaluated, students synthesize their accumulated knowledge and emerging ideas, perspectives, and conclusions into an argument of their own. In order to situate their perspectives within the larger conversation, students must consider other perspectives and points of view. Strong arguments have a clear purpose and are grounded in a logical line of reasoning supported by carefully chosen and relevant evidence. Effective arguments analyze the material and develop a perspective on it. Information from other sources should not stand in for students' own thinking. The goal is for students to think critically about the information and then add to, not simply repeat, the ideas of others. Building arguments on the ideas of others recognizes and acknowledges their perspectives while also establishing one's unique voice in the conversation.

Essential Questions

- ▶ How do I connect and analyze the evidence in order to develop an argument and support a conclusion?
- ▶ What line of reasoning and evidence would best support my argument? Is my reasoning logical?
- ▶ Are there other conclusions I should consider?
- ▶ What am I taking for granted? How do I acknowledge and account for my own biases and assumptions?
- ▶ What is the best way to acknowledge and attribute the work of others that was used to support my argument?
- ▶ What are the consequences of plagiarism?

Enduring Understandings

(Students will understand that . . .)

EU 4.1: People express their ideas, points of view, perspectives, and conclusions through arguments. Crafting an argument requires a clear line of reasoning, considering audience, purpose, and context.

Learning Objectives

(Students will be skilled at . . .)

LO 4.1A: Formulating a complex and well-reasoned argument.

Essential Knowledge

(Students will know that . . .)

EK 4.1A1: Arguments use reason and evidence to convey a perspective, point of view, or some version of the truth that is stated or implied in the thesis and/or conclusion.

EK 4.1A2: Arguments are supported and unified by carefully chosen and connected claims, reasons, and evidence.

EK 4.1A3: Qualifiers place limits on how far a claim may be carried. Effective arguments acknowledge these limits, increasing credibility by reducing generalization or oversimplification.

EK 4.1A4: An argument may acknowledge other arguments and/or respond to them with counterarguments (e.g., via concession, refutation, and/or rebuttal).

Enduring Understandings (Students will understand that . . .)	Learning Objectives (Students will be skilled at . . .)	Essential Knowledge (Students will know that . . .)
EU 4.2: Evidence is strategically selected to support a line of reasoning that appeals to or influences others.	LO 4.2A: Interpreting, using, and synthesizing qualitative and/or quantitative data/information from various perspectives and sources (e.g., primary, secondary, print, nonprint) to develop and support an argument.	<p>EK 4.1A5: The line of reasoning is a clear, logical, sequential path leading the audience through the reasons toward the conclusion.</p> <p>EK 4.1A6: The logic and reasoning of an argument may be deductive (claim followed by evidence) or inductive (evidence leads to a conclusion).</p> <p>EK 4.1A7: A line of reasoning is organized based on the argument's purpose (e.g., to show causality, to evaluate, to define, to propose a solution).</p> <p>EK 4.1A8: Claims and supporting evidence are arranged (e.g., spatially, chronologically, order of importance) to convey reasoning and relationship (e.g., comparative, causal, correlational).</p> <p>EK 4.1A9: The same argument may be organized, arranged, or supported in multiple ways depending on audience and context.</p>
	LO 4.2B: Providing insightful and cogent commentary that links evidence with claims.	<p>EK 4.2A1: Evidence can be collected from print and nonprint sources (e.g., libraries, museums, archives), experts, or data gathered in the field (e.g., interviews, questionnaires, observations).</p> <p>EK 4.2A2: Compelling evidence is used to support the claims and reasoning of an argument. Evidence should be sufficient, typical, relevant, current, and credible to support the conclusion.</p> <p>EK 4.2A3: Evidence is chosen based on purpose (e.g., to align an argument with authority; to define a concept, illustrate a process, or clarify a statement; to set a mood; to provide an example; to amplify or qualify a point).</p> <p>EK 4.2A4: Evidence is strategically included or excluded to appeal to or influence a particular audience.</p> <p>EK 4.2B1: Commentary connects the chosen evidence to the claim through interpretation or inference, identifying patterns, describing trends, and/or explaining relationships (e.g., comparative, causal, correlational).</p>

Enduring Understandings (Students will understand that . . .)	Learning Objectives (Students will be skilled at . . .)	Essential Knowledge (Students will know that . . .)
	LO 4.2C: Attributing knowledge and ideas accurately and ethically, using an appropriate citation style.	<p>EK 4.2C1: 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.</p> <p>EK 4.2C2: Source material should be introduced, integrated, or embedded into the text of an argument.</p> <p>EK 4.2C3: Quoted and paraphrased material must be properly attributed, credited, and cited following a style manual. Quoting is using the exact words of others; paraphrasing is restating an idea in your own words.</p> <p>EK 4.2C4: Academic disciplines use specific style guides for citing and attributing sources (e.g., APA, MLA, Chicago, AMA).</p>
EU 4.3: Achievement of new understandings involves the careful consideration of existing knowledge, imagination, innovation, and risk taking and incorporates personally generated evidence.	LO 4.3A: Extending an idea, question, process, or product to innovate or create new understandings.	EK 4.3A1: Innovative solutions and arguments identify and challenge assumptions, acknowledge the importance of content, imagine and explore alternatives, and engage in reflective skepticism.
EU 4.4: Arguments and solutions have intended and unintended consequences and implications.	LO 4.4A: Offering resolutions, conclusions, and/or solutions based on evidence while considering consequences and implications.	EK 4.4A1: When proposing a solution, the advantages and disadvantages of the options and alternatives should be weighed against the goal within its context.

Big Idea 5: Team, Transform, and Transmit

Collaboration, communication, and reflection are fundamental 21st-century skills that provide opportunities for students to use their learning. When collaborating, students draw upon their own strengths and the strengths of teammates to achieve a common goal. Students should engage in peer review and personal revision to refine and tailor their arguments. Arguments are effectively communicated when their purpose is clear, they are tailored to a specific audience and context, and they are conveyed through a medium appropriate and appealing to the intended audience. Adhering to standard language conventions and engaging delivery techniques establishes a writer's or speaker's credibility with his or her audience. Whether working alone or in a group, students reflect on their work and learning processes, which can lead to personal growth as well as even more effective inquiry, learning, and collaboration.

Essential Questions

- ▶ How can I best appeal to and engage my audience?
- ▶ What is the best medium or genre through which to reach my audience?
- ▶ What common misconceptions might my audience have?
- ▶ How do I adapt my argument for different audiences and situations?
- ▶ How do my communication choices affect my credibility with my audience?
- ▶ What contributions can I offer to a team?
- ▶ What is the benefit of revision?
- ▶ How can I benefit from reflecting on my own work?

Enduring Understandings (Students will understand that . . .)	Learning Objectives (Students will be skilled at . . .)	Essential Knowledge (Students will know that . . .)
EU 5.1: How an argument is presented affects how people interpret or react to it.	LO 5.1A: Working both as an individual and with a team to plan, produce, and present a cohesive argument, considering audience, context, and purpose, and using appropriate media (e.g., essay, poster, presentation, documentary, research report/thesis).	EK 5.1A1: An argument may include the following elements: <ul style="list-style-type: none"> ▶ Introduction: engage the audience by providing background and/or context ▶ Claim: convey the main idea of an argument ▶ Reasons, evidence, and commentary: provide support for the argument ▶ Concession, refutation, and rebuttal: acknowledge and/or respond to opposing arguments ▶ Conclusion: reinforce points, offer additional analysis, possible implications for the future, tie back to the introduction ▶ References

Enduring Understandings (Students will understand that . . .)	Learning Objectives (Students will be skilled at . . .)	Essential Knowledge (Students will know that . . .)
		<p>EK 5.1A2: Coherence is achieved when the elements and ideas in an argument flow logically and smoothly. Transitions are used to move the audience from one element or idea to another by illustrating the relationship between the elements or ideas.</p> <p>EK 5.1A3: Effective organizational and design elements (e.g., headings, layout, illustrations, pull quotes, captions, lists) may aid in audience engagement and understanding by calling attention to important information and/or creating emotional responses in the audience. Ineffective use or overuse of these elements disrupts audience engagement and understanding.</p> <p>EK 5.1A4: Data and other information can be presented graphically (e.g., infographics, graphs, tables, models) to aid audience understanding and interpretation.</p> <p>EK 5.1B1: A writer or speaker expresses tone or attitude about a topic through word choice, sentence structure, and imagery.</p> <p>EK 5.1B2: Effective sentences create variety, emphasis, and interest through structure, agreement of elements, placement of modifiers, and consistency of tense.</p> <p>EK 5.1B3: Precision in word choice reduces confusion, wordiness, and redundancy.</p> <p>EK 5.1B4: Spelling and grammar errors detract from credibility.</p> <p>EK 5.1C1: Speakers vary elements of delivery (e.g., volume, tempo, movement, eye contact, vocal variety, energy) to emphasize information, convey tone, and engage their audience.</p>
	<p>LO 5.1B: Communicating an argument in an evidence-based written essay adhering to established conventions of grammar usage, style, and mechanics.</p> <p>LO 5.1C: Communicating an argument in an engaging oral presentation using appropriate media, incorporating effective techniques of design and delivery.</p>	
EU 5.2: Teams are most effective when they draw on the diverse perspectives, skills, and backgrounds of team members to address complex, open-ended problems.	LO 5.2A: Providing individual contributions to overall collaborative effort.	EK 5.2A1: Knowing and communicating one's strengths and challenges to a group allows one's contributions to be more effective.

Enduring Understandings (Students will understand that . . .)	Learning Objectives (Students will be skilled at . . .)	Essential Knowledge (Students will know that . . .)
	LO 5.2B: Fostering constructive team climate, resolving conflicts, and facilitating the contributions of all team members to address complex, open-ended problems.	<p>EK 5.2B1: Teams are built around tasks. Low-risk teambuilding activities and simulations enhance a team's performance.</p> <p>EK 5.2B2: Teams function at their best when they understand the diversity of their social-cultural perspectives, talents, and skills.</p> <p>EK 5.2B3: Teams function at their best when they practice effective interpersonal communication, consensus building, conflict resolution, and negotiation.</p> <p>EK 5.2B4: Effective teams consider the use of online collaborative tools.</p>
EU 5.3: Reflection increases learning, self-awareness, and personal growth through the slowing down of thinking processes to identify and evaluate personal conclusions and their implications.	<p>LO 5.3A: Reflecting on and revising their own writing, thinking, and/or processes.</p> <p>LO 5.3B: Reflecting on personal contributions to overall collaborative effort.</p>	<p>EK 5.3A1: Reflection is an ongoing and recursive process in inquiry, often leading to changes in understanding. Strategies for reflection may include journal writing, self-questioning, and/or guided contemplation.</p> <p>EK 5.3B1: Learning requires practice through an iterative process of thinking/rethinking, vision/revision, and writing/rewriting.</p> <p>EK 5.3B2: Reflective contributors acknowledge the impact of their actions on the outcome of the group's efforts, noting the reasons for such actions, assumptions made, and whether or not such actions and assumptions hindered or helped the achievement of the group's goals.</p>

AP Seminar Instructional Approaches

Organizing the Course

Inquiry and the Academic Conversation

While the AP Seminar course develops core skills for academic success, it also challenges students to learn to think critically about complex issues and form their own perspectives about them. For this reason, the course is organized around topics, themes, or issues chosen at the local level. Helping students move from reviewing literature to building an argument through inquiry is a key goal of the AP Seminar course.

Critical inquiry focuses on the creation of new ideas, perspectives, and arguments. Teachers must help students understand that the research process is not simply about collecting evidence or facts and then piecing them together. Instead, the research process is about *inquiry* — asking questions and coming to solutions and conclusions through serious thinking and reflection. The researcher seeks relevant information in articles, books, and other sources and develops an informed perspective built upon, but not merely derivative of, the ideas in the examined material. As a result, the research process is recursive, meaning that the researcher regularly revisits ideas, seeks new information when necessary, and reconsiders and refines the research questions, topic, and/or approach.

Facilitating students' entrance into academic or real-world conversations about complex issues is another key goal of the AP Seminar course. AP Seminar provides the forum for students to examine multiple, diverse perspectives on issues in order to better understand and appreciate their complexity. Students' cultural backgrounds and experiences provide a rich foundation from which to begin. By considering and evaluating the multiple perspectives of others, students develop their own individual perspectives and add their personal voices to the larger conversation.

All in all, the AP Seminar course aims to build independent, critical thinkers by empowering students to develop the skills and traits necessary for future academic study.

Course Content

Topics and Themes

Teachers have the flexibility to choose one or more appropriate themes that allow for deep interdisciplinary exploration based on:

- ▶ Concepts or issues from other AP courses
- ▶ Student interests
- ▶ Local and/or civic issues
- ▶ Academic problems or questions
- ▶ Global or international topics

Possible Themes

These themes are possible starting points. Within these themes, issues can be identified for exploration and investigation.

- | | | |
|------------------|----------------|-------------------------------|
| ▶ Aesthetics | ▶ Identity | ▶ Power |
| ▶ Belief | ▶ Immigration | ▶ Protest |
| ▶ Communication | ▶ Innovation | ▶ Representation |
| ▶ Courage | ▶ Intelligence | ▶ Revolution |
| ▶ Culture | ▶ Justice | ▶ Rights and responsibilities |
| ▶ Democracy | ▶ Language | ▶ Social media |
| ▶ Discovery | ▶ Leisure | ▶ Space |
| ▶ Discrimination | ▶ Liberty | ▶ Sustainability |
| ▶ Diversity | ▶ Media | ▶ Technology |
| ▶ Education | ▶ Modeling | ▶ Theory |
| ▶ Environment | ▶ Myth | ▶ Traditions |
| ▶ Evolution | ▶ Networks | ▶ Transformation |
| ▶ Food | ▶ Opportunity | ▶ Utopia |
| ▶ Freedom | ▶ Patterns | ▶ War |
| ▶ Government | ▶ Peace | ▶ Wealth and poverty |
| ▶ Health | ▶ Perception | ▶ Work |
| ▶ Home | ▶ Place | |

Multiple Perspectives and Interdisciplinary Connections

Exploring different points of view and making connections across disciplines are fundamental components of the AP Seminar experience. Students consider each topic through a variety of lenses and from multiple perspectives, many of which are divergent or competing. Analyzing topics through multiple lenses aids in interdisciplinary understanding and helps students gain a rich appreciation for the complexity of important issues. Teachers should encourage students to explore a topic through several of the following lenses:

- ▶ Cultural and social
- ▶ Artistic and philosophical
- ▶ Political and historical
- ▶ Environmental
- ▶ Economic
- ▶ Scientific
- ▶ Futuristic
- ▶ Ethical

As the AP Program engages students in college-level work, the AP Seminar course may include perspectives that could be considered controversial, including references to ethnicity, nationality, religion, politics, race, dialect, sexuality, gender, or class. AP Seminar requires students to have the level of maturity and skill to thoughtfully consider and analyze diverse perspectives. The inclusion of topics, readings, texts, and other source material is not intended as an endorsement by the College Board of the content, ideas, or values expressed in the material.

Texts

Because people share their perspectives through many different types of media, teachers and students are encouraged to draw upon a wide variety of texts. These texts can include printed and online articles, speeches, interviews, and personal narratives, artistic works and performances, or other kinds of texts — anything that conveys a perspective and can be examined.

When selecting texts for study, teachers should challenge students to engage with and analyze complex and scholarly sources. Helping students with the identification of scholarly materials requires a discussion of peer review, which differentiates scholarly from nonscholarly sources in an academic, research community. Students should be invited to find and contribute texts for study, providing them opportunities to make connections of their own.

Access to a variety of print and online style guides, writing and argumentation handbooks, databases, and other reference materials is essential to equip students and teachers with the tools necessary for research and communication. The AP Capstone program does not require or specify a specific style guide. However, students should maintain the conventions of a single style guide in an individual project.

Organizational Models

AP Seminar can be organized in a variety of ways to best address student interests, state and district goals and requirements, and local school traditions and culture. The following table illustrates some possible organizational models.

AP Seminar Model	Description	Example Courses
Thematic Survey	Themes are selected based on teacher and student interest. The themes may be linked with overarching focus or they may be more loosely connected. Interdisciplinary connections are made within each theme and issues are examined through multiple lenses and perspectives.	Civic Engagement Themes are selected by the teacher to support the school's service learning initiative. The units use essential questions to engage students with community issues and challenges: <ul style="list-style-type: none"> ▶ Democracy: Does my civic engagement make a difference? ▶ Sustainability: What impact do I have? ▶ Traditions: Do local traditions encourage or hinder community progress? ▶ Health: How do my choices affect our future?

AP Seminar Model	Description	Example Courses
Disciplinary Focus	The course content is grounded in a specific discipline. Interdisciplinary connections are made to the topics of study.	<p>Student Interest</p> <p>Students are given a list of 10 possible themes by the teacher and asked to rate them. The four highest-rated themes are used for the course:</p> <ul style="list-style-type: none"> ▶ Social networks and individual privacy ▶ Stereotypes in media ▶ Food supply and demand ▶ The youth revolution
		<p>Science</p> <p>This course (titled AP Seminar: Man and Nature) is offered as an elective in science. The interdisciplinary units connect scientific study with real-world sustainability issues:</p> <ul style="list-style-type: none"> ▶ Marine debris ▶ Renewable energy ▶ Food scarcity ▶ Greenhouse gas emissions ▶ LEED certification
		<p>Arts</p> <p>This course is offered to students who have an interest or area of emphasis in the arts. The selected themes allow students to examine common issues that intersect the various arts disciplines through multiple lenses:</p> <ul style="list-style-type: none"> ▶ Aesthetics and Interpretation: What is beauty and who decides? ▶ Culture and Context: How does culture and context influence art's creation? ▶ Transformation and Innovation: How do new forms of art come about? ▶ Myth and Pattern: How does one work of art influence another? Are works of art universal?

AP Seminar Model	Description	Example Courses
Thematic Survey Linked to AP Anchor Course	AP Seminar students are concurrently enrolled in another common AP course, allowing for team teaching and interdisciplinary units.	<p>AP Seminar: American Studies</p> <p>Students are concurrently enrolled in AP U.S. History, allowing for cross-curricular connections between the two courses:</p> <ul style="list-style-type: none"> ▶ Place and Frontiers: Relationships between humans and their environment ▶ Belief and Values: Perspectives on faith and religion ▶ Revolution and Freedom: Historical ideas of protest and solidarity ▶ Identity and Expansion: Diverse views about U.S. expansion, citizenship, and the American dream ▶ Wealth and Poverty: Social and cultural topics and perspectives about current issues
Interdisciplinary Courses	All course topics are connected and cross disciplinary boundaries.	<p>The two example courses listed here are modeled on courses offered as part of the Thinking Matters program at Stanford University.</p> <p>AP Seminar: Sustainability and Collapse</p> <p>Students explore how people have lived with nature over time and how different ways of life have come under pressure. Using fictional and historical texts, students consider definitions of nature from different historical, literary, cultural, and scientific perspectives and examine how these conceptions of nature impact the way we think of what it means to live sustainably.</p> <p>AP Seminar: Networks</p> <p>Students examine and consider how ecological, revolutionary, digital, and social networks are used to understand the natural world, historical change, and social lives. Students will consider networks from the perspectives of a biologist, a computer scientist, a historian and a social scientist.</p>

Discussion Techniques

Discussion is an essential instructional method in the AP Seminar course because it helps students identify and understand multiple perspectives and deepen their own understanding of the topics being studied. Effective discussion goes beyond summary and comprehension in that it requires students to actively grapple with others' ideas as they formulate their own perspectives on an issue. Some discussion strategies are listed in the following table.

Strategy	Purpose	Definition
Socratic Seminar	To help students arrive at a new understanding by asking questions that clarify; challenge assumptions; probe perspective and point of view; question facts, reasons, and evidence; or examine implications and outcomes.	A focused discussion tied to a topic, essential question, or selected text in which students ask questions of one another. The questions initiate a conversation that continues with a series of responses and additional questions.
Debate	To provide students with an opportunity to collect and orally present evidence supporting the affirmative and negative arguments of a proposition or issue.	The presentation of an informal or formal argumentation that defends a claim with reasons, while others defend different claims about the same topic or issue. The goal is to debate ideas without attacking the people who defend those ideas.
Jigsaw	To have students summarize and present information to others in a way that facilitates an understanding of a text (or multiple texts) or issue without having each student read the text in its entirety; by teaching others, they become experts.	Each student in a group reads a different text or different passage from a single text, taking on the role of “expert” on what was read. Students share the information from that reading with students from other groups and then return to their original groups to share their new knowledge.
Fishbowl	To provide students with an opportunity to engage in a formal discussion and to experience the roles of both participant and active listener; students also have the responsibility of supporting their opinions and responses using specific evidence.	Some students form an inner circle and model appropriate discussion techniques while an outer circle of students listens, responds, and evaluates.
Shared Inquiry	To allow a teacher to lead a deep discussion of a text and encourage a diversity of ideas to emerge as students think deeply and share interpretations.	Students read a provocative text and are asked interpretative questions (questions for which there are no predetermined “right” answers). Students offer different answers and debate one another, supporting their positions with specific evidence from the text.
Discussion Group	To allow students to gain new understanding of or insight into a text or issue by listening to multiple perspectives.	Students engage in an interactive, small-group discussion, often with an assigned role (e.g., questioner, summarizer, facilitator, evidence keeper) to consider a topic, text, question, etc.
Debriefing	To solidify and deepen student understanding.	A facilitating discussion that leads to consensus understanding or helps students identify the key conclusions or takeaways.

Teaching the Skills

The focus of AP Seminar is on skill development: students practice, refine, and master the skills critical for academic success. The curriculum framework identifies the learning objectives and essential knowledge that address the core skills listed below in more detail. As teachers create instructional units, they should carefully plan so that skills are developmentally sequenced and spiraled off. The table below illustrates representative instructional strategies that can be used to help students develop these core skills.

Core Skill Area	Description	Representative Instructional Strategies
Critical Thinking and Reasoning	<p>The thinking process of analyzing, interpreting, synthesizing, and evaluating perspectives.</p> <p>Thinking strategies used in critical thinking include:</p> <ul style="list-style-type: none"> ▶ comparing and/or contrasting ▶ identifying patterns and trends ▶ explaining relationships (comparative, casual, correlational) 	<p>Graphic organizers</p> <p>Notemaking</p>
Critical Reading	<p>The strategic process of discovering ideas and information in a text.</p> <p>Critical reading strategies include:</p> <ul style="list-style-type: none"> ▶ contextualizing ▶ questioning assumptions ▶ identifying bias and implications ▶ making inferences ▶ making connections 	<p>Close reading</p> <p>Marking the text</p> <p>Summarizing, paraphrasing, retelling</p> <p>Metacognitive markers</p> <p>Previewing</p> <p>Questioning the text</p> <p>Think-alouds</p> <p>Chunking the text</p>
Inquiry and Research	<p>The process of discovering new understandings or ideas.</p> <p>Inquiry and research strategies include:</p> <ul style="list-style-type: none"> ▶ identifying a problem or issue ▶ determining the best strategy to address the problem or issue ▶ gathering evidence ▶ drawing and supporting a conclusion 	<p>I-Search</p> <p>Service learning</p> <p>Webquest</p>

Core Skill Area	Description	Representative Instructional Strategies
Argumentation	<p>The process of making a claim and developing a line of reasoning supported by evidence.</p> <p>Critical components of argumentation include:</p> <ul style="list-style-type: none"> ▶ thesis development ▶ developing a line of reasoning ▶ making claims ▶ selecting evidence and attributing its use ▶ providing commentary ▶ considering other perspectives ▶ drawing a conclusion ▶ attention to grammar, usage, and mechanics 	<p>Outlining</p> <p>Debates</p> <p>Socratic seminars</p>
Communicating Publically	<p>The process of conveying a clear message in a way that engages and appeals to a specific audience.</p> <p>Techniques that may be used to emphasize ideas and engage an audience include:</p> <ul style="list-style-type: none"> ▶ eye contact ▶ vocal variety (tempo, inflection) ▶ emphatic gestures ▶ movement ▶ appropriate visuals 	<p>Practice</p> <p>Modeling</p> <p>Self-evaluation and reflection</p> <p>Peer review</p> <p>Videotaping</p>
Collaboration	<p>The process of working with others to accomplish a shared task or goal or solve a problem.</p> <p>Strategies for collaboration include:</p> <ul style="list-style-type: none"> ▶ individual role and contribution ▶ consensus building ▶ conflict resolution 	<p>Cooperative groups</p> <p>Teams and games</p> <p>Teambuilding</p>

AP Capstone Policy on Plagiarism

A student who fails to acknowledge (i.e., through citation, through attribution, by reference, and/or through acknowledgment in a bibliographic entry) the source or author of any and all information or evidence taken from the work of someone else will receive a score of zero on that particular component of the AP Seminar and/or AP Research Performance Assessment Task. In AP Seminar, a team of students that fails to properly acknowledge sources or authors on the Written Team Report will receive a group score of zero for that component of the Team Project and Presentation.

To the best of their ability, teachers will ensure that students understand ethical use and acknowledgment of the ideas and work of others, as well as the consequences of plagiarism. The student's individual voice should be clearly evident, and the ideas of others must be acknowledged, attributed, and/or cited.

Bridging to the AP Research Course

Upon class completion of the assessment tasks for the AP Seminar course, teachers should provide students with a preview of the skills, goals, and timelines of the next course in the AP Capstone program: AP Research. Students who will continue on to the AP Research course should be given the opportunity to:

- ▶ develop a list of topics and high-level questions to spark their interest in engaging in an individual research project;
- ▶ identify potential mentors to guide them in the planning and development of their research project;
- ▶ identify potential opportunities (if they are interested) to perform primary research with a mentor during the summer, via internships or summer research projects for high school students offered in the community and local higher education institutions; and
- ▶ discuss research project planning skills and ideas with students who are currently taking the AP Research course.

In schools that permit students to begin the AP Research course in the summer, the AP Seminar and AP Research course instructors should provide AP Research students with additional instruction, assignments, and avenues for continued communication to guide them through the research planning process during the summer months.

AP Seminar Assessment Overview

Students are assessed with two through-course performance assessment tasks and one end-of-course exam. All three assessments are summative and will be used to calculate a final AP score (using the 1–5 scale) for AP Seminar.

- ▶ **Team Project and Presentation — 25%**
- ▶ **Individual Research-Based Essay and Presentation — 35%**
- ▶ **End-of-Course Exam (3 Hours) — 40% (College Board Scored)**

AP Seminar Performance Assessment Task: Team Project and Presentation

Weight: 25% of the AP Seminar score

Recommended Completion Date: February 28

Submission Deadline: April 30

*Note: Teachers must carefully plan a calendar that provides time for **all** the tasks to be completed, scored, and uploaded by April 30.*

Teachers must upload and submit the following for this task by April 30:

- ▶ Individual Research and Reflection for each student
- ▶ All Written Team Reports
- ▶ Internal Score Report for the following components
 - › Individual Research and Reflection (IRR)
 - › Written Team Report (WTR)
 - › Team Multimedia Presentation and Defense (TMP)

Task Overview

Students work in teams of three to six to identify, investigate, analyze, and evaluate an academic or real-world problem, question, or issue. Each team designs and/or considers options, alternatives, and approaches; develops a written report and multimedia presentation to communicate its conclusions, solutions, or recommendations; and provides a defense to questions posed by the teacher.

Components

The following components are formally assessed:

Component	Scoring Method	Weight
Individual Research and Reflection (single document, approximately 2,000 words: 1,200 research/800 reflection)	Teacher scored, College Board validated (individual score)	25% of 25%
Written Team Report (approximately 3,000 words)	Teacher scored, College Board validated (group score)	50% of 25%
Team Multimedia Presentation and Defense (8–10 minutes, plus defense questions)	Teacher scored (group score)	25% of 25%

Learning Objectives Assessed in Team Project and Presentation

AP Seminar Learning Objectives for Team Project and Presentation		IRR	WTR	TMP
1.1A	Identifying and contextualizing a problem or issue.	X	X	
1.1B	Posing complex questions and seeking out answers that reflect multiple, divergent, or contradictory perspectives.	X	X	
1.2A	Retrieving, questioning, organizing, and using prior knowledge about a topic.			
1.3A	Accessing information using effective strategies.			
1.3B	Using technology to access and manage information.			
1.3C	Evaluating the relevance and credibility of information from sources and data.	X		
1.4A	Identifying alternatives for approaching a problem.		X	
2.1A	Employing appropriate reading strategies and reading critically for a specific purpose.			
2.1B	Summarizing and explaining the main idea and the line of reasoning, and identifying the supporting details of an argument, while avoiding generalizations and oversimplification.	X		
2.2A	Identifying, explaining, and analyzing the logic and line of reasoning of an argument.			
2.2B	Describing and analyzing the relevance and credibility of evidence used to support an argument, taking context into consideration.	X		
2.2C	Evaluating the validity of an argument.		X	

AP Seminar Learning Objectives for Team Project and Presentation		IRR	WTR	TMP
2.3A	Connecting an argument to broader issues by examining the implications of the author's claim.			
2.3B	Evaluating potential resolutions, conclusions, or solutions to problems or issues in an argument.		X	
3.1A	Identifying and interpreting multiple perspectives on or arguments about an issue.		X	
3.2A	Evaluating objections, implications, and limitations of alternate, opposing, or competing perspectives or arguments.		X	
4.1A	Formulating a complex and well-reasoned argument.		X	
4.2A	Interpreting, using, and synthesizing qualitative and/or quantitative data/information from various perspectives and sources (e.g., primary, secondary, print, nonprint) to develop and support an argument.	X	X	
4.2B	Providing insightful and cogent commentary that links evidence with claims.		X	
4.2C	Attributing knowledge and ideas accurately and ethically, using an appropriate citation style.	X	X	
4.3A	Extending an idea, question, process, or product to innovate or create new understandings.			
4.4A	Offering resolutions, conclusions, and/or solutions based on evidence while considering consequences and implications.		X	X
5.1A	Working both as an individual and with a team to plan, produce, and present a cohesive argument, considering audience, context, and purpose, and using appropriate media (e.g., essay, poster, presentation, documentary, research report/thesis).			X
5.1B	Communicating an argument in an evidence-based written essay adhering to established conventions of grammar, usage, style, and mechanics.	X	X	
5.1C	Communicating an argument in an engaging oral presentation using appropriate media, incorporating effective techniques of design and delivery.			X
5.2A	Providing individual contributions to overall collaborative effort.			X
5.2B	Fostering constructive team climate, resolving conflicts, and facilitating the contributions of all team members to address complex, open-ended problems.			
5.3A	Reflecting on and revising their own writing, thinking, and/or processes.	X		
5.3B	Reflecting on personal contributions to overall collaborative effort.	X		

Task Guidelines

In this project, three to six students collaborate as a team to identify a problem or issue (e.g., local, national, global, academic/theoretical/philosophical). Each team develops a team research question and conducts preliminary research. They identify approaches, perspectives, or lenses and divide responsibilities among themselves for individual research that will address the team's research question.

Individually, students investigate an approach, perspective, or lens on the issue or topic of the team research question. Each student presents his or her findings and analysis to the group in a well-written individual report that

- ▶ identifies the area of investigation and its relationship to the overall problem, question, or issue;
- ▶ describes and analyzes the line of reasoning and evidence of the information collected;
- ▶ explains and synthesizes the range of information and perspectives considered and the relevance of that information to the problem, question, or issue;
- ▶ justifies the inclusion and exclusion of information advanced to the team; and
- ▶ cites and attributes any information included.

Working collaboratively, the team considers all of the research and analyses from individual team members for the purpose of proposing or creating one or more solutions, conclusions, or recommendations.

The team evaluates and integrates the findings and perspectives from individual research, synthesizing the most effective arguments and supporting evidence, and proposes additional research that may need to be done to further develop the team report.

Together, the team prepares a well-written report that

- ▶ introduces, situates, contextualizes, and/or explains the problem or issue and identifies each team member's approach to that problem or issue;
- ▶ proposes one or more solutions, conclusions, or recommendations to the problem or issue that are based on evidence and consider consequences and implications;
- ▶ appropriately acknowledges, attributes, and/or cites the ideas and work of authors of outside sources; and
- ▶ includes a bibliography of works cited.

The team develops an 8–10 minute presentation that conveys its key findings and delivers the presentation to an audience of its peers. The presentation and the media used to enhance the presentation should consider audience, context, and purpose. The presentation should reflect the major components of the written team report. Following the presentation, the team will defend its argument, with each student responding to a question posed by the teacher. Each team member should be prepared to answer questions about any part of the presentation.

Finally, each student writes a reflection, which will be added to his or her individual research report, that describes

- ▶ how he or she approached the process of researching and solving a problem or issue
- ▶ how his or her understanding of the problem or issue developed and/or changed
- ▶ how working with the group deepened or otherwise influenced his or her thinking and writing

Role of Teacher

Teachers

- ▶ must ensure students are aware of the task, timeline, components, and scoring criteria
- ▶ may explore issues, discuss topics and perspectives, and/or question students as necessary
- ▶ oversee the formation of groups

Teachers may not

- ▶ assign, provide, distribute, or generate research questions for students
- ▶ conduct or provide research/articles/evidence for students
- ▶ write, revise, amend, or correct student work
- ▶ reveal defense questions to students prior to the presentation

AP Seminar Performance Assessment Task: Individual Research-Based Essay and Presentation

Weight: 35% of the AP Seminar score

Recommended Completion Date: April 15

Submission Deadline: April 30

*Note: Students must be given at least 30 school days (state testing, spring breaks, holidays, etc. would not count toward those days) to complete their research, compose their essays, and develop their presentations. The actual presentations must take place outside the 30-day window. The task is complex and rigorous, so students must be given sufficient time to complete it. Teachers would disadvantage students by giving them less time. Giving more time could also disadvantage students by reducing the time available for completing the Team Project and Presentation. Teachers should collect written work and presentation media from every student in the school's AP Seminar course(s) before any student actually delivers the oral presentation. Teachers must carefully plan a calendar that provides time for **all** the tasks to be completed, scored, and uploaded by April 30.*

Teachers must upload and submit the following for this task by April 30:

- ▶ Individual Written Argument for each student
- ▶ Internal Score Report for the following components:
 - › Individual Written Argument (WA)
 - › Individual Multimedia Presentation (IMP)
 - › Oral Defense (OD)

Task Overview

The College Board's AP Program will annually release cross-curricular stimulus material (texts) representing a range of perspectives focused on a single theme. Students will use these texts to identify a research question of their own; conduct research; analyze, evaluate, and select evidence to develop an argument; and present and defend their conclusions. The final paper must refer to and incorporate at least one of the provided sources.

Criteria for Stimulus Material

On or about January 2 of each year, the College Board will release academic, cross-curricular stimulus material (texts) focused on a theme representing a range of perspectives from each of the following domains:

- ▶ Natural Sciences, Technology, Mathematics, Environment
- ▶ Social Sciences, Politics, Economics, Psychology
- ▶ Arts (Visual Arts, Music, Dance, Theater)
- ▶ Culture, Languages, Linguistics
- ▶ History
- ▶ Literature, Philosophy, Critical Theory/Criticism

The following will be represented in the texts:

- ▶ Visual text and/or multimedia
- ▶ Quantitative data

Note: The inclusion of sources in this exam is not intended as an endorsement by the College Board or ETS of the content, ideas, or values expressed by the authors.

Components

The following components are formally assessed:

Component	Scoring Method	Weight
Individual Written Argument (approximately 2,000 words)	Teacher scored, College Board validated	60% of 35%
Individual Multimedia Presentation (6–8 minutes)	Teacher scored	30% of 35%
Oral Defense (two questions from the teacher)	Teacher scored	10% of 35%

Learning Objectives Assessed in Individual Research-Based Essay and Presentation

AP Seminar Learning Objectives for Individual Research-Based Essay and Presentation		WA	IMP	OD
1.1A	Identifying and contextualizing a problem or issue.	X	X	
1.1B	Posing complex questions and seeking out answers that reflect multiple, divergent, or contradictory perspectives.	X		
1.2A	Retrieving, questioning, organizing, and using prior knowledge about a topic.			
1.3A	Accessing information using effective strategies.			
1.3B	Using technology to access and manage information.			
1.3C	Evaluating the relevance and credibility of information from sources and data.	X		X
1.4A	Identifying alternatives for approaching a problem.			
2.1A	Employing appropriate reading strategies and reading critically for a specific purpose.			
2.1B	Summarizing and explaining the main idea and the line of reasoning, and identifying the supporting details of an argument, while avoiding generalizations and oversimplification.			
2.2A	Identifying, explaining, and analyzing the logic and line of reasoning of an argument.			

AP Seminar Learning Objectives for Individual Research-Based Essay and Presentation		WA	IMP	OD
2.2B	Describing and analyzing the relevance and credibility of evidence used to support an argument, taking context into consideration.		X	
2.2C	Evaluating the validity of an argument.			
2.3A	Connecting an argument to broader issues by examining the implications of the author's claim.			
2.3B	Evaluating potential resolutions, conclusions, or solutions to problems or issues in an argument.	X		
3.1A	Identifying and interpreting multiple perspectives on or arguments about an issue.	X		
3.2A	Evaluating objections, implications, and limitations of alternate, opposing, or competing perspectives or arguments.	X		
4.1A	Formulating a complex and well-reasoned argument.	X	X	
4.2A	Interpreting, using, and synthesizing qualitative and/or quantitative data/information from various perspectives and sources (e.g., primary, secondary, print, nonprint) to develop and support an argument.	X	X	
4.2B	Providing insightful and cogent commentary that links evidence with claims.	X	X	
4.2C	Attributing knowledge and ideas accurately and ethically, using an appropriate citation style.	X		
4.3A	Extending an idea, question, process, or product to innovate or create new understandings.			X
4.4A	Offering resolutions, conclusions, and/or solutions based on evidence while considering consequences and implications.	X	X	
5.1A	Working both as an individual and with a team to plan, produce, and present a cohesive argument, considering audience, context, and purpose, and using appropriate media (e.g., essay, poster, presentation, documentary, research report/thesis).			
5.1B	Communicating an argument in an evidence-based written essay adhering to established conventions of grammar, usage, style, and mechanics.	X		
5.1C	Communicating an argument in an engaging oral presentation using appropriate media, incorporating effective techniques of design and delivery.		X	
5.2A	Providing individual contributions to overall collaborative effort.			
5.2B	Fostering constructive team climate, resolving conflicts, and facilitating the contributions of all team members to address complex, open-ended problems.			
5.3A	Reflecting on and revising their own writing, thinking, and/or processes.			
5.3B	Reflecting on personal contributions to overall collaborative effort.			

Task Guidelines

Teachers must ensure that students will have at least 30 school days to complete this project upon distribution of the stimulus materials. *Students must be given at least 30 school days to complete their research, compose their essays, and develop their presentations.* Student presentations must be scheduled after the 30-day window.

Teachers engage students in discussions of emerging issues from the cross-curricular stimulus material supplied by the College Board. Materials are released on or about January 2 of each year, and students must address the current year's stimulus material in their written responses.

Students identify a research question of their own prompted by the stimulus material. They then gather additional information through research; analyze, evaluate, and select evidence; and develop a logical, well-reasoned argument of approximately 2,000 words. The final paper must refer to and incorporate at least one of the sources provided.

Students must avoid plagiarism by acknowledging, attributing, and/or citing sources throughout the paper and including a bibliography (see AP Capstone Policy on Plagiarism).

Students each develop a 6–8 minute presentation using appropriate media and present it to an audience of their peers. This presentation is an opportunity for students to present their conclusions by building arguments that convey their perspectives. The presentations should use the evidence to support students' own arguments and situate their perspectives in their larger contexts rather than merely summarizing student research. Finally, students defend their research process, use of evidence, and conclusion through oral responses to two questions asked by the teacher.

Role of Teacher

Teachers

- ▶ must ensure students are aware of the task, timeline, components, types of and sample generic questions for the defense, and scoring criteria
- ▶ may lead discussion of the stimulus material, discuss topics and perspectives, and/or question students as necessary

Teachers may not

- ▶ assign, provide, distribute, or generate research questions for students
- ▶ conduct or provide research/articles/evidence for students
- ▶ write, revise, amend, or correct student work
- ▶ provide or identify specific defense questions a student will be asked prior to his or her defense

Instructions for the Oral Defense

Following the presentation, teachers should ask two questions of the student. This component is designed to assess the student's response to and understanding of the two criteria below, and a question must be asked to address each of them. Teachers may select questions from the list or formulate more specific questions appropriate to a student's presentation, as long as the questions posed address the two criteria below. Teachers may also ask follow-up clarifying questions to allow students the opportunity to fully explain their answers.

1. Source selection and use

- › How did the stimulus material inspire your original research? What source prompted your research question?
- › What information did you need before you began your research, and how did that information shape your research?
- › What evidence did you gather that you didn't use? Why did you choose not to use it?
- › How valid and reliable are the sources you've used? How do you know? Which sources didn't work?
- › How did you select the strategies you used to gather information or conduct research? Were they effective?
- › How did your research question evolve as you moved through the research process? Did your research go in a different direction than you originally planned/hypothesized?
- › What information did you need that you weren't able to find or locate? How did you go about trying to find that information?
- › How did you handle the differing perspectives in order to reach a conclusion?

2. Extending argumentation through effective questioning and inquiry

- › What additional questions emerged from your research? Why are these questions important?
- › What advice would you have for other researchers who consider this topic?
- › What might be the real-world implications or consequences (influence on others' behaviors or decision-making processes) of your findings? What are the implications to your community?
- › If you had more time, what additional research would you conduct related to this issue?
- › Explain the level of certainty you have about your conclusion, solution, or recommendation.
- › How does your conclusion respond to any of the other research or sources you examined?
- › How did you use the conclusions and questions of others to advance your own research?

AP Seminar End-of-Course Exam

Weight: 40% of the AP Seminar score (College Board scored)

Date: May (in the AP Exam administration window)

Note: The end-of-course exam will be administered by the AP Coordinator following the same procedures and guidelines as all other Advanced Placement Exams.

Task Overview

During the AP Exam administration window, students will take the AP Seminar End-of-Course Exam. The exam consists of five items (three short-answer and two essay questions). The three short-answer questions assess analysis of an argument in a single source or document. The first essay question requires the students to perform a close reading of two documents and perform a comparative analysis and evaluation of the authors' arguments. The second essay question assesses students' skills in synthesizing and creating an evidence-based argument.

Description of End-of-Course Exam

Seven sources will be included with each end-of-course exam. Sources and readings on the end-of-course exam will represent a range of disciplines and perspectives. The five questions listed in the table below will remain the same on the end-of-course exam from year to year.

Components

The following components are formally assessed:

Component	Scoring Method	Weight
Section 1, Part A Suggested time: 30 minutes One source provided Students are asked to analyze an argument using evidence. <ol style="list-style-type: none"> 1. Identify the author's argument, main idea, or thesis. 2. Explain the author's line of reasoning by identifying the claims used to build the argument and the connections between them. 3. Evaluate the effectiveness of the evidence the author uses to support the claims made in the argument. 	College Board scored	25% of 40%

Component	Scoring Method	Weight
Section I, Part B Suggested time: 60 minutes Two sources provided Students are asked to evaluate the effectiveness of two arguments on a similar question, problem, or issue. Each of the sources should present alternate, divergent, or contradictory perspectives. Directions: Read the following two (2) articles carefully, paying attention to their perspectives, implications, and limitations. Then, write an essay that compares the two arguments by evaluating their effectiveness. In your essay, address the relevance and credibility of the evidence each presents to support the authors' lines of reasoning.	College Board scored	35% of 40%
Section II Suggested time: 90 minutes Four sources provided Students are asked to build their own arguments using at least two of the four provided sources. Each of the four sources will explore a common theme through a different lens, allowing multiple entry points for students to approach the topic. Directions: Read the four (4) sources carefully, focusing on a theme or issue that connects them and the different perspective each represents. Then, write a logically organized, well-reasoned, and well-written argument that presents your own perspective on the theme or issue you identified. You must incorporate at least two (2) of the sources provided and link the claims in your argument to supporting evidence. You may also use the other provided sources or draw upon your own knowledge. In your response, refer to the provided sources as Source A, Source B, Source C, or Source D, or by the authors' names.	College Board scored	40% of 40%

Learning Objectives Assessed in End-of-Course Exam

	AP Seminar Learning Objectives for End-of-Course Exam	Section I, Part A	Section I, Part B	Section II
1.1A	Identifying and contextualizing a problem or issue.			X
1.1B	Posing complex questions and seeking out answers that reflect multiple, divergent, or contradictory perspectives.			
1.2A	Retrieving, questioning, organizing, and using prior knowledge about a topic.			
1.3A	Accessing information using effective strategies.			
1.3B	Using technology to access and manage information.			

	AP Seminar Learning Objectives for End-of-Course Exam	Section I, Part A	Section I, Part B	Section II
1.3C	Evaluating the relevance and credibility of information from sources and data.	X		
1.4A	Identifying alternatives for approaching a problem.			
2.1A	Employing appropriate reading strategies and reading critically for a specific purpose.			
2.1B	Summarizing and explaining the main idea and the line of reasoning, and identifying the supporting details of an argument, while avoiding generalizations and oversimplification.	X		
2.2A	Identifying, explaining, and analyzing the logic and line of reasoning of an argument.	X	X	
2.2B	Describing and analyzing the relevance and credibility of evidence used to support an argument, taking context into consideration.	X	X	
2.2C	Evaluating the validity of an argument.		X	
2.3A	Connecting an argument to broader issues by examining the implications of the author's claim.			
2.3B	Evaluating potential resolutions, conclusions, or solutions to problems or issues in an argument.			
3.1A	Identifying and interpreting multiple perspectives on or arguments about an issue.			X
3.2A	Evaluating objections, implications, and limitations of alternate, opposing, or competing perspectives or arguments.		X	
4.1A	Formulating a complex and well-reasoned argument.			X
4.2A	Interpreting, using, and synthesizing qualitative and/or quantitative data/information from various perspectives and sources (e.g., primary, secondary, print, nonprint) to develop and support an argument.			X
4.2B	Providing insightful and cogent commentary that links evidence with claims.			X
4.2C	Attributing knowledge and ideas accurately and ethically, using an appropriate citation style.			X
4.3A	Extending an idea, question, process, or product to innovate or create new understandings.			
4.4A	Offering resolutions, conclusions, and/or solutions based on evidence while considering consequences and implications.			

	AP Seminar Learning Objectives for End-of-Course Exam	Section I, Part A	Section I, Part B	Section II
5.1A	Working both as an individual and with a team to plan, produce, and present a cohesive argument, considering audience, context, and purpose, and using appropriate media (e.g., essay, poster, presentation, documentary, research report/thesis).			
5.1B	Communicating an argument in an evidence-based written essay adhering to established conventions of grammar, usage, style, and mechanics.			X
5.1C	Communicating an argument in an engaging oral presentation using appropriate media, incorporating effective techniques of design and delivery.			
5.2A	Providing individual contributions to overall collaborative effort.			
5.2B	Fostering constructive team climate, resolving conflicts, and facilitating the contributions of all team members to address complex, open-ended questions.			
5.3A	Reflecting on and revising their own writing, thinking, and/or processes.			
5.3B	Reflecting on personal contributions to overall collaborative effort.			

AP Seminar Overview of Learning Objectives Assessed

This chart shows which learning objectives are addressed by each of the course assessments.

Key

Team Project and Presentation: IRR = Individual Research and Reflection • WTR = Written Team Report • TMP = Team Multimedia Presentation

Individual Research-Based Essay and Presentation: WA = Individual Written Argument • IMP = Individual Multimedia Presentation • OD = Oral Defense

AP Seminar Learning Objectives		Team Project & Presentation			Individual Research-Based Essay & Presentation			End-of-Course Exam		
		IRR	WTR	TMP	WA	IMP	OD	Section I		Section II
								A	B	
1.1A	Identifying and contextualizing a problem or issue.	X	X		X	X				X
1.1B	Posing complex questions and seeking out answers that reflect multiple, divergent, or contradictory perspectives.	X	X		X					
1.2A	Retrieving, questioning, organizing, and using prior knowledge about a topic.									
1.3A	Accessing information using effective strategies.									
1.3B	Using technology to access and manage information.									
1.3C	Evaluating the relevance and credibility of information from sources and data.	X			X		X	X		
1.4A	Identifying alternatives for approaching a problem.		X							
2.1A	Employing appropriate reading strategies and reading critically for a specific purpose.									

AP Seminar Learning Objectives		Team Project & Presentation			Individual Research-Based Essay & Presentation			End-of-Course Exam	
		IRR	WTR	TMP	WA	IMP	OD	Section I	Section II
								A	B
2.1B	Summarizing and explaining the main idea and the line of reasoning, and identifying the supporting details of an argument, while avoiding generalizations and oversimplification.	X						X	
2.2A	Identifying, explaining, and analyzing the logic and line of reasoning of an argument.							X	X
2.2B	Describing and analyzing the relevance and credibility of evidence used to support an argument, taking context into consideration.	X				X		X	X
2.2C	Evaluating the validity of an argument.		X						X
2.3A	Connecting an argument to broader issues by examining the implications of the author's claim.								
2.3B	Evaluating potential resolutions, conclusions, or solutions to problems or issues in an argument.		X		X				
3.1A	Identifying and interpreting multiple perspectives on or arguments about an issue.		X		X				X
3.2A	Evaluating objections, implications, and limitations of alternate, opposing, or competing perspectives or arguments.		X		X			X	
4.1A	Formulating a complex and well-reasoned argument.		X		X	X			X

AP Seminar Learning Objectives		Team Project & Presentation			Individual Research-Based Essay & Presentation			End-of-Course Exam		Section II
		IRR	WTR	TMP	WA	IMP	OD	Section I		
								A	B	
4.2A	Interpreting, using, and synthesizing qualitative and/or quantitative data/information from various perspectives and sources (e.g., primary, secondary, print, nonprint) to develop and support an argument.	X	X		X	X				X
4.2B	Providing insightful and cogent commentary that links evidence with claims.		X		X	X				X
4.2C	Attributing knowledge and ideas accurately and ethically, using an appropriate citation style.	X	X		X					X
4.3A	Extending an idea, question, process, or product to innovate or create new understandings.						X			
4.4A	Offering resolutions, conclusions, and/or solutions based on evidence while considering consequences and implications.		X	X	X	X				
5.1A	Working both as an individual and with a team to plan, produce, and present a cohesive argument, considering audience, context, and purpose, and using appropriate media (e.g., essay, poster, presentation, documentary, research report/thesis).			X						
5.1B	Communicating an argument in an evidence-based written essay adhering to established conventions of grammar, usage, style, and mechanics.	X	X		X					X

AP Seminar Learning Objectives		Team Project & Presentation			Individual Research-Based Essay & Presentation			End-of-Course Exam	
								Section I	Section II
		IRR	WTR	TMP	WA	IMP	OD	A	B
5.1C	Communicating an argument in an engaging oral presentation using appropriate media, incorporating effective techniques of design and delivery.			X		X			
5.2A	Providing individual contributions to overall collaborative effort.			X					
5.2B	Fostering constructive team climate, resolving conflicts, and facilitating the contributions of all team members to address complex, open-ended problems.								
5.3A	Reflecting on and revising their own writing, thinking, and/or processes.	X							
5.3B	Reflecting on personal contributions to overall collaborative effort.	X							

Reproducibles for Students

The following 50 pages contain reproducible versions of the Performance Assessment Tasks, Sample End-of-Course Exam, and stimulus material.

AP Seminar Performance Assessment Task: Team Project and Presentation

Student Version

Weight: 25% of the AP Seminar score

Task Overview

You will work in teams of three to six to identify, investigate, analyze, and evaluate an academic or real-world problem or issue. The components that comprise this task are the Individual Research and Reflection, the Written Team Report, and the Team Presentation and Defense. These components are made up of the following elements, each of which you will need to complete in order to fulfill the task requirements:

Task Elements	Length	Date Due (fill in)
Individual Research Report	Approximately 1200 words	
Written Team Report	Approximately 3000 words	
Team Presentation	8–10 minutes	
Oral Defense (part of Team Presentation)	Each student responds to 1 question	
Individual Reflection (appended to end of Individual Research Report)	Approximately 800 words	

In all written work, you must:

- ▶ Acknowledge, attribute, and/or cite sources using in-text citations, endnotes, or footnotes, as well as a bibliography. You must avoid plagiarizing (see attached College Board policy on plagiarism).
- ▶ Adhere to established conventions of grammar, usage, style, and mechanics.

Task Directions

1. Team Coordination

As a team, collaborate to identify an academic or real-world problem or issue (e.g., local, national, global, academic/theoretical/philosophical).

- › Develop a team research question that can be viewed from multiple perspectives.
- › Conduct preliminary research to identify possible approaches, perspectives, or lenses.
- › Divide responsibilities among group members for individual research that will address the team's research question.

(continues)

2. Individual Research Report (approximately 1200 words)

On your own, investigate an approach, perspective, or lens on the issue or topic of the team research question. You may consult with your peers to get feedback and refine your approach. However, the report you submit must be your own work.

Present your findings and analysis to the group in a well-written individual report that

- › identifies one area of investigation and its relationship to the overall problem, question, or issue;
- › describes and analyzes the line of reasoning and evidence of the information collected;
- › explains and synthesizes the range of information and perspectives considered and the relevance of that information to the problem, question, or issue;
- › justifies the inclusion and exclusion of information advanced to the team; and
- › cites and attributes any information you have included.

3. Written Team Report (approximately 3000 words)

Working collaboratively, consider all of the research and analyses from individual team members for the purpose of proposing or creating one or more solutions, conclusions, or recommendations.

- › Evaluate and integrate individual findings and perspectives, synthesizing the most effective arguments and supporting evidence, and propose additional research that may need to be done to further develop the team report.

As a group, prepare a well-written team report that

- › introduces, situates, contextualizes, and/or explains the problem or issue and identifies each team member's approach to that problem or issue;
- › proposes one or more solutions, conclusions, or recommendations for the problem or issue that are based on evidence and consider consequences and implications;
- › appropriately acknowledges, attributes, and/or cites the ideas and work of authors of outside sources; and
- › includes a bibliography of works cited.

4. Team Multimedia Presentation and Defense (8–10 minutes)

Together with your team, develop a presentation that conveys your key findings and deliver it to an audience of your peers. The presentation and the media used to enhance the presentation should consider audience, context, and purpose. The presentation should reflect the major components of the written team report. Engage your audience using appropriate strategies (e.g., eye contact, vocal variety, expressive gestures, movement).

- › Use effective visual design elements to engage your audience and illustrate your points.

(continues)

- › Use appropriate communication strategies. Do not read directly from your paper, slides, or a script. Instead, interact with visuals or other supporting elements. Rehearse your commentary in advance and prepare notecards or an outline that you can quickly reference as you are speaking.
- › Make explicit connections between the evidence you choose and claims about your key findings.
- › Following the presentation, your team will defend its argument. Each team member will respond to a question posed by your teacher. Each team member should be prepared to answer questions about any part of the presentation (including information that others in your team have researched and/or presented).

5. Individual Reflection (approximately 800 words)

On your own, write an individual reflection on your experience as you worked on this task. Describe

- › how you approached the process of researching and solving a problem or issue
- › how your understanding of the problem or issue developed and/or changed
- › how working with the group deepened or otherwise influenced your thinking and writing

When your individual reflection is complete, label it and append it to the end of your individual research report so that the two pieces of work are submitted to your teacher as one document.

(continues)

AP Capstone Policy on Plagiarism

A student who fails to acknowledge (i.e., through citation, through attribution, by reference, and/or through acknowledgment in a bibliographic entry) the source or author of any and all information or evidence taken from the work of someone else will receive a score of zero on that particular component of the AP Seminar and/or AP Research Performance Assessment Task. In AP Seminar, a team of students that fails to properly acknowledge sources or authors on the Written Team Report will receive a group score of zero for that component of the Team Project and Presentation.

To the best of their ability, teachers will ensure that students understand ethical use and acknowledgment of the ideas and work of others, as well as the consequences of plagiarism. The student's individual voice should be clearly evident, and the ideas of others must be acknowledged, attributed, and/or cited.

AP Seminar Performance Assessment Task: Individual Research-Based Essay and Presentation

Student Version

Weight: 35% of the AP Seminar score

Task Overview

This packet includes stimulus materials for the AP Seminar Performance Assessment Task: Individual Research-Based Essay and Presentation. This essay should be in the form of an argument.

You must identify a research question prompted by the provided stimulus materials, gather additional information from outside sources, develop and refine an argument, write and revise your argument, and create a presentation that you will be expected to defend. Your teacher will give you a deadline for when you need to submit your written argument and presentation media. Your teacher will also give you a date on which you will give your presentation.

Task Components	Length	Date Due (fill in)
Individual Written Argument	Approximately 2000 words	
Individual Multimedia Presentation	6–8 minutes	
Oral Defense	Respond to 2 questions	

In all written work, you must:

- ▶ Acknowledge, attribute, and/or cite sources using in-text citations, endnotes, or footnotes, as well as a bibliography. You must avoid plagiarizing (see attached College Board policy on plagiarism).
- ▶ Adhere to established conventions of grammar, usage, style, and mechanics.

Task Directions

- 1. Individual Written Argument** (approximately 2000 words)
 - › Read, analyze, and discuss the provided stimulus materials to identify areas for inquiry.
 - › Compose a research question of your own prompted by the stimulus materials.
 - › Gather additional information from outside sources through research.

(continues)

- › Analyze, evaluate, and select evidence to develop a well-reasoned and well-written argument that answers the research question and conveys your perspective.
 - Your research question must be inspired by one or more of the stimulus materials. Your essay must refer to and incorporate at least one of these documents.
 - As part of your research, you must find outside sources, including peer-reviewed academic work, that will serve as evidence for your argument. You must locate these sources independently.
 - During your research process, revisit your original research question. Ensure that the evidence you gather addresses your original purpose and focus. Refine your research process, or your research question, as needed to make sure that your evidence aligns with your research question and supports your argument.
 - Your written argument must identify opposing or alternate views and consider their implications and/or limitations as well as the consequences and implications of one or more resolutions, conclusions, or solutions.

2. Individual Multimedia Presentation (6–8 minutes)

Develop a presentation that conveys your key findings and deliver it to an audience of your peers. The presentation and the media used to enhance the presentation should consider audience, context, and purpose. The presentation should reflect the major components of your written argument. Engage your audience using appropriate strategies (e.g., eye contact, vocal variety, expressive gestures, movement).

- › Use effective visual design elements to engage your audience and illustrate your points.
- › Use appropriate communication strategies. Do not read directly from your paper, slides, or a script. Instead, interact with visuals or other supporting elements. Rehearse your commentary in advance and prepare notecards or an outline that you can quickly reference as you are speaking.
- › Make explicit connections between the evidence you choose and claims about your key findings.
- › Situate your perspective within a larger context.

3. Individual Oral Defense (two questions)

Defend your research process, use of evidence, and conclusion(s), solution(s), or recommendation(s) through oral answers to two questions asked by your teacher. (See list of sample defense questions on the following page.)

(continues)

Sample Oral Defense Questions

Here are some examples of the types of questions your teacher might ask you during your oral defense. These are *examples only*; your teacher may ask you different questions, but there will still be one question that relates to each of the two categories below.

1. Source selection and use

- › How did the stimulus materials inspire your original research? Which stimulus material(s) prompted your research question?
- › What information did you need before you began your research, and how did that information shape your research?
- › What evidence did you gather that you didn't use? Why did you choose not to use it?
- › How valid and reliable are the sources you used? How do you know? Which sources didn't work?
- › How did you select the strategies you used to gather information or conduct research? Were they effective?
- › How did your research question evolve as you moved through the research process? Did your research go in a different direction than you originally planned/hypothesized?
- › What information did you need that you weren't able to find or locate? How did you go about trying to find that information?
- › How did you handle the differing perspectives in order to reach a conclusion?

2. Extending argumentation through effective questioning and inquiry

- › What additional questions emerged from your research? Why are these questions important?
- › What advice would you have for other researchers who consider this topic?
- › What might be the real-world implications or consequences (influence on others' behaviors or decision-making processes) of your findings? What are the implications to your community?
- › If you had more time, what additional research would you conduct related to this issue?
- › Explain the level of certainty you have about your conclusion, solution, or recommendation.
- › How does your conclusion respond to any of the other research or sources you examined?
- › How did you use the conclusions and questions of others to advance your own research?

(continues)

AP Capstone Policy on Plagiarism

A student who fails to acknowledge (i.e., through citation, through attribution, by reference, and/or through acknowledgment in a bibliographic entry) the source or author of any and all information or evidence taken from the work of someone else will receive a score of zero on that particular component of the AP Seminar and/or AP Research Performance Assessment Task. In AP Seminar, a team of students that fails to properly acknowledge sources or authors on the Written Team Report will receive a group score of zero for that component of the Team Project and Presentation.

To the best of their ability, teachers will ensure that students understand ethical use and acknowledgment of the ideas and work of others, as well as the consequences of plagiarism. The student's individual voice should be clearly evident, and the ideas of others must be acknowledged, attributed, and/or cited.

Social Education 77(1), pp 7–13
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The Hispanic Heritage of North America

Beyond La Niña, La Pinta, and La Santa María: The Invention and Mental Mapping of the New World¹

Luis Martínez Fernández

The gradual unveiling of the Americas took place in the context of a Europe in transition between the Middle Ages and the Renaissance, also of transition from feudalism to capitalism, from small regional kingdoms to absolute monarchies, and from a world view dominated by religion and scholasticism to another based on skepticism, humanism, and experimentation. These transitions, to be sure, were gradual, occurring at different times in different places. Although

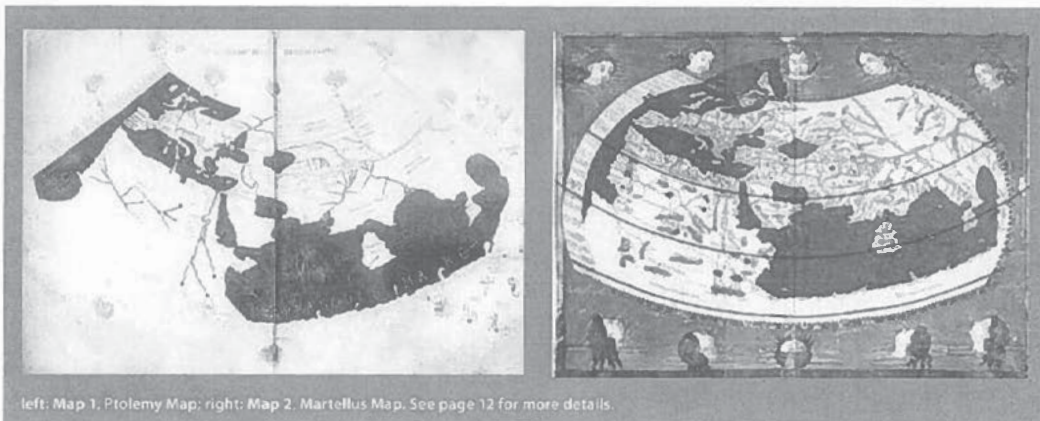
they were contemporaries, Christopher Columbus and the cartographer and explorer Amerigo Vespucci represented two different worlds, a waning Middle Ages and a dawning Renaissance, worlds that collaborated and clashed as Europeans strove to make sense of a potentially new world gradually unfolding before their eyes and in their minds.

Contrary to the still repeated misconception that before 1492 Europeans believed the earth was flat, it had long

been established that it was round. Actually, as far back as the second century, Claudius Ptolemy had calculated the size of the earth, which he estimated to be 28 percent smaller than its actual size. He also produced a fairly accurate map of the known world, which was rediscovered during the Renaissance and became an important source of cosmographic knowledge (bottom left).

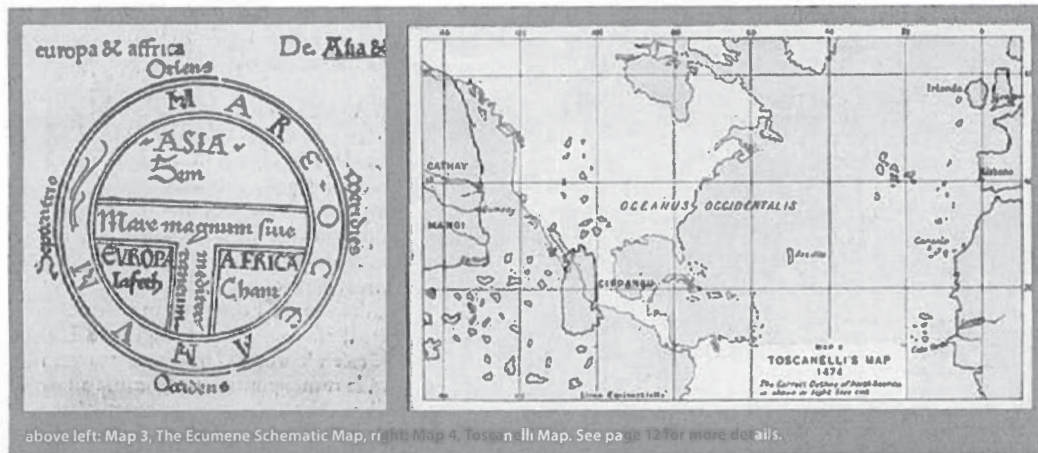
Vespucci is likely to have been more influenced by Henricus Martellus's 1489 map (bottom right); and he believed that Earth's circumference was 24,000 miles, very close to its actual size.³

Columbus was emblematic of the Middle Ages, a deeply religious man and a crusader at heart. He drew his cosmology deductively, mainly from the Bible and a few philosophical authori-



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ties. Columbus believed in the medieval Catholic dogma of the Ecumene, a cosmovision in which the world's landmass consisted of three connected continents (Europe, Asia, and Africa), each with its own great river (Don, Ganges, and Nile), and each with its own race (descendents of Japheth, Shem, and Ham), all of these triads being reflections of the Holy Trinity.

Columbus was a self-taught man who embraced an unconventional cosmovision based on even less reliable calculations. He accepted the views of Paolo Toscanelli, a Florentine physician and mathematician, whose 1474 map made the world even smaller, and Marinus of Tyre's measurement of Eurasia which was 45 degrees longer than Ptolemy's and 125 degrees longer than it actually is.⁴

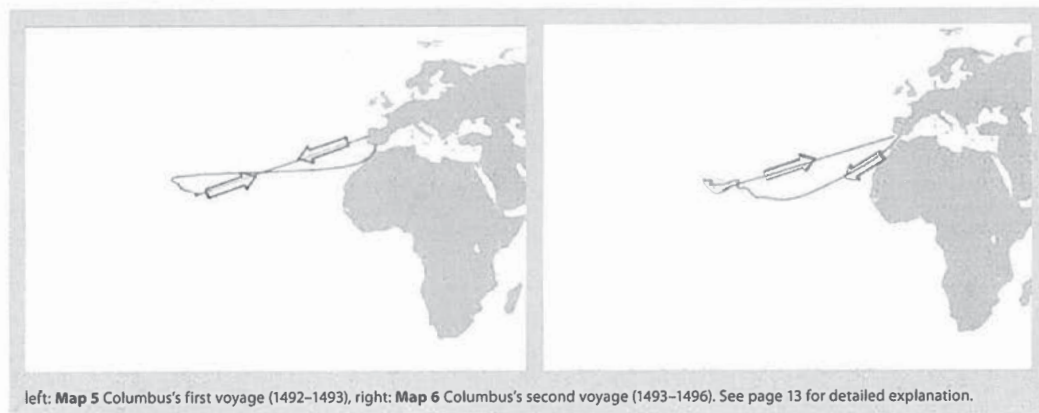
The compounding effect of these miscalculations led Columbus to believe that it was feasible to reach Asia by crossing the Atlantic Ocean, known then as Occidental Ocean.

Columbus's first voyage (1492–1493) shook the cosmological, philosophical, and religious foundations of Europe, as explorers,

cosmographers, theologians, and cartographers scrambled to make sense of the puzzling geographic information gradually making its way to Europe from half way around the globe (below left). Columbus interpreted the geographic observations from his first voyage according to the idea of the Ecumene, concluding that he came in contact with the Indies, inhabited by Indians, and that the largest of those islands, Cuba, was the legendary island of Cipangu (Japan).

During his second voyage (1493–1496), Columbus revisited Cuba and Hispaniola and several new islands of varying sizes (below right).

This time, however, in spite of what the natives told him, he claimed that Hispaniola, and not Cuba, was Japan; and that Cuba was actually the Malay Peninsula protruding from the Asian mainland. Precisely at the point when Cuba began to appear to be an island, instead of continuing to sail westward, Columbus ordered his ships to turn back—but not before making his crew take an oath affirming that Cuba was not an island.





above: **Map 7** Juan de la Cosa produced the first map portraying Cuba as an island in 1500.

Ironically, one of the men who took the oath, navigator Juan de la Cosa, produced the first map portraying Cuba as an island in 1500. (see **Map 7** above.)

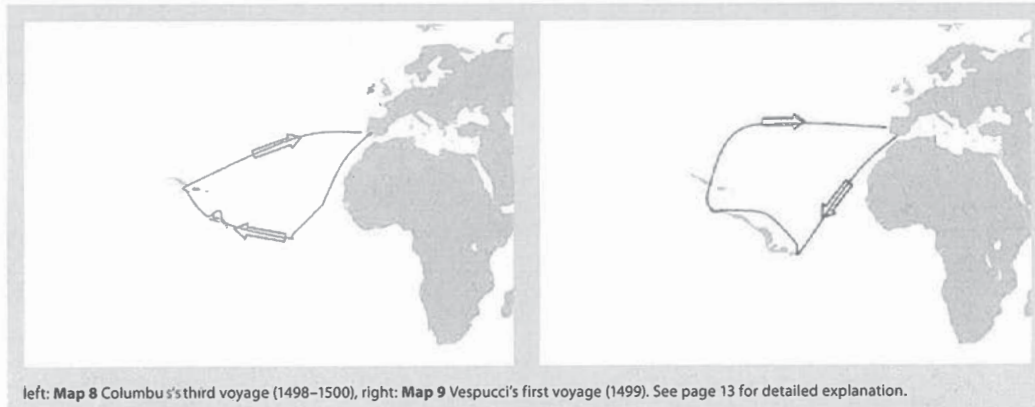
Vespucci was born and raised in Florence, the epicenter of the Renaissance, where he received a privileged education, and later worked as a merchant for the de Medici family. Renaissance minds like his approached the question scientifically, seeking and analyzing empirical evidence in order to reach conclusions about the nature of the islands and landmasses encountered by the European explorers. For him the budding idea of a New World was not a dogmatic conclusion but rather a hypothesis to be tested with subsequent voyages and explorations.

Over the next few years, Columbus, on the one hand, and

Vespucci, on the other, embarked on parallel explorations to determine the nature of the lands Columbus took to be the Indies.

During his third voyage (1498–1500), Columbus ventured farther south and came in contact with the mainland of South America, near the Gulf of Pariah, which separates Trinidad and the coast of Venezuela; there he stood in awe of the basin of the great Orinoco River, and now scrambled to redraw the map of the world and to find a place for the seemingly continental landmass he found (below left). He turned to another Biblical explanation: the Orinoco, he concluded, flowed from the Garden of Eden.

In his first voyage (1499),⁵ Vespucci reached the Cape of San



left: **Map 8** Columbus's third voyage (1498–1500), right: **Map 9** Vespucci's first voyage (1499). See page 13 for detailed explanation.

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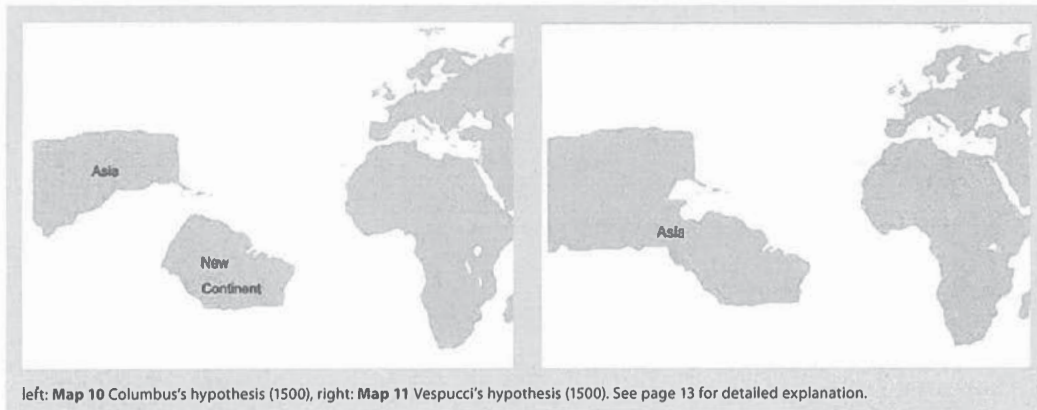
Roque near the northwestern tip of Brazil and then sailed west toward Venezuela where he coasted from the Gulf of Pariah all the way to Maracaibo, in present day Venezuela (below right).

He, like Columbus, believed that those coasts were part of a large continental mass. Soon thereafter, Pedro Álvarez Cabral, sailing for Portugal, navigated south along the Brazilian coast to about 15 degrees south of the Equator, thus expanding the mental map of the southern continent to a massive territory stretching between at least Porto Seguro, Brazil and Maracaibo.

By the year 1500, these mystifying discoveries produced two competing interpretations: Columbus concluded deductively (below left) that because islands could not produce rivers of the magnitude of the Orinoco River, the landmass to the south

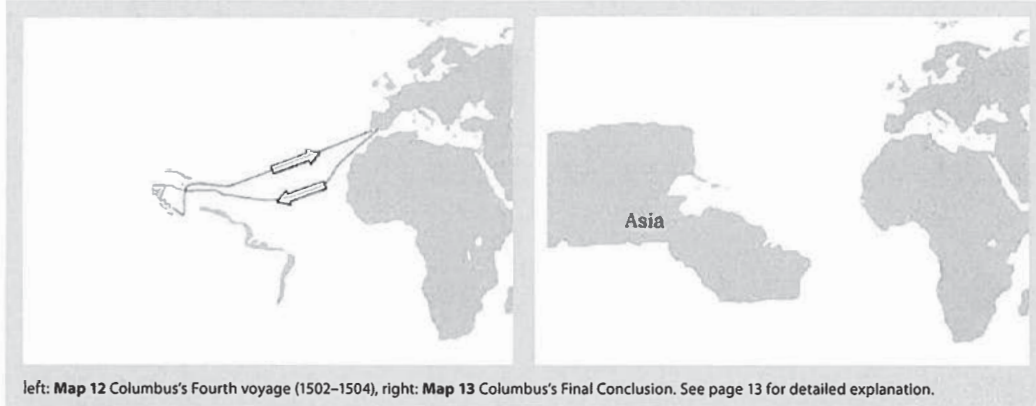
was “a mighty continent that was hitherto unknown,” which God had concealed from Europeans until that point.⁶

This new continent, he believed, was separated from the islands and mainland to the north, which he claimed all along were Asia. On the other hand, Vespucci hypothesized that all of the islands and landmasses constituted a single continent, Asia (below right), believing that it was a “fourth part of the earth.”⁷ Both explorers embarked on yet another round of voyages, to test their respective ideas. In 1502, Columbus led a fourth exploration, setting out toward the yet unknown isthmus of Central America in search of a water passage separating what he now believed was Asia to the north and the new continent to the south (illustration next page: top box, map at the left).



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He believed that finding an oceanic passage would prove his new theory of two different continental masses. After coasting from Honduras to as far south as Panama without finding any water passage, he discarded the two-continent theory, returning to his earlier Ecumene-based proposition that all of the lands belonged to Asia; when he died in 1506, he was still convinced of that (top right). As a result of this voyage, Columbus recurred to another Biblical explanation, interpreting information about prodigiously rich gold mines in Central America as the Mines of Ophir in Panama, which produced the gold to build Solomon's temple.

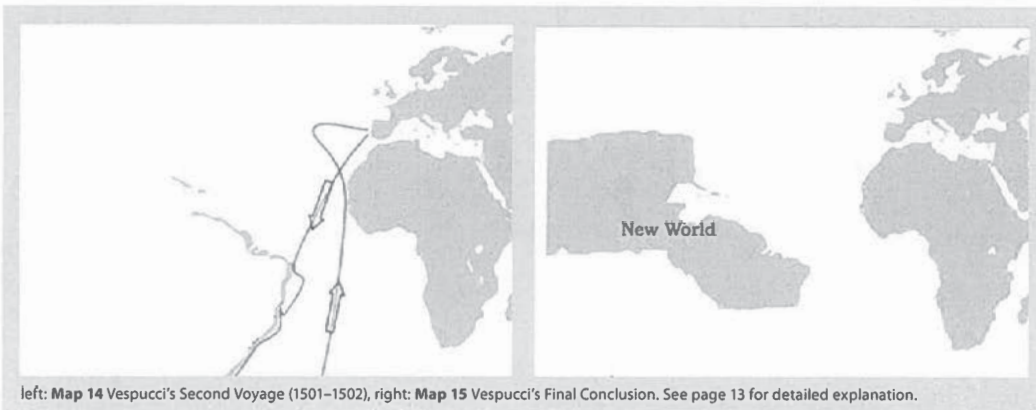
Vespucci, meanwhile, set out in his second voyage (1501–1502)⁸ in search of more evidence to support his hypothesis of a new single continent.

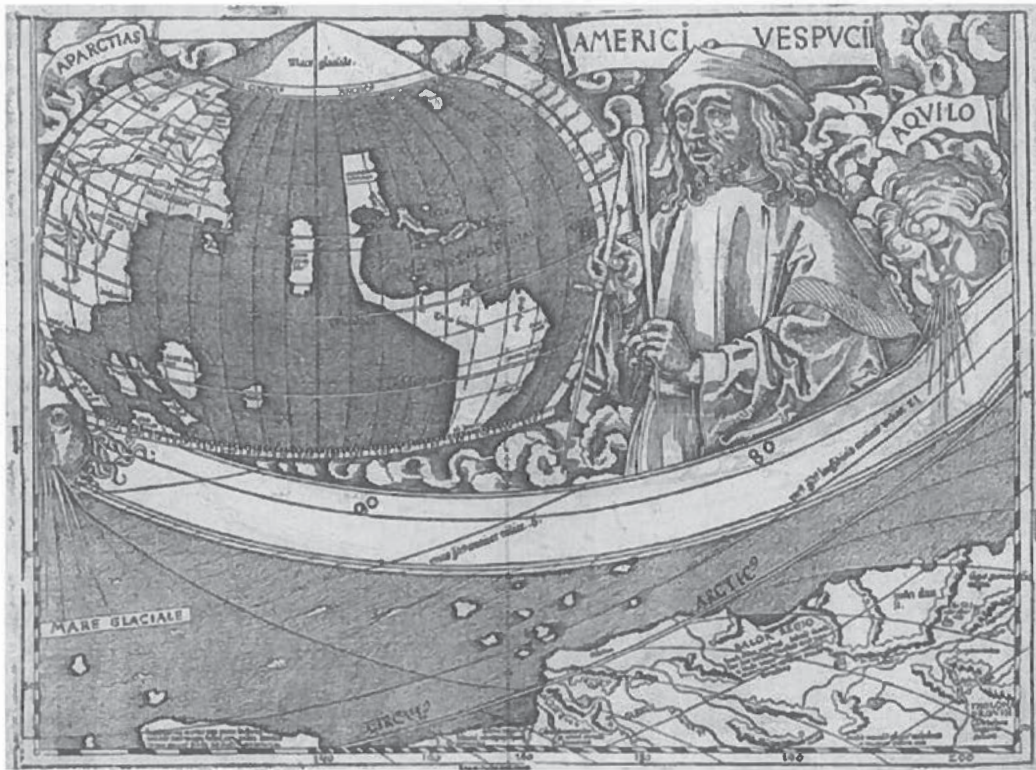
In order to prove that it was a new continent, he had to rule out that it was Asia, so he sailed southward way beyond the point where Asia's southernmost point was believed to be located. Vespucci's expedition reached what later came to be known as Río de la Plata, Argentina, located 34.5 degrees south of the Equator. Based on this evidence he inductively

concluded that all of the newly discovered lands and continents, indeed, constituted a new world.

So who “invented” America? Was it Columbus or Vespucci? Arguably it was neither and it was both. The invention and mental discovery of America required the mystic zeal of a prodigiously stubborn Columbus, whose deeply religious worldview allowed him to embark on explorations and theories summarily dismissed by his learned contemporaries. It also required a Renaissance man like Vespucci, who proposed hypotheses and sought empirical evidence to make sense of the new lands eventually named the Americas in his honor.

In 1507, Martin Waldseemüller produced the very first map with the word “America” stamped over South America. This map and others produced in the next few years reflected the Europeans' continuing uncertainty about the size, shape, location and connectedness of the new world that continued to unveil itself. Two things, though, remain clear: no one refers to the new lands as Columbia and no country celebrates Vespucci Day. 🇺🇸





above: **Map 16** In 1507, Martin Waldseemüller produced the very first map with the word "America" stamped over South America.

Notes

1. A few segments of this essay appeared previously in "1492: First Encounters, the Invention of America and the Columbian Exchange," *Revista Brasileira do Caribe* 6, no. 11 (2005), 13–31.
2. Edmundo O'Gorman, *The Invention of America* (Westport, Conn.: Greenwood Press, 1972). Also see Eviatar Zerubavel, *Terra Cognita: The Mental Discovery of America* (New Brunswick, N.J.: Rutgers University Press, 1992) and Enrique Dussel, *The Invention of the Americas* (New York: Continuum, 1995).
3. Felipe Fernández-Armesto, *Amerigo: The Man Who Gave His Name to America* (New York: Random House, 2008), 69–72.
4. Helen Wallis, "What Columbus Knew," *History Today* 42, no. 5 (May 1992): 17–23; www.historytoday.com/helen-wallis/what-columbus-knew.
5. Vespucci claimed that he embarked in four expeditions to the New World. The historical sources that mention four voyages, however, have been held suspect by many scholars; and there is a consensus that he had only two voyages—one in 1499, and the other in 1501–1502. The graphic reconstruction used here is derived from maps that appear in <http://olnuiis.library.cornell.edu/exhibitions/vespucci>.
6. Christopher Columbus, *Four Voyages to the New World* (Gloucester, Mass.: Peter Smith, 1978), 129–130.
7. Fernández-Armesto, *Amerigo*, 71. See Vespucci's letters in: http://mith.umd.edu/ead4/html/display.php?doc=vespucci_letters.xml&action=show.
8. See note 5. If the questionable 1497 voyage is discounted, his 1501–1502 voyage is his second.

LUIS MARTÍNEZ FERNÁNDEZ is professor of history at the University of Central Florida, where he teaches courses on Latin American and Caribbean history. He is also a trustee of the College Board and was a member of the History Academic Advisory Committee that produced the "College Board History Framework" and revised the U.S. History AP course (2006–10). His books include *Fighting Slavery in the Caribbean* (1998) and *Frontiers, Plantations, and Walled Cities* (2010).

More about the maps and where to find them on the Web

Map 1: Ptolemy map originally in his *Geographia*, circa 150 AD. This 1482 edition is an example of the rediscovery of classic works during the Renaissance. Source: <http://upload.wikimedia.org/wikipedia/commons/2/23/PtolemyWorldMap.jpg>

Map 2: Henricus Martellus map of 1489 is based on Ptolemy's map but portrays a smaller Asia and the Indian Ocean does not appear as a landlocked body of water. Source: http://upload.wikimedia.org/wikipedia/commons/4/4d/Martellus_world_map.jpg

Map 3: The Ecumene as represented in a schematic map of the world by Bishop Isidore of Seville (560–636 AD). Note the three known continents inhabited by the three known races. The east appears on top of the map rather than on the left, a reflection of the greater importance of the east, where the Holy Land of Jerusalem is located. Source: <http://dlespeculations-terryprest.blogspot.com/search?q=isidore>.

Map 4: Toscanelli map (1474). The original of his map has been lost but it has been reconstructed based on information from the letter that accompanied the map. Source: Lawrence J. Burpee, *An Historical Atlas of Canada* (Toronto: Thomas Nelson and Son Limited, 1927). Map by John Bartholomew and Son, Ltd., Edinburgh Geographical Institute. www.heritage.nf.ca/exploratori/toscanelli.html; see also, http://cartographic-images.net/252_Toscanellis_World_Map.html.

More about the maps and where to find them on the Web (continued)

Map 5: Columbus's 1st voyage (1492–1493) showing the lands he coasted, including several small islands in the Bahamas, Cuba's northwestern coast, and a good portion of the northern coast of Hispaniola.

Map 6: Columbus's 2nd voyage (1493–1496) reflecting his encounter with numerous Leeward and Windward islands, Puerto Rico, and Jamaica. It also reflects his coasting of southern Cuba. He insisted that Cuba was the Malay Peninsula and embraced the idea that Hispaniola was Japan.

Map 7: Juan de la Cosa's map of 1500 shows the geographical knowledge accumulated at the time from various explorations. It is the first map in which Cuba appears in the shape of an island (1500). Source: http://upload.wikimedia.org/wikipedia/commons/b/b5/1500_map_by_Juan_de_la_Cosa-North_up.jpg.

Map 8: Columbus's 3rd voyage (1498–1500), including his first encounter with South America.

Map 9: Vespucci's 1st voyage (1499). In all fairness, this voyage should be credited to Alonso de Ojeda, who organized and led the expedition. Many question the validity of his account of a first voyage in 1497 and therefore the 1499 voyage is widely referred to as number one. The graphic reconstruction presented here is derived from maps created by Nij Tontisirin and Boris Michev, in Oris and Ulin Libraries, Cornell University. <http://olinurislbrary.cornell.edu/exhibitions/vespucci>

Map 10: Columbus's hypothesis. The lands and islands discovered so far are parts of two separate continental masses: Asia to the north and a previously unknown continent to the south.

Map 11: Vespucci's hypothesis. The lands discovered thus far are all connected and appear to belong to Asia.

Map 12: Columbus's 4th voyage (1502–1504) during which he sets out to find an oceanic passage between what he believes to be Asia and a new continent to the south.

Map 13: Columbus's final conclusion. He died holding on firmly to these ideas, leaving the *Ecumene* intact and never giving up on his belief that Cuba was not an island.

Map 14: Vespucci's 2nd voyage (1501–1502). It reflects how far south he went in search of a passage to what he believed was the Indian Ocean. See comment on Map 9, above.

Map 15: Vespucci's conclusion. Columbus's failure to find an oceanic passage between the northern and southern continents validated his contention that all of it was a connected landmass, and his southward coasting of the continent demonstrated that it could not be Asia because it went as far south as 34.5° below the Equator, if not farther.

Map 16: A facsimile of Waldseemüller's world map from his *Universalis Cosmographia* (1507). While the larger map includes the name "America," this insert shows the term "Terra Incognita" (unknown land). It does, however, show what was known of the American continents as connected, and separated from Asia. Source: http://upload.wikimedia.org/wikipedia/commons/thumb/c/c0/Waldseemuller_map_2.jpg/1280px-Waldseemuller_map_2.jpg

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The Map

Land lies in water; it is shadowed green.
Shadows, or are they shallows, at its edges
showing the line of long sea-weeded ledges
where weeds hang to the simple blue from green.
Or does the land lean down to lift the sea from under,
drawing it unperturbed around itself?
Along the fine tan sandy shelf
is the land tugging at the sea from under?

The shadow of Newfoundland lies flat and still.
Labrador's yellow, where the moony Eskimo
has oiled it. We can stroke these lovely bays,
under a glass as if they were expected to blossom,
or as if to provide a clean cage for invisible fish.
The names of seashore towns run out to sea,
the names of cities cross the neighboring mountains
-the printer here experiencing the same excitement
as when emotion too far exceeds its cause.
These peninsulas take the water between thumb and finger
like women feeling for the smoothness of yard-goods.

Mapped waters are more quiet than the land is,
lending the land their waves' own conformation:
and Norway's hare runs south in agitation,
profiles investigate the sea, where land is.
Are they assigned, or can the countries pick their colors?
-What suits the character or the native waters best.
Topography displays no favorites; North's as near as West.
More delicate than the historians' are the map-makers' colors.

Elizabeth Bishop

Fleckenstein: How Maps Lie

GEOGRAPHY AND YOU

HOW MAPS LIE

Never head down a little pink line to deception.

BY LEAH FLECKENSTEIN

Through the 1940s, British school children studied maps of the Empire. At that time, "the empire" sprawled across nearly a quarter of the globe in uniform hues of pale pink, blue, or yellow. Hanging against the classroom wall, Britain's territory seemed even more extensive by a coy cartographic trick. Australia made a dual appearance at each end of the map. After all, a little extra coverage never harmed patriotism.

Such tiny deceptions are common in maps. Like any interpretation of data, maps can reflect the desires of their creators. That is why, for example, the earliest maps showed the cartographer's own country at the center of the universe.

Wishful thinking can produce another type of deception. Think of the blue, blue water on maps that beckon tourists to vacation spots. Bending the truth can encourage people to share a vision. Why else would developers illustrate proposed shopping malls with landscapes devoid of dumpsters but replete with full-grown trees?

LEAH FLECKENSTEIN is a free-lance writer based in Syracuse.

"Most decent maps are collections of little lies," says Mark Monmonier, a professor of geography in the Maxwell School of Citizenship and Public Affairs. Monmonier is the author of *How to Lie With Maps*, which discusses deceptions that are inherent in maps. The critically acclaimed book also reviews methods of creating maps that interpret census data or that are used to influence planning boards.

"What people have to remember," he says, "is that any given map is just one way, out of many, to present the information. Maps look impressive. People believe in them when they should be more critical."

Innocent Deceptions

On the most benign level, the "lies" maps tell are practical omissions. Since maps are scale models of reality—say of a large city or several states—too much detail is cumbersome. In shrinking reality so it can be effectively stored in a glove compartment, map-makers omit features by necessity. Depending on scale, streets may vanish or suburbs be swallowed by their neighboring city.

Beyond just trying to fold a road map back into its original neat rectangle (or

crumpling it into a wrecked tangle), most people, at one time or another, have been frustrated by a map. As an example, Monmonier points out the widespread tendency to show highway interchanges that drivers can't actually make.

"Not all big lies told by maps are deliberate or devious," he adds. "Ignorance, mistakes, and even a bit of mischief account for many cartographic lies."

There are examples of map-maker whimsy, such as the Michigan football fan who created the towns Goblu (Go Blue) and Beatosu (Beat Ohio State University) on a 1979 Michigan highway map.

A mortifying and costly mistake occurred when Seattle was omitted altogether from the American Automobile Association's road map. "It fell through the editing crack," explained an embarrassed official. Disconcerting, too, was the disappearance of Ottawa from an airline tourist map.

More likely to affect the average map user are oversights, such as inclusion of "paper" streets—roads that were planned but never built—and "trap" streets inserted by map-making companies to catch unwary plagiarists.

One reason American maps are not

all they should be, Monmonier says, is the unwillingness of the public to pay top dollar for quality maps. Years of free highway maps paved the way for a sort of take-maps-for-granted attitude.

European countries, he says, generally produce better-quality maps. Not only do they have more companies that undertake the expensive cartographic process, but their countries are smaller.

Political Plotting

In the United States, it is the U.S. Geological Survey that is officially in charge of mapping the country. The entire 3.5 million square miles (with the exception of Alaska) is depicted on a series of maps at a one-inch-to-2,000-foot scale.

The maps are supposed to be updated every 10 years, but because map-making is so expensive and the coverage so expansive, that task is far behind. Found in stationery stores or stacked in map drawers in libraries, these maps are used by hunters, developers, hikers, politicians, and scientists for a multitude of purposes.

"Topographical maps show very strong biases," says Monmonier. "There is a lot they aren't showing, like certain military installations or what kind of neighborhood is being depicted. Camp David isn't labeled on topographical maps, though it is clearly identifiable."

The omission that burns him up the most is the determined absence of known waste dumps.

"We have Super Fund sites that hold toxic waste, but these sites aren't shown because they might embarrass polluters or local officials. Some claim that, as these dumps will be 'cleaned up soon,' they shouldn't be featured. That excuse doesn't wash because there are a lot of other temporary structures shown on topographical maps." He points out that "temporary structures" such as off-shore shipwrecks, drive-in movie theaters, and abandoned railways are regular features on topographical maps.

Love Canal is one stunning example of an ignored waste dump. A 1946 map of Niagara Falls, New York, shows the infamous canal as a thin line, with no indication that it had been used for chemical waste since 1942. In the mid-fifties the canal was filled in, homes were built in the area, and a public

MAPS USED FOR PROPAGANDA

The German Library of Information published a weekly news magazine, *Facts in Review*, between 1939 and 1941 to garner sympathy for Germany. This map, published two years before Germany invaded the Baltic states, boasted of voluntary efforts to bring German citizens back to their homeland from foreign countries.

These maps, while always in black-and-white, effectively used shading to strengthen its assertions. In his book, *How to Lie With Maps*, Mark Monmonier observes that, "The map's pictorial symbols dramatize the repatriation by showing proud, brave, obedient Germans clutching their suitcases and lining up to board ships sent to 'lead [these] lost Germans back home to the Reich.' To the east in stark, depressing black looms the Soviet Union, and to the south in pure, hopeful white lies Germany."



VIEWS OF THE MIDDLE EAST



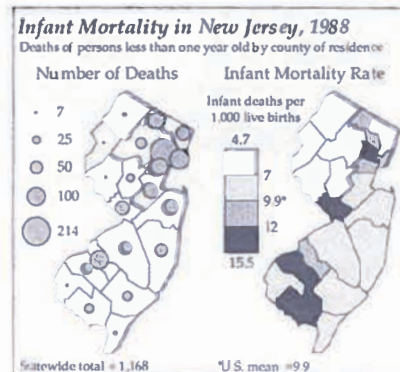
Labeled as "The Arab World," the map on the left, which appears in a 1990 pamphlet promoting an atlas of Jordan, is self-described as a "political one" in the caption. Perhaps that explains the absence of Israel, the unlabeled territory south of Lebanon (through which passes the label "Palestine"). The outlines of Jordan mark its old territory, claiming the West Bank which Israel conquered in 1967. The fact that the countries are all the same color carries an obviously political message.

The map on the right, also shows all Arab countries the same shade. In this instance, though, the effect is one of unified menace. Israel looks small and defenseless in this map produced by the Jewish National Fund of Canada during the 1973 war. While the map is accurate in comparing land mass, it does not give a sense of Israel's strong support from other sympathetic countries at the time.

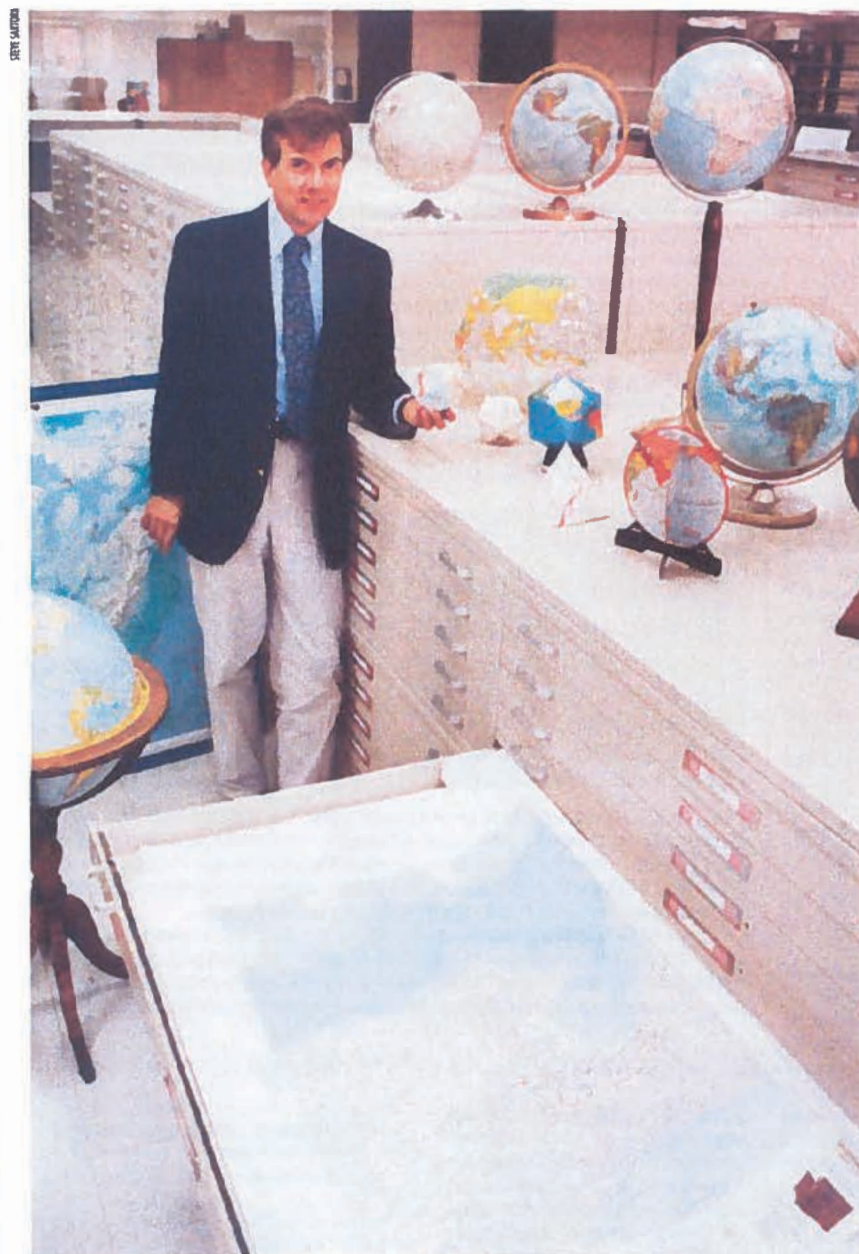
SAME DATA, DIFFERENT APPEARANCES

These maps depicting infant mortality rates in New Jersey show the benefit of using complementary maps to examine the same data. The map on the left simply shows the number of deaths in each county. It does not compare that number to population or overall number of births. The map on the right does. A choropleth or "patch" map, it sets data break-off points and uses gradations indicative of, in this case, four levels of categorization.

While the map on the left appears to indicate an alarming death rate in the northeast corner of the state (note the overlapping cluster of circles), putting those numbers into context shows that the mortality rate is equally serious mid-state and in the southwest.



Fleckenstein: How Maps Lie



Mark Monmonier, professor of geography, in mapland at SU's Bird Library. The author of *How to Lie With Maps* warns that, like any form of human communication, maps are subject to the whims and biases of their creators.

school spanned the chemical dump. A map produced 10 years ago does not feature the filled-in canal, or its history.

While maps serve as guides, they can have strong political purposes. Maps are used to claim territory (Argentina

still shows the Falkland Islands on its national stamps) or to disclaim territory (recent maps from Latvia and Estonia don't show the overshadowing Russian border).

Sometimes countries have differing

interpretations. The territory of Kashmir is shown on both Indian and Pakistani maps as belonging to their respective countries, while more impartial sources show the disputed boundary with a dotted line.

Most chilling are the propaganda maps, especially those produced by Nazi Germany. In his book, Monmonier states: "No other group has exploited the map as an intellectual weapon so blatantly, so intensely, so persistently, and with such variety."

The Nazis' deliberate manipulation of apparently standard maps prior to World War II was intended to direct sympathy toward Germany and away from the Allies. One map uses a comparison of British territory (13 million square miles) to Germany's (264,000 square miles) to imply Allied greed. The caption under the tiny map of Germany queries the reader, "The Aggressor Nation?" (For other examples of propaganda maps see the sidebar on page 37.)

If you're looking at a map produced by the Soviet Union between 1939 to 1969, you'd best not trust it to get you from Lenin's tomb to Red Square. The security police bolstered a systematic fake map campaign, which reached its peak during the Cold War. Although officials kept the real versions under lock and key, they disseminated the false versions abroad as well as in their own country to create distrust—especially among foreign militaries—for the accuracy of their maps. This scheme was abandoned as costs mounted and satellite technology punctured such duplicity easily.

Home Soil

In the U.S., maps that serve political purposes are common. As the Bush administration tackles the reapportionment of wetlands, generalized maps will be used to evaluate huge tracts of land that may, or may not, be opened to developers.

Cartographers have little influence over that process, as maps are compared with satellite and aerial photos of the same area. But even impartial maps can be cropped, "simplified," or embellished with distracting detail.

"Generalized maps can provide a quick and dirty way to define any large area," Monmonier says. "The smaller your scale, the more you can hide."

Recent focus on congressional redistricting in New York City and other large urban centers has been in the news this summer. Despite the claims by some groups of unfair reapportionment, Monmonier says this is a hard process to corrupt.

"Congressional redistricting is closely regulated by the courts and has very strict guidelines," he explains. "Although these maps can be corrupted to some extent, it would be hard to say whether redrawn lines are deliberate attempts solely to break up political groups. Of course, those involved in redistricting want to keep incumbents in office. But they can't just carve in a slice of a neighboring district. If district 'A' has 45,000 constituents and district 'B' has 40,000 constituents, you can bet the circuit court judge will refuse those boundaries."

The Data's In

While maps are most commonly used to show terrain, maps also show data. Census figures, employment gains and losses, health statistics and thousands of other data are all regularly transformed into data maps.

This, says Monmonier, is where the real danger for misinterpretation and self-deception awaits.

"User friendly" mapping software is one of the biggest hoondoggles for the unwary map reader. Lightning-fast reconfigurations can uncover the most favorable relationship between data and their maps. [See the map on page 37 for an example of manipulated infant-mortality statistics.]

"Anyone interested in public poli-

cy—voters, administrators, politicians, consumers, or marketers should know that while maps based on census data can provide useful information, they can also communicate flagrant distortion," Monmonier warns.

Because statistical maps often display data collected on the basis of large areas—counties, states, or countries—the biggest problems occur with inaccurate appearances of uniformity. For example, if a county has one big town sprouting from an otherwise rural area, statistics from the town will be spread thinly over the entire territory. A naïve reader or analyst will be mistaken if he or she uses that "spread out" information to make assumptions on individual households.

Another way to change the face of the data map is to change the "breaks" between levels. For example, if a marketing company wanted to show a suburban area as being "high-income," it might create a choropleth—or "patch"—map to make its point, with differently shaded areas indicating levels of mean income. The key consideration is how the data are grouped. If only three income levels are used, and the top one begins as low as, say, \$20,000, the reader would be presented with a map that looks impressive but not truly reflecting "high income."

Gray-scale tones can be effective in data maps because the different intensities—from white, to gray, to black—connote objectively. Color, however, is far more subjective.

"Colors mean different things to different people," Monmonier points out. "If you asked 10 different people to put colors 'in order' to reflect intensity, you'd have 10 different results."

With this in mind, color can confuse viewers, or can be another way to influence emotions. While many colors fail miserably on most data maps (weather maps are a major exception), traditional cartography takes advantage of the common perception that light yellow means "desert," brown means "high altitude," green means "vegetation," and blue "ocean." Viewers would have a subtle change in perception if, for example, California is portrayed as pale

yellow on one map and verdant green on another.

"People respond emotionally to some colors, such as blue and red," Monmonier states. "Red, for instance, is associated with fire, warning, heat, blood, anger, courage, power, love, military force, and Communism."

Comparison's Sake

For those interested in viewing maps with a more critical eye, Monmonier stresses again that maps are just as prone to errors or misinterpretation as any large body of data. The best way to remove bias, he says, is to compare many maps featuring the same data. He sees future atlases as being "graphic scripts" that can compare many maps in sequence.

He's working on his own graphic script—a project he calls "atlas touring." Now up and running on a Macintosh

The best way to remove bias, Monmonier says, is to compare many maps featuring the same data. He sees future atlases as being "graphic scripts" that can compare many maps in sequence.

computer, the program allows map comparison of an area over a period of time. While the program might fall into the trap of providing maps or graphs for contrived purposes, Monmonier says the advantage with atlas touring is that the user has control over the information.

Monmonier hopes his tool eventually will be used to chronicle social changes, diseases, and environmental concerns.

"If you have layers upon layers of data, all hung on essentially the same framework, you'll be more likely to spot trends in, say, cancer rates," he explains.

"With these types of tools, viewers don't have to settle for one freeze frame and have that be the sum of their knowledge. They can see one hundred maps using the same data to get the most complete picture." He pauses, thoughtfully. "Maps are not going to stand still much longer." ■

theguardian TheObserver

From shopping to warfare, why maps shape our minds as well as our planet

Apple's new mapping software is under intense scrutiny – but a series of new books and an exhibition demonstrate that cartography is a huge and growing influence

Vanessa Thorpe, arts and media correspondent
The Observer, Saturday 22 September 2012 07:56 EDT



A world map based on the writings of Claudius Ptolemy, the first geographer, published in 1482 by the German cartographer Nicolaus Germanus as part of his *Cosmographia*. Photograph: Corbis

Maps are at the centre of a worldwide commercial power struggle this weekend as Apple faces criticism of the technology it has developed for its new smartphone. But two new books and an exhibition at the Royal Geographical Society reveal that maps have been at the centre of both politics and commerce down the ages, as well as key to the development of the human imagination.

<http://www.theguardian.com/science/2012/sep/22/why-maps-shape-our-minds/print>

11/10/2013

In his new book, *On The Map*, Simon Garfield explains that, just as the empires of the past understood that marking territory was crucial, so Google and its rivals now wield influence. They are even implicated in border disputes. Garfield describes how in 2010 the Nicaraguans cited Google Maps in support of their action when they invaded Costa Rica. Brian McClendon, who developed the mapping technology bought up by Google in 2004, told Garfield that the Nicaraguans argued that they were justified in moving onto the extra territory accidentally assigned to them.

And Garfield believes the commercial and political significance of reliable maps can only grow. "Not only will it become the decisive element in the smartphones and apps we buy, it is also the way that shops will find out when we are nearby," he said.

A revived interest in representations of planet Earth is also reflected in Jerry Brotton's book, *A History of the World in Twelve Maps*, out last month, and in an exhibition of globes at the Royal Geographic Society in London next month.

"The amount of interest in maps and globes at the moment has probably got something to do with the fact that we are all able to find ourselves on maps now at the touch of a screen," said Garfield. Throughout history, he points out, the centre of a map of the world has been the place to be, and today individuals find themselves at the centre courtesy of their smartphones.

"It used to be Jerusalem that was placed at the centre of Christian maps," said Garfield. "Or in China, it would have been a place called Youzhou. Now for the first time we are all at the centre."

Histories of cartography often start in AD150 when Claudius Ptolemy, the first "geographer" to use the term, wrote a book about the skill of map-making. He laid out rules about the geometric lines of latitude and longitude and gave co-ordinates for more than 8,000 locations in the ancient world. But Garfield believes it is possible to look back further, to the moment when the human mind began to develop.

"In *Unweaving the Rainbow*, Richard Dawkins suggests that map-making is one of the basic things that first distinguished us from animals. We needed to explain to each other where to hunt, so spatial awareness, plus the skills of representation and communication, had to develop."

In his book about maps, Brotton, a professor of renaissance studies at Queen Mary, University of London, examines the difficulties faced by map-makers through the stories of 12 key maps, going from Ptolemy's ground rules right up to Google Earth, and taking in influential Islamic and East Asian works.

He concludes that maps rarely come without an agenda. "The idea of the world may be common to all societies, but different societies have very distinct ideas of the world and how it should be represented," he writes. Garfield sees the history of cartography as a way to understand political influence too. "It is always about the proprietorial impulse," he said. "A map says not only 'We know all this', but often 'We own all this' too."

This is clear when shipping routes, the paths to gold and spices, are first traced, and even with British Ordnance Survey maps, which Garfield believes conveyed a sense of power and territory.

The appeal of maps can also be purely visual. "I am a sucker for all kinds of maps and it seems that lots of people are," said Garfield. "For many, the best ever is the 17th century Atlas Maior made by Joan Blaeu. It is just an absolutely wonderful thing – the coffee-table book of its day, complete with wonderfully strange creatures in the sea."

A fresh interest in hand-drawn and personalised maps is providing some antidote to the advance of digital technology, Garfield thinks. The work of artist Grayson Perry, who maps out British social mores with his wall tapestries, is an example. Garfield also notes the enduring appeal of maps in children's literature, from *Treasure Island* to *The Chronicles of Narnia* and *The Hobbit*. JK Rowling's Marauder's Map in the Harry Potter books is a recent example. "Vladimir Nabokov also did a wonderful map of the characters in *Ulysses* and of where they all go in one day," said Garfield.

Peter Bellerby, a professional globemaker, fell under the spell of cartography five years ago when he tried to make a globe for his father's birthday and he has not stopped since. "I had to figure out the very basics of globemaking," he has explained. "How to make perfectly spherical balls for instance." A selection of his work will be displayed at the Royal Geographical Society next month.

Garfield owns two globes. "There are things you can only get from a globe," he said. "There used to be one in every Victorian classroom and, even if it wasn't consulted, it was a symbol of power."

As the battle for pre-eminence in smartphone maps escalates, there will be slip-ups and deliberate misrepresentations on the way, he says. There always have been: for two centuries the state of California was shown as an island. And for a century the mountains of Kong stretched across Africa, until a French explorer found they were not there, while names are a political minefield.

"We have places that are named that are claimed to be owned by three different countries," Google's McClendon told Garfield. "And they have two or three names associated with them."

WORLD VIEWS

The Hereford Mappa Mundi (circa 1300)

Drawn on a single sheet of calfskin, this is the largest medieval map known to still exist. Written in black ink, with additional red and gold, it records how scholars interpreted the world in spiritual as well as geographical terms. The 500 or so drawings include 15 biblical events, 420 cities and towns and eight pictures from classical mythology.

The Mercator projection (1569)

The standard map used in most schoolbooks and newspapers. The projection flattens the Earth on to a rectangular page, distorting the outline and proportions of the continents (Greenland appears larger than Africa, but is one-fourteenth its size).

Atlas Maior (1665)

Joan Blaeu's magisterial and comprehensive world atlas was the most expensive book in the 17th century. The original 11-volume Latin edition included the world's continents, individual countries, islands, cities and towns, each decorated with miniature portraits, coats of arms, great ships and mystical characters.

Google Maps (21st century)

Google has set the standard for online cartography, using satellite imagery and street view data that creates a picture of the world more accurate and detailed than anything before.

Students learn about mapping, environment th.. | The Salt Lake Tribune

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The Salt Lake Tribune

Students learn about mapping, environment through dance

Green Map • Online access allows anyone to see shops, parks and transit that helps the planet.

BY CAROL LINDSAY SPECIAL TO THE TRIBUNE

PUBLISHED MAY 2, 2012 5:16 PM

Repertory Dance Theatre, Weber State University's Moving Company and the geography department joined 800 other communities in 60 countries to create and choreograph an environmental Green Map for residents of Ogden. The Green Map system — which marks places such as public transit stops, secondhand stores and environmentally minded businesses — was developed in 1995 as a means of encouraging participation in sustainable community development around the world.

Weber State took the system a step further and added dance as a means of sharing knowledge. Ogden is the first city to combine its Green Map with dance.

The geography department worked to identify local sustainable businesses and map them online. The dance department used the information from the map to develop dance performances and spread the word encouraging a more sustainable life.

"Just about anything can be taught through dance. Because children learn through kinetics, dance is an excellent format to reinforce what they are learning," said Joanne Lawrence, professor of dance at WSU.

Lawrence worked with Repertory Dance Theatre in Salt Lake City to develop the program.

Each year, Weber State does an outreach program in the community. This year, it decided to use the green map project. Lawrence and her students took the mapping and dance project to schools in Ogden, where the students learned dances about water, plants and animal life that were represented by icons on the map.

Dancers from Weber State University performed at schools during assemblies. They worked closely with fourth- and sixth-graders at Horace Mann Elementary twice a week for 10 weeks, teaching them mapping and dance.

Students would re-create a biome, such as the high desert, by holding poses that represented rocks, cactus and sage while other students would move as animals through the dancescape, Lawrence said.

Geography majors would help the children identify places they thought were important to map, and they would display their creations in the classroom.

Students at Horace Mann were given a pre-test and a post-test in geography, and teachers said the results were positive.

"We plan to do more in-depth assessment as to how learning is increased through dancing," Lawrence said.

Ashley Remkes, a fourth-grade teacher at Horace Mann Elementary, said the dance went "really well."

"We were talking about animals and their environment," Remkes said. "It helped them understand dance and the subject we were studying."

Jordan Porter, a senior majoring in geography, was responsible for the computer aspect of the project. Porter enjoyed getting outside his box and interacting with other departments. "Working with the eccentric dance students was a big and welcomed change from the typical science students I am used to encountering," Porter said. "Their open spirits made for a very fun and rewarding project."

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"Students Learn about Mapping, Environment through Dance," by Carol Lindsay. *Salt Lake City Tribune*, May 2, 2012. Used with permission.

International Journal of Health Geographics



Review

Open Access

The shape of the global causes of death

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Abstract

Background: World maps can provide an instant visual overview of the distribution of diseases and deaths.

Results: There is a particular geography to each type of death: in some places many thousands of deaths are caused by a particular condition, whilst other equally populous areas have few to no deaths from the same cause.

Conclusion: Physicians and other health professionals often specialise in the specifics of causes, symptoms and effects. For some practitioners gaining a worldview of disease burden complements smaller scale medical knowledge of where and how people are affected by each condition. Maps can make health related information much more accessible to planners and the general public than can tables, text, or even graphs. Ten cartograms based on World Health Organisation Burden of Disease data are introduced here; alongside seven based on data from other sources. The Burden of Disease cartograms are the latest in a much larger collection of social, economic and health world maps.

Introduction

In this paper we introduce a new collection of cartograms, depicting geographies of medicine, health care, disease and death. Cartograms have a long but sparse history in medical mapping. The history we can reconstruct is one of similar ideas being repeatedly rediscovered in both Britain and the United States, often with little knowledge of earlier discoveries. There are almost certainly examples of their discovery and use for medical mapping in other countries, given the spontaneity with which the idea appears to be independently reborn time and again (but we have failed to find them).

To our knowledge medical cartograms were first employed by Wallace in 1926 [1] to create a new base map of the counties of the State of Iowa that was explicitly

designed to allow coloured pins to be placed on the map each representing a reportable disease notification. Any clustering of the pins on that map would be much more likely to represent an actual cluster of significance on the ground. Three decades later, in 1955, Ian Taylor [2] independently produced "an epidemiological map" for use in the British ministry of health upon which were drawn the then current boroughs of London, each sized as a box of equal height drawn with width in proportion to population and filled with crosses to represent the notifications of poliomyelitis in each borough during the year 1947. The height of the crosses within each box was thus proportional to the rate of notifications.

Fifteen years later (1970) in the second edition of his Atlas of disease mortality Melvyn Howe [3] employed a popu-

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lation cartogram of the United Kingdom upon which various squares and diamonds were placed representing the peoples of the major cities, towns, counties and boroughs. These were then coloured by the age and sex standardized rates of particular diseases as they effected the populations. In 1965, which was five years earlier, and back over in the United States Levison and Haddon [4] had demonstrated how it was possible to use a population by area cartogram of upstate New York to investigate whether spatial clustering of Wilm's tumour or cervical carcinoma was occurring there in the early 1960s. Back in Britain, Hunter and Young in 1971 [5] showed how cartograms could be used to plot the influenza epidemic of that decade across England and Wales using a series of cartograms.

The first use of computer-created population cartograms in medical mapping was pioneered in America by Selvin and his colleagues during the mid eighties [6-9], but still the benefits of using cartograms in medical mapping were not widely recognised, mainly because of the difficulties of creating cartograms by computer and their arbitrary nature. A series of cartograms of mortality rates by area for many different diseases appeared in a cartogram based atlas of Britain [10]. The new algorithm to produce cartograms suitable (in general) to use as a base for medical mapping was only developed and made available three or four years ago [11].

The new form of mapping which has recently been applied to world data, including mortality data [12-14], makes maps using an algorithm based on the physics of heat transfer [15]. This algorithm allows the density of a variable to become equal everywhere on the map. For example, on a map of deaths attributed to Vitamin A deficiency, the relatively large area of Pakistan denotes the relatively large proportion of all such deaths in the world that occur there (Figure 1). Similarly, Brazil cannot be seen on this map because very few Vitamin A deficiency-related deaths are thought to occur there. This scaling of the area of each territory by the number of deaths there due to a particular cause is achieved whilst allowing coastlines and borders to expand, contract and crumple. Thus territories appear distorted yet recognisable, somewhat like a caricature of the world. Note too that here we do not consider geographical variations within territory boundaries. For illustrations of sub-national variations in a range of measures see the Gapminder website [16].

Data availability is crucial to making these maps. Collecting and estimating good quality data that is internationally comparable is a challenging task. Recently the quality of World Health Organisation statistics has improved, particularly in terms of data accuracy and the number of territories for which data are collected and estimated. It is important of course to remember that the quality of data

will vary both between territories and between causes of death, and that even the world total number of people dying each year is an estimate that is hard to verify. The original data, which is publicly available, includes a level of uncertainty indicator for each country for each cause and also a set of confidence limits for all cause mortality in each country. There are still issues of uncertainty even in that which is most certain. However, the situation now is far better than it was a decade ago. One example of dramatically improved data used here is the 'World Mortality in 2000: Life Tables for 191 Countries' [17]. This report was released because reporting of mortality data has been poor in many territories, despite the importance of this information for health policy.

The maps shown here are a subset of a broader mapping project, Worldmapper. These and many other health-related maps are available on the Internet and can be downloaded at no cost to the user. At the time of writing the Worldmapper project's health related maps include reshaping the world according to: health care quality, numbers of nurses working, physicians working, HIV prevalence, maternal mortality, stillbirths, infant mortality, malnutrition, malaria cases, hospital beds and spending on public and private health care. Other mapped indicators, which are also related to health, include maps of money, war, trade, labour, education and transport. Also available are the data used to make these maps, technical notes about the data used for these maps, and posters of these maps for use in education [18].

Some 200 maps of disease and death are to be made available during 2007. A subset of these maps is shown below. Figures 1, 2, 3, 4, 5, 6, 7 and 8 rely on a related key source of data about death derived from the Global Burden of Disease Project [19], which provides world data on over 130 causes of death, ranging from Sexually Transmitted Infections, to Cancers, to Accidental Deaths. Figure 8 shows where deaths would occur if only age and sex determined age of death, and where you lived had no effect, it is based on the life table data [17] from the same source. The most recent references to these WHO projects now appear as book chapters [20] and journal articles [21].

In the following information about each of these maps, the Global Burden of Disease (GDB) number and International Classification of Disease (ICD) numbers are given for reference purposes. These maps have been selected to demonstrate the ways in which certain causes of death are distributed. This form of mapping may be one of the clearest ways to demonstrate the significance of the well-known axiom that poverty is linked to early death (Figure 9 shows the world distribution of poor people, measured by the United Nations Development Programme's Human Poverty Index). It is generally understood that in

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Figure 1
Worldmapper Map 413: Vitamin A deficiency deaths in 2002.

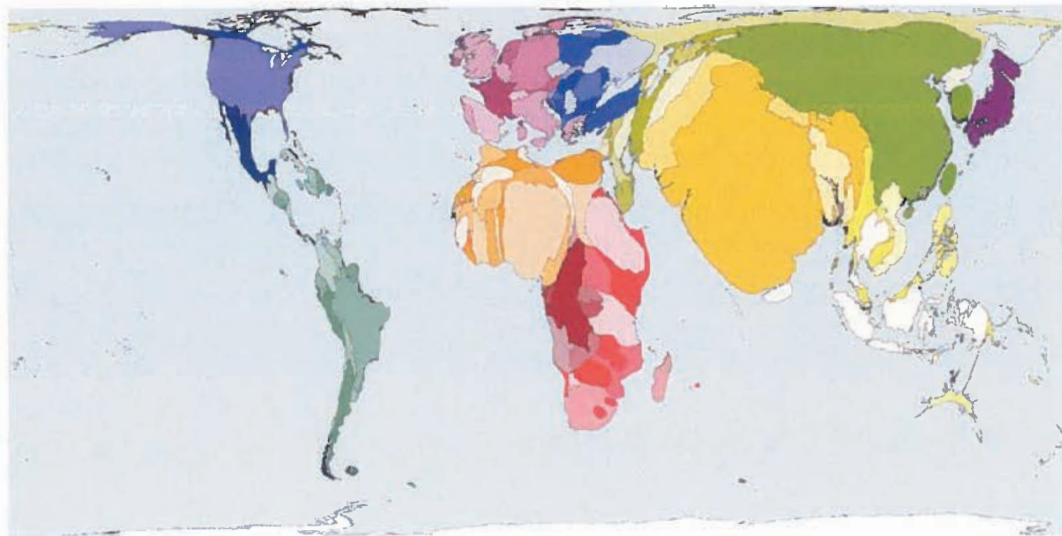


Figure 2
Worldmapper Map 368: All deaths (numbers in the year 2002).

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Figure 3
Worldmapper Map 371: Deaths from communicable, maternal, perinatal and nutritional conditions in 2002.



Figure 4
Worldmapper Map 380: Childhood cluster deaths in 2002 (includes: Pertussis, Poliomyelitis, Diphtheria, Measles and Tetanus).

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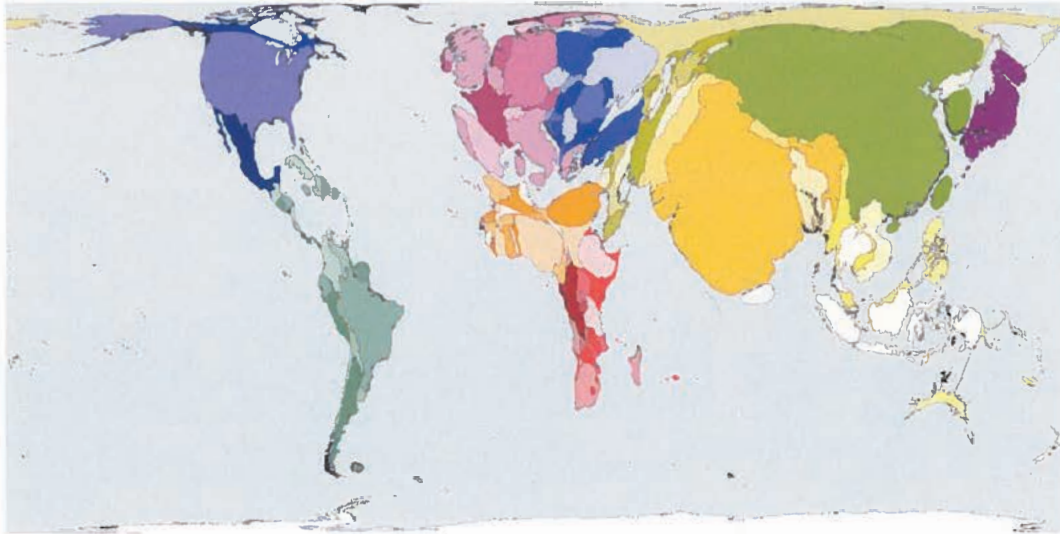


Figure 5
Worldmapper Map 417: All Chronic disease deaths in the year 2002.



Figure 6
Worldmapper Map 425: Trachea, Bronchus and Lung Cancer deaths in 2002.

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Figure 7
Worldmapper Map 444: Alzheimer and other dementias deaths in 2002.

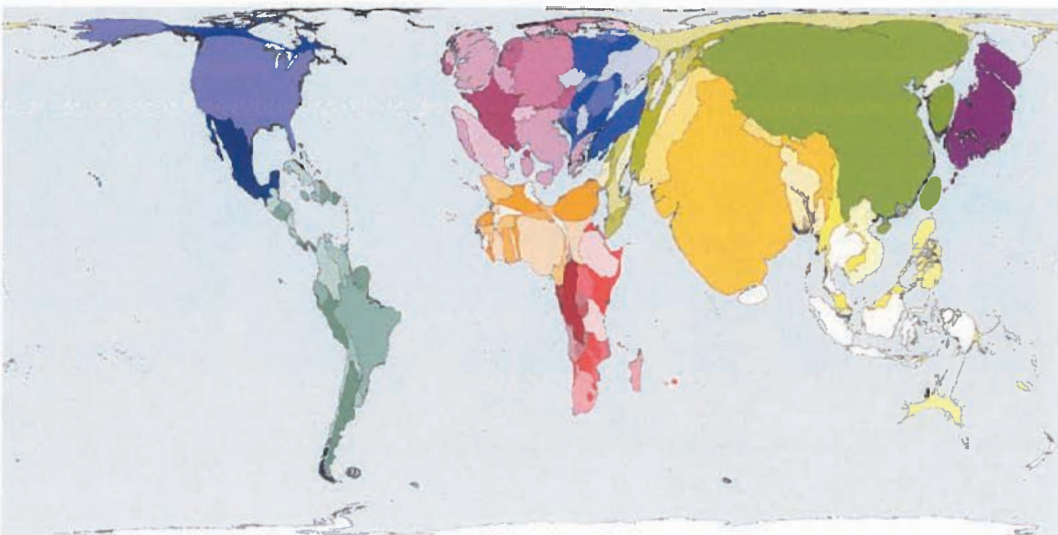


Figure 8
Worldmapper Map 367: Expected deaths (estimated for 2001).

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some places most young people die from preventable diseases, whilst elsewhere people survive long enough for the vast majority to die from the conditions of old age; but it is revealing to see the extent to which this is the case when the world is drawn to reflect the numbers.

To understand the distribution of diseases requires first understanding the global distribution of people. People are distributed very differently to land (the land distribution is shown in Figure 10). The distribution of people is the most simple map of who is at risk of disease and is shown in Figure 11 where areas are drawn in proportion to population in the year 2002. Of course, different people face different risks depending on a large number of factors. Figure 12 illustrates how these too are unevenly distributed by showing the world shaped by the elderly population aged 65 years or more. Figure 13 shows one additional risk factor for one group: the world shaped by the number of men who smoke. Lastly in introduction it is worth looking again at Figure 9 which shows the world shaped by the proportion of people living in poverty as internationally understood.

All the deaths estimated to have occurred worldwide in 2002 are mapped in Figure 2. That was a total of 57 million deaths. This map looks roughly similar to a map of population, although Latin America appears to have a lower proportion of all deaths occurring there, than the proportion of the world population that live there. India, China, Nigeria and the United States are where a large proportion of all deaths occurred in 2002 – these are also some of the more populous territories on earth. The original WHO source data groups diseases in a particular way and we have adopted their grouping here.

Roughly a third of all deaths in 2002 were caused by communicable, maternal, perinatal and nutritional conditions these can ostensibly almost all be controlled by public health interventions. The world shaped to show the locations of these 18 million deaths is drawn in Figure 3. The look of this map contrasts with the preceding map: territories in the South and East have generally expanded relative to those territories in the North and West. The anomalies are Australia and New Zealand, which have tiny areas due to both their small populations and the small number of deaths there due to these causes. [Source information: GDB cause U001 I. Communicable, maternal, perinatal and nutritional conditions; ICD9: 001–139, 243, 260–269, 279.5, 280–281, 285.9, 320–323, 381–382, 460–465, 466, 480–487, 614–616, 630–676, 760–779, ICD10: A00–B99, G00–G04, N70–N73, J00–J06, J10–J18, J20–J22, H65–H66, O00–O99, P00–P96, E00–E02, E40–E46, E50, D50–D53, D64.9, E51–64].

The 1 million deaths used to shape Figure 4 are all those caused by vaccine-preventable childhood diseases. These diseases are Pertussis, Poliomyelitis, Diphtheria, Measles, and Tetanus. In many parts of the world these diseases do not threaten the lives of children – either because the disease has been locally wiped out, or vaccinations are used to protect almost all children, and/or treatment is available to those who do contract these diseases. This map shows that children living in South America, North America, Western Europe and Japan are usually quite safe from the threat of these diseases. Children living in Eastern Europe and the Middle East are also relatively unlikely to be killed by these diseases; it is in parts of Southern Asia and Africa where most children die due to childhood cluster diseases. It should be noted that where diseases do not result in death, serious disability may have been caused. [Source information: GBD cause U011 5. Childhood-cluster diseases, ICD 9: 032, 033, 037, 045, 055, 138, 771.3; ICD 10: A33–A37, A80, B05, B91]

Figure 1 shows a much rarer cause of death but a major cause of disability: Vitamin A deficiency (which is a major cause of blindness in the tropics). This map shows the distribution of the 20,000 deaths that this deficiency is estimated to have caused in 2002. The vast majority of these deaths occurred in African territories; most deaths outside of Africa were in India, Pakistan, Bangladesh, Nepal and Thailand. These deaths are related to education and the availability of vitamin A – a good and varied diet is enough to prevent almost all of these deaths. Vitamin A can be found in milk, carrots, green leafy vegetables and animals' livers. [Source information: GBD cause: U056, ICD 9: 264, ICD 10: E50].

Figure 5 represents the geography of all deaths caused by chronic diseases. Together with Figure 3, the deaths shown in this figure show the causes of all deaths attributable to disease worldwide. In 2002, there were 33.6 million deaths from chronic causes. These deaths include cancers, diabetes, diseases of the heart, the respiratory tract and the digestive tract. This map looks similar to Figure 2; the most obvious exception is that a larger proportion of deaths from chronic diseases occur in Europe, whilst fewer occur in Africa. [Source information: GBD cause U059 II. Chronic diseases, ICD 9: 140–242, 244–259, 270–279 (minus 279.5), 282–285 (minus 285.9), 286–319, 324–380, 383–459, 470–478, 490–611, 617–629, 680–759; ICD 10: C00–C97, D00–D48, D55–D64 (minus D 64.9) D65–D89, E03–E07, E10–E16, E20–E34, E65–E88, F01–F99, G06–G98, H00–H61, H68–H93, I00–I99, J30–J98, K00–K92, N00–N64, N75–N98, L00–L98, M00–M99, Q00–Q99].

Cancers are a major cause of disease and each group of cancers can be used to draw a differently shaped world.

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Figure 9

Worldmapper map 174: Human Poverty (as defined by the United Nations Development Programme).

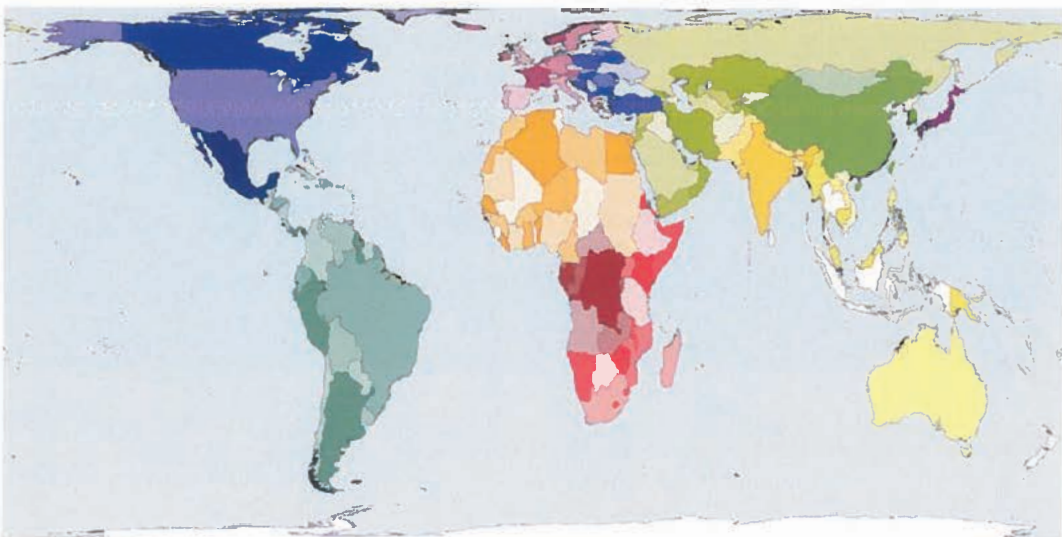


Figure 10

Worldmapper map 1: Land area. See [18] for further details.

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<http://www.ij-healthgeographics.com/content/6/1/48>

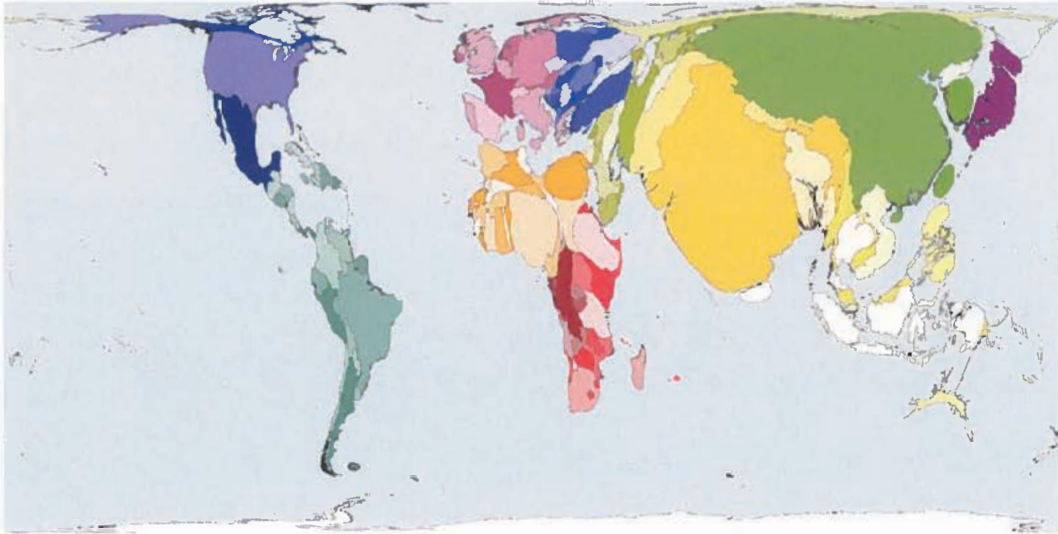


Figure 11
Worldmapper map 2: Total Population (estimated for 2002).

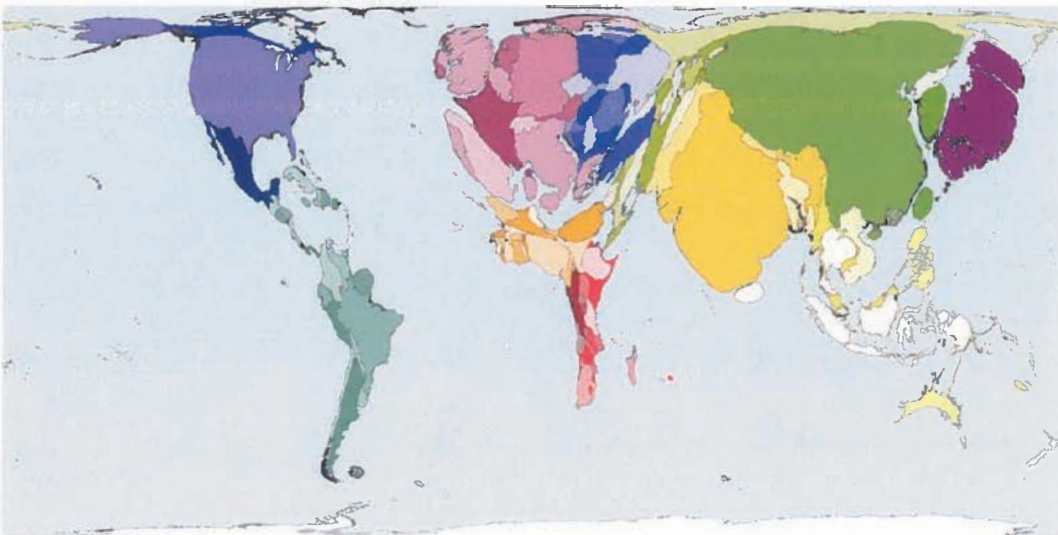


Figure 12
Worldmapper map 6: Total Elderly (people aged 65 years and older, estimated for 2002).

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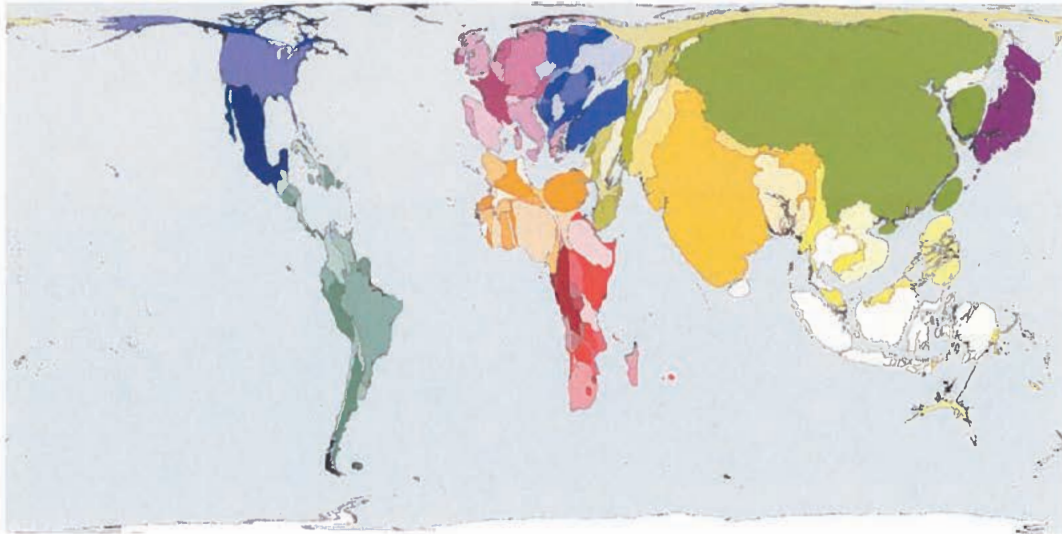


Figure 13
Worldmapper map 242: Men Smoking (numbers estimated for 2002).

The distribution of deaths shown in Figure 6 is of those due to cancers of the trachea, bronchus and lungs. These are all strongly smoking related. In 2002, 1.2 million deaths worldwide were due to these causes. These causes of death generally occur more in richer territories – the United States, Western and Eastern Europe, South Korea and Japan are prominent on this map. However, China also has a large area as more and more tobacco is sold there (historically mainly to men). Due to the low proportion of all people killed by the cancers in Africa, that continent has shrunk to become barely visible on this map. [Source information: GBD: U067 7. Trachea, bronchus and lung cancers; ICD 9: 162; ICD 10: C33-C34].

Figure 7 is a map of deaths from Alzheimer's disease and other dementias. These were thought to have caused and contributed to some 400,000 deaths worldwide in 2002. However, this diagnosis and the estimates based on it are especially error-prone. Many people do not reach an age where these conditions are likely, as they die from some other cause first. Other than India and China still being the location of high proportions of worldwide deaths (due to the large populations living in these territories), this map shows an inverse distribution to the map of deaths from childhood cluster diseases (Figure 4). India, China, Western Europe, the United States, Japan and South Korea have large areas on this map. [Source information: GBD cause U087 6. Alzheimer and other dementias; ICD 9: 290, 330, 331; ICD 10: F01, F03, G30-G31].

This short series of cartograms hopefully demonstrates quite clearly how where you live affects what you are likely to die from. It may also be of use to those already familiar with these statistics who have not seen them in this form before. The maps also allow us to experiment with alternative possibilities. Imagine if the world was changed, if from today onwards only our sex and age affected when we die; if where we lived became immaterial. Figure 8 shows the redistributed 57 million deaths that would be expected to have occurred, had worldwide average age-sex specific mortality rates applied everywhere. The statistics behind this figure have been calculated on the assumption that access to health care, prevalence of infectious diseases, and many other factors become equal. This map shows what could happen, Figure 2 shows what does happen.

The differences between Figure 2 and 8 are due chiefly to the differences in age composition (and less so gender). On Figure 8 the excess death count in the African continent shrinks considerably (because the populations in the countries in this continent typically have a much younger age structure), whereas the death count increases notably for the United States, Canada, and Europe (which have an older age structure), somewhat increases for Japan and China, and stays about the same for India.

Policy makers could well benefit from seeing the world through images such as these. In some cases policy makers

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Figure 14
Worldmapper map 292: Self-inflicted deaths (estimated for 2002).

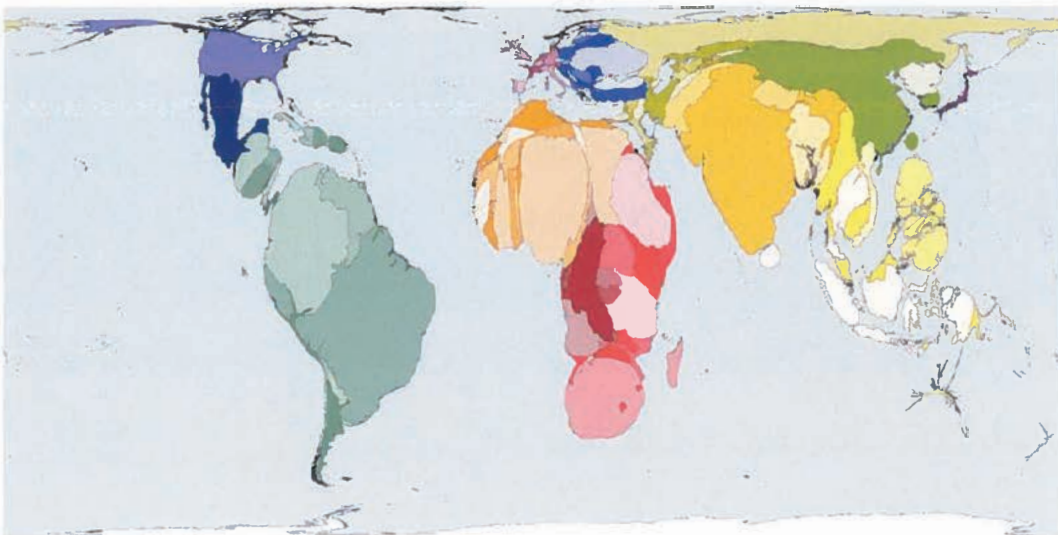


Figure 15
Worldmapper map 291: Violent deaths (estimated for 2002).

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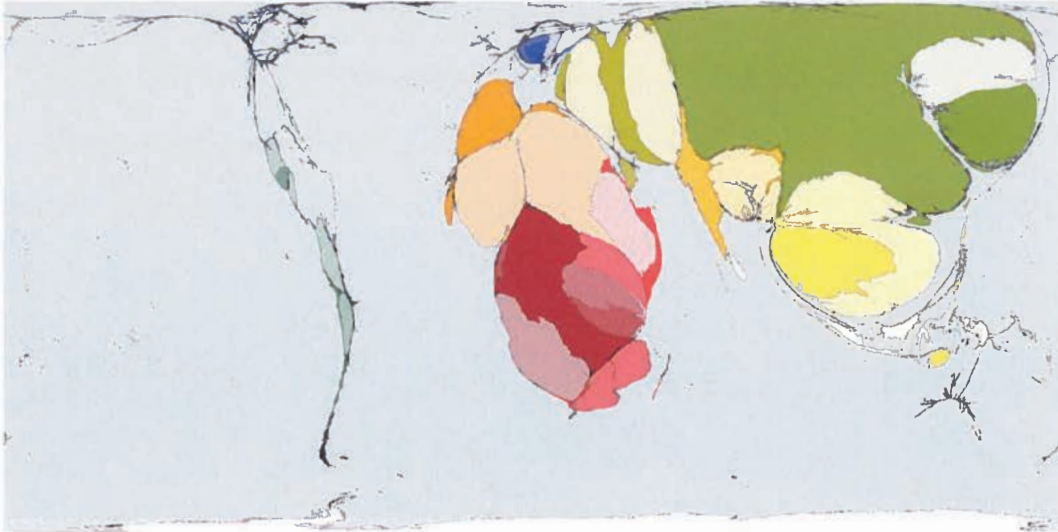


Figure 16
Worldmapper map 287: War Deaths 1945–2000.

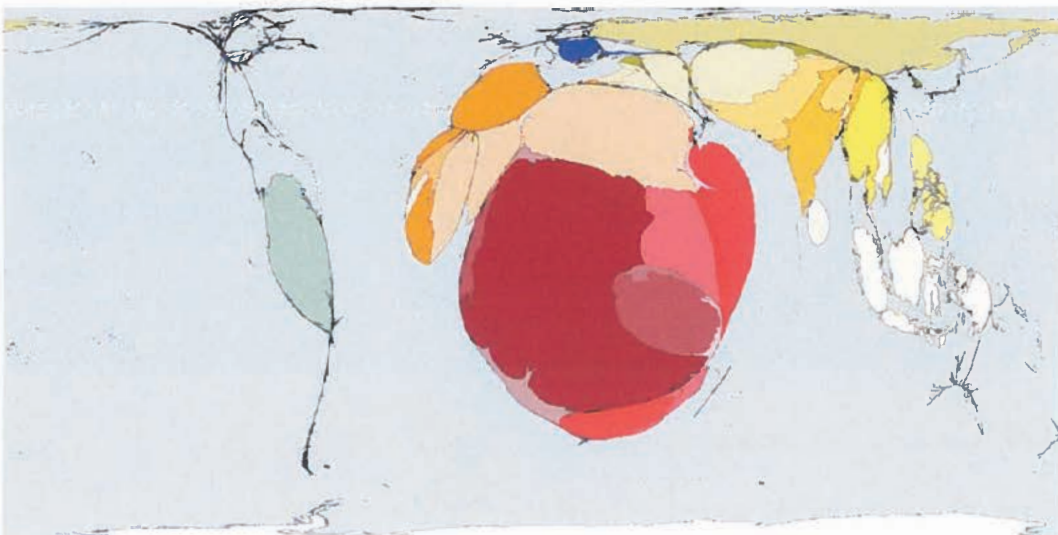


Figure 17
Worldmapper map 288: War Deaths 2002.

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<http://www.ij-healthgeographics.com/content/6/1/48>

can have a far more immediate effect than others. There is evidence that government influences suicide rates [22]. Homicide rates also vary dramatically between nations and, most obviously, policy makers are the makers of war. Consider the worldwide distributions of suicides, homicides, war deaths from 1945–2000, and war deaths in 2002 (Figures 14, 15, 16 and 17). With colleagues we have tried to ensure that these images appear in a wide variety of media; they will have greater weight if they are familiar forms. This is particularly the case if they can be instrumental in the formation of public opinion and can effect what we request from our politicians. Examples of these maps appearing in the printed press are available on the Internet [23]. One way in which images such as this may come to be used more widely is if they are employed in teaching. To help in this we have provided all the data our maps are based on as freely downloaded spreadsheets from the website and many lecturers are currently using these resources in schools and universities.

Acknowledgements

Other researchers working on the Worldmapper project are John Pritchard (University of Sheffield), Mark Newman (University of Michigan), and David Dorling. We are also grateful to the anonymous referees. Daniel Dorling is currently supported by a British Academy Research Leave Fellowship. The Leverhulme Trust provided financial support for this work [18].

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AP Seminar End-of-Course Exam

Weight: 40% of the AP Seminar score

AP SEMINAR

Section I

Part A

Suggested time – 30 minutes

Directions: Read the passage below and then respond to the following three questions.

1. Identify the author's argument, main idea, or thesis.
2. Explain the author's line of reasoning by identifying the claims used to build the argument and the connections between them.
3. Evaluate the effectiveness of the evidence the author uses to support the claims made in the argument.

From "The Uncertainty of Science" in *The Meaning of It All: Thoughts of a Citizen Scientist* by Richard P. Feynman (1998, 2005)

Scientists . . . are used to dealing with doubt and uncertainty. All scientific knowledge is uncertain. This experience with doubt and uncertainty is important. I believe that it is of very great value, and one that extends beyond the sciences. I believe that to solve any problem that has never been solved before, you have to leave the door to the unknown ajar. You have to permit the possibility that you do not have it exactly right. Otherwise, if you have made up your mind already, you might not solve it.

When the scientist tells you he does not know the answer, he is an ignorant man. When he tells you he has a hunch about how it is going to work, he is uncertain about it. When he is pretty sure of how it is going to work, and he tells you, "This is the way it's going to work, I'll bet," he still is in some doubt. And it is of paramount importance, in order to make progress, that we recognize this ignorance and this doubt. Because we

have the doubt, we then propose looking in new directions for new ideas. The rate of the development of science is not the rate at which you make observations alone but, much more important, the rate at which you create new things to test.

If we were not able or did not desire to look in any new direction, if we did not have a doubt or recognize ignorance, we would not get any new ideas. There would be nothing worth checking, because we would know what is true. So what we call scientific knowledge today is a body of statements of varying degrees of certainty. Some of them are most unsure; some of them are nearly sure; but none is absolutely certain. Scientists are used to this. We know that it is consistent to be able to live and not know. Some people say, "How can you live without knowing?" I do not know what they mean. I always live without knowing. That is easy. How you get to know is what I want to know.

Note: The inclusion of source material in this exam is not intended as an endorsement by the College Board or ETS of the content, ideas, or values expressed by the authors.

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This freedom to doubt is an important matter in the sciences and, I believe, in other fields. It was born of a struggle. It was a struggle to be permitted to doubt, to be unsure. And I do not want us to forget the importance of the struggle and, by default, to let the thing fall away. I feel a responsibility as a scientist who knows the great value of a satisfactory philosophy of ignorance, and the progress made possible by such a philosophy, progress which is the fruit of freedom of thought. I feel a responsibility to proclaim the value of this freedom and to teach that doubt is not to be feared,

but that it is, to be welcomed as the possibility of a new potential for human beings. If you know that you are not sure, you have a chance to improve the situation. I want to demand this freedom for future generations.

Doubt is clearly a value in the sciences. Whether it is in other fields is an open question and an uncertain matter. I expect in the next lectures to discuss that very point and to try to demonstrate that it is important to doubt and that doubt is not a fearful thing, but a thing of very great value.

The Meaning of It All by Richard Feynman. © Basic Books, 2005. Reproduced with permission of Basic Books for excerpt in an assessment via Copyright Clearance Center.

END OF PART A

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Part B

Suggested time – 60 minutes

Directions: Read the following two (2) articles carefully, paying attention to their perspectives, implications, and limitations. Then, write an essay that compares the two arguments by evaluating their effectiveness. In your essay, address the relevance and credibility of the evidence each presents to support the authors' lines of reasoning.

Article A

From "Make Them Eat Cake: How America is exporting its obesity epidemic."
by John Norris (*Foreign Policy*, September 3, 2013)

With this summer's news from the United Nations that Mexico has surpassed the United States in adult obesity levels — one-third of Mexican adults are now considered extremely overweight — U.S. foreign policy has come into sharper, or perhaps softer, focus. Despite first lady Michelle Obama's continued emphasis on good diet and exercise, the United States seems secretly intent on fattening everyone else on the planet. Apparently, America has adopted the old piece of ursine humor as grand strategy: "You don't have to run faster than the bear to get away. You just have to run faster than the guy next to you."

At first blush, it might seem unfair to blame the United States for the stoutness south of its border. Surely, Mexicans (like Americans) are getting fatter because they are eating more, exercising less, and spending too much time watching television. When one digs beneath the surface, however, it quickly becomes apparent that a complex web of American agricultural, trade, marketing, and scientific practices together are helping drive a "globesity" epidemic. Many of these policies were designed to give U.S. firms a leg up in international markets, but the domestic economic benefits of this culinary oligarchy are increasingly being outweighed — literally and figuratively — by the toll on

international health, particularly among the poor. The American taxpayer is directly underwriting a food-production system in which nutrition has become a distant afterthought.

Perhaps America is ultimately guilty of nothing worse than trying to remake the world in its own hefty image — a case of soft-power influence gone horribly literal. As the global costs of obesity continue to spiral, however, it is time to rethink the changes that the United States has brought to the table.

IT IS NO ACCIDENT that Mexico's weight gain has coincided with increased soft-drink guzzling. The country's national statistics agency estimates that Mexicans drink 43 gallons per capita annually, giving the country the world's highest rate of soda consumption. The Institute for Agriculture and Trade Policy, a Minnesota-based think tank, has shown that the country's sharp spike in obesity and soda consumption correlates with the 1994 passage of the North American Free Trade Agreement (NAFTA), which opened Mexico to a flood of cheap junk food and soda pop: After the agreement took effect, there was a more than 1,200 percent increase in high-fructose corn syrup exports from the United States to Mexico between 1996 and 2012, according to the U.S.

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Agriculture Department. (At one point, the Mexican government began taxing drinks sweetened with high-fructose corn syrup, but the fierce objections of U.S. corn refiners prompted Washington to complain to the World Trade Organization and the tax was eventually struck down.)

In many ways, Mexico's diet is being devastated by America's perverse economic incentives. The United States has long imposed relatively high tariffs on sugar imports and granted large subsidies for domestic crops such as corn and soybeans. In the 1970s, however, when sugar tariffs rose even further and technological advances from Japan helped perfect high-fructose corn syrup production, agribusinesses' use of the sweetener exploded. Suddenly, it was cheaper to put high-fructose corn syrup in everything from spaghetti sauce to soda. Coke and Pepsi swapped out sugar for high-fructose corn syrup in 1984, and most other U.S. soda and snack companies followed suit. U.S. per capita consumption of high-fructose corn syrup spiked from less than half a pound a year in 1970 to a peak of almost 38 pounds a year in 1999. As it did, American obesity spiked as well.

...

Meanwhile, nothing has been more American in recent years than exporting fast-food chains. McDonald's boasts that it now has restaurants in 118 countries. KFC is second only to the Golden Arches in global fast-food market share. The fried-chicken chain's parent company, Yum! Brands, which also owns Taco Bell and Pizza Hut, saw \$13.6 billion in revenue last year alone and is focusing some 86 percent of its restaurant development in emerging economies.

The results are as depressing as you might expect. A University of Minnesota study published last year found that those flocking to Western-style fast-food

chains in Singapore were younger and better educated, exercised more, and smoked less — all factors normally associated with lower risk of heart disease. Yet those Singaporeans eating fast food once a week had a 20 percent higher likelihood of dying from coronary heart disease than those eschewing fast food; people eating fast food two or three times a week had a 50 percent higher likelihood; and those wealthy, educated patrons downing fast food four or more times a week were nearly 80 percent more likely to die from heart disease. "The big picture," one of the study's authors said, "is that this [fast food] aspect of globalization and exportation of U.S. and Western culture might not be the best thing to spread to cultures around the world."

WHY IS THE UNITED STATES determined to export fat? In part because button-popping sums of money are at stake. The market research firm Euromonitor International notes that the global sale of packaged foods (everything from potato chips to cereal to pre-prepared meals like Lunchables) has jumped more than 90 percent over the last decade, with 2012 sales topping \$2.2 trillion. PepsiCo alone sells more than \$10 billion in potato chips annually. Kraft Foods' global snack-food spinoff, Mondelez International — meaning "world delicious," in a blend of Romance languages and corporatespeak — operates in 165 countries and is ramping up investments in the developing world, which already accounts for more than 40 percent of its \$35 billion in annual net revenues. Coca-Cola and PepsiCo together control almost 40 percent of the world's \$532 billion soft drink market, according to the *Economist*. Soda sales, meanwhile, have more than doubled in the last 10 years, with much of that growth driven by developing markets. McDonald's investors were

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disappointed that the company only turned \$1.4 billion in profit during the second quarter of 2013, having become used to years of double-digit gains every three months.

...

The United States, meanwhile, seems to be doubling down on the export of fat and fructose. The farm bill that

passed the House of Representatives in July not only stripped out food stamps but also made a number of key agricultural subsidies — including for corn, soybeans, and peanuts — self-renewing in perpetuity. Legislation like this, mixed with relentless corporate marketing, means the rest of the world is likely to keep getting heavier — and it's clear whose hand is feeding them.

"Make Them Eat Cake" by John Norris, from *Foreign Policy* by Carnegie Endowment for International Peace; National Affairs, Inc. Reproduced with permission of FOREIGN POLICY MAGAZINE via Copyright Clearance Center.

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Article B

From “New Global Middle Class Hungers for Good Ol’ US Fast Food”
by John W. Schoen (CNBC.com, August 9, 2013)

Along the upward journey to middle-class status, a growing number of people around the world are working up quite a voracious appetite. The developing world has fallen big time for all-American exports like Footlongs, Big Macs and Extra Crispy Chicken Tenders.

Despite early signs that a fast-food diet is no healthier in Beijing than it is in Boston, consumers who are new to middle-class dining seem less concerned about the health risks of the high-fat, high-sodium fare that many Americans now seek to avoid.

As the U.S. economy slogs along at a tepid pace, household incomes in much of the developing world are leaping ahead. Over the next two decades, those gains are expected to introduce billions of new consumers to menus from fast-food chains that are among some of the most iconic American brands.

And as many chains have saturated the U.S. market (and American tastes have shifted) the fast-food industry is finding a hungry market in far-flung locations — from Malawi to Mongolia.

“A lot of domestic chains are completely refocusing their business on the international market,” said IBISWorld Industry analyst Andy Brennan. “And most of them have been quite successful at it.”

IBISWorld pegs global fast-food sales at \$190 billion but does not break out non-U.S. sales.

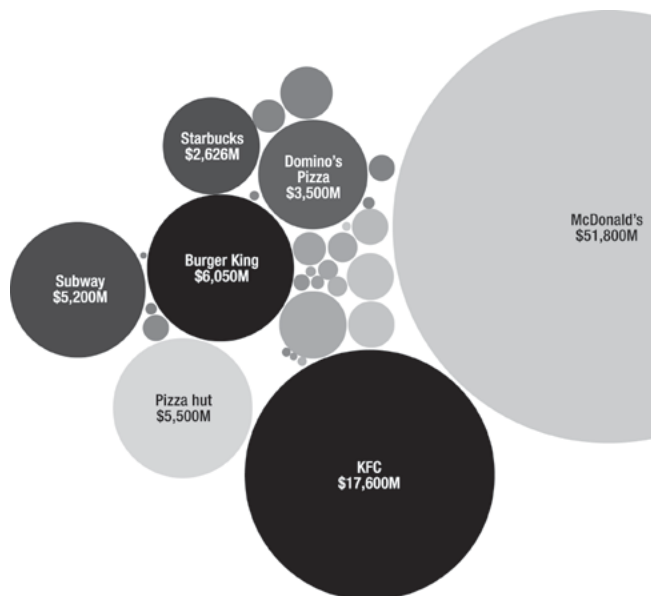
For most fast-food chains, the formula that worked at home — low-cost menu items, prepared consistently and served quickly — seems to translate well for foreign

consumers with newfound disposable income.

These companies are also riding a wave of global brand awareness, thanks to increased international travel and the powerful reach of the Web.

For many new arrivals to middle-class life, a meal at an iconic American fast-food outlet also bestows a level of prestige, according to Brennan.

“It’s a real status symbol to be eating in an American restaurant in Asia,” he said.



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Yum Brands — the parent company of KFC, Pizza Hut and Taco Bell — generated more than 70 percent of its profits, or \$1.1 billion, outside the U.S. last year, up from just 20 percent 15 years earlier.

“We believe we have a long runway for growth in emerging markets like China, India, Africa, Russia, Indonesia, Vietnam and many others,” a Yum spokeswoman said in email.

That overseas growth comes as the company has an increasingly tough time finding a U.S. location that isn’t already well-supplied with Hot Wings, Cantina Double Steak Quesadillas and Ultimate Cheese Lover’s Pizza. In the top 10 emerging markets, Yum Brands has just two stores per million people — compared with 58 stores per million in the U.S.

As any traveler to a foreign country will tell you, adapting to strange tastes and diets can be challenging.

More than half of Subway’s new stores last year were opened outside the U.S. by franchisees and other business partners. When it began expanding globally more than a decade ago, some of those partners “took local tastes a little too far,” according to Don Fertman, Subway’s chief development officer.

Japan franchisees tried to downsize the company’s flagship Footlong sandwich on the theory that local customers weren’t interested in larger portions.

“That’s what Subway is known for,” said Fertman. “So that didn’t really work out.”

Appealing to local markets also involves adapting a store’s physical design and layout to conform to local tastes in decor and architecture — a move that can also backfire. Fertman said an Austrian partner once tried to introduce a “modern, cold look that was virtually unrecognizable to Subway customers.”

“It was more like a disco,” he said. “All steel and rock. So folks that were looking for Subway weren’t finding it.”

But adhering strictly to the original formula isn’t always possible, no matter how successful it is with American consumers.

McDonald’s offers customers in India a potato-based veggie burger, McAloo Tikki or the McCurry, served with or without chicken. It includes curried broccoli, baby corn, mushrooms and red bell pepper, with creamy sauce on a baked crust. In many Latin American countries you’ll find the McMollette — an English muffin served with refried beans, cheese and salsa.

In Saudi Arabia, Subway’s menu sticks with Halal foods and preparation methods. And if you’re looking for a Subway sandwich in any other predominantly Muslim or Hindu country, don’t bother asking for sliced roast beef or ham. Instead, there’s a choice of turkey or lamb cold cuts on your Footlong.

Finding those ingredients — especially in parts of the world with limited infrastructure and poorly developed distribution systems — poses a major challenge.

“Even the mature companies can have supply chain issues overseas,” said IBISWorld’s Brennan. “That’s really an unpredictable factor.”

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Yum Brands felt the full effect of those risks in December, when Chinese food safety agencies launched a probe of the company's supply chain after excess levels of antibiotics were found in chicken from two suppliers. Yum was not fined, but the probe sparked a widespread backlash in Chinese media and on social media sites.

In April, reports about a new bird flu renewed local concerns about the safety of its chicken. Sales plummeted at its KFC outlets, though the company says they have since begun to recover.

American fast-food chains have also been wrestling with a wider range of health concerns at home, as many consumers are changing domestic eating habits in response to an ongoing obesity epidemic. Many diners are now paying more attention to the long-term health impact of the high-fat, high-sodium fare that has been long been a best-selling fast-food industry staple.

So far, those concerns have had much less impact on sales in emerging markets, where entrance to the middle class includes consumption of higher-calorie, higher-fat food products that are only available with more disposable income.

That may another reason America's food makers are finding a more welcoming clientele in the developing world.

"Obesity is a sign of wealth," said Brennan. "The prestige factor of these fast-food menus overrides the health concern to a degree."

"New global middle class hungers for good ol' US fast food," from CNBC.com, August 9, 2013. Used with permission.

STOP

END OF PART B

END OF SECTION I

AP SEMINAR**Section II****Time – 90 minutes**

Directions: Read the four (4) sources carefully, focusing on a theme or issue that connects them and the different perspective each represents. Then, write a logically organized, well-reasoned, and well-written argument that presents your own perspective on the theme or issue you identified. You must incorporate at least two (2) of the sources provided and link the claims in your argument to supporting evidence. You may also use the other provided sources or draw upon your own knowledge. In your response, refer to the provided sources as Source A, Source B, Source C, or Source D, or by the authors' names.

Source A

From "Why Great Revolutions Will Become More Rare" in *Democracy in America*
by Alexis de Tocqueville (1840)

Among a people whose ranks are nearly equal, no ostensible bond connects men together or keeps them settled in their station. None of them have either a permanent right or power to command, none are forced by their condition to obey; but every man, finding himself possessed of some education and some resources, may choose his own path and proceed apart from all his fellow men. The same causes that make the members of the community independent of each other continually impel them to new and restless desires and constantly spur them onwards. It therefore seems natural that in a democratic community men, things, and opinions should be forever changing their form and place, and that democratic ages should be times of rapid and incessant transformation.

But is this really the case? Does the equality of social conditions habitually and permanently lead men to revolution? Does that state of society contain some perturbing principle which prevents the community from ever subsiding into calm and disposes the citizens to alter incessantly their laws, their principles, and their manners? I do not believe it; and as the subject is important, I beg for the reader's close attention.

Almost all the revolutions that have changed the aspect of nations have been made to consolidate or to destroy social inequality. Remove the secondary causes that have produced the great convulsions of the world and you will almost always find the principle of inequality at the bottom. Either the poor have attempted to plunder the rich, or the rich to enslave the poor. If, then, a state of society can ever be founded in which every man shall have something to keep and little to take from others, much will have been done for the peace of the world.

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Source B

"A Sane Revolution"
by D. H. Lawrence (1929)

If you make a revolution, make it for fun,
don't make it in ghastly seriousness,
don't do it in deadly earnest,
do it for fun.

Don't do it because you hate people,
do it just to spit in their eye.

Don't do it for the money,
do it and be damned to the money.

Don't do it for equality,
do it because we've got too much equality
and it would be fun to upset the apple-cart
and see which way the apples would go a-rolling.

Don't do it for the working classes.
Do it so that we can all of us be little aristocracies on our own
and kick our heels like jolly escaped asses.

Don't do it, anyhow, for international Labour.
Labour is the one thing a man has had too much of.
Let's abolish labour, let's have done with labouring!
Work can be fun, and men can enjoy it; then it's not labour.
Let's have it so! Let's make a revolution for fun!

"A Sane Revolution" by D. H. Lawrence.
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Source C

From "Civil Disobedience"
by Henry David Thoreau (1849)

I HEARTILY ACCEPT the motto, — "That government is best which governs least"; and I should like to see it acted up to more rapidly and systematically. Carried out, it finally amounts to this, which also I believe, — "That government is best which governs not at all"; and when men are prepared for it, that will be the kind of government which they will have. Government is at best but an expedient; but most governments are usually, and all governments are sometimes, inexpedient. The objections which have been brought against a standing army, and they are many and weighty, and deserve to prevail, may also at last be brought against a standing government. The standing army is only an arm of the standing government. The government itself, which is only the mode which the people have chosen to execute their will, is equally liable to be abused and perverted before the people can act through it.

. . . Governments show thus how successfully men can be imposed on, even impose on themselves, for their own advantage. It is excellent, we must all allow. Yet this government never of itself furthered any enterprise, but by the alacrity with which it got out of its way. It does not keep the country free. It does not settle the West. It does not educate. The character inherent in the American people has done all that has been accomplished; and it would have done somewhat more, if the government had not sometimes got in its way. For government is an expedient by which men would fain succeed in letting one another alone; and, as has been said, when it is most expedient, the governed are most let alone by it. . . .

But, to speak practically and as a citizen, unlike those who call themselves no-government men, I ask for, not at once no government, but at once a better government. Let every man make known what kind of government would command his respect, and that will be one step toward obtaining it.

. . . All men recognize the right of revolution; that is, the right to refuse allegiance to, and to resist, the government, when its tyranny or its inefficiency are great and unendurable. But almost all say that such is not the case now. But such was the case, they think, in the Revolution of '75. If one were to tell me that this was a bad government because it taxed certain foreign commodities brought to its ports, it is most probable that I should not make an ado about it, for I can do without them. All machines have their friction; and possibly this does enough good to counterbalance the evil. At any rate, it is a great evil to make a stir about it. But when the friction comes to have its machine, and oppression and robbery are organized, I say, let us not have such a machine any longer. In other words, when a sixth of the population of a nation which has undertaken to be the refuge of liberty are slaves, and a whole country is unjustly overrun and conquered by a foreign army, and subjected to military law, I think that it is not too soon for honest men to rebel and revolutionize. What makes this duty the more urgent is the fact that the country so overrun is not our own, but ours is the invading army.

GO ON TO THE NEXT PAGE.

Source D

From "Death of Rosa Parks - Senate Floor Statement"
Statement of Senator Obama (October 25, 2005)

Mr. President, today the nation mourns a genuine American hero. Rosa Parks died yesterday in her home in Detroit. Through her courage and by her example, Rosa Parks helped lay the foundation for a country that could begin to live up to its creed.

Her life, and her brave actions, reminded each and every one of us of our personal responsibilities to stand up for what is right and the central truth of the American experience that our greatness as a nation derives from seemingly ordinary people doing extraordinary things.

Rosa Parks' life was a lesson in perseverance. As a child, she grew up listening to the Ku Klux Klan ride by her house and lying in bed at night fearing that her house would be burnt down. In her small hometown in Alabama, she attended a one-room school for African American children that only went through the sixth grade. When she moved to Montgomery, Alabama, to continue her schooling, she was forced to clean classrooms after school to pay her tuition. Although she attended Alabama State Teachers College, Rosa Parks would later make her living as a seamstress and housekeeper.

...

Of course, her name became permanently etched in American history on December 1, 1955, when she was arrested for refusing to give up her seat to a white passenger on a Montgomery bus. It wasn't the first time Rosa Parks refused to acquiesce to the Jim Crow system. The same bus driver who had her arrested had thrown her off a bus the year before for refusing to give up her seat.

Some schoolchildren are taught that Rosa Parks refused to give up her seat because her feet were tired. Our nation's schoolbooks are only getting it half right. She once said: "The only tired I was, was tired of giving in."

This solitary act of civil disobedience became a call to action. Her arrest led a then relatively unknown pastor, Martin Luther King, Jr., to organize a boycott of the Montgomery bus system. That boycott lasted 381 days and culminated in a landmark Supreme Court decision finding that the city's segregation policy was unconstitutional.

This solitary act of civil disobedience was also the spark that ignited the beginning of the end for segregation and inspired millions around the country and ultimately around the world to get involved in the fight for racial equality.

STOP

END OF EXAM

AP Seminar Glossary

argument — A claim or thesis that conveys a perspective developed through a line of reasoning and supported by evidence

assumption — A belief regarded as true and often unstated

bias — A personal opinion, belief, or value that may influence one's judgment, perspective, or claim

claim — A statement made about an issue that asserts a perspective

commentary — Discussion and analysis of evidence in relation to the claim which may identify patterns, describe trends, and/or explain relationships

complex issue — Issues involving many facets or perspectives that must be understood in order to address them

concession — Acknowledgment and acceptance of an opposing or different view

conclusion — Understanding resulting from analysis of evidence

conventions — The stylistic features of writing (e.g., grammar, usage, mechanics)

counterargument — An opposing perspective, idea, or theory supported by evidence

credibility — The degree to which a source is believable and trustworthy

cross-curricular — Goes beyond the traditional boundary of a single content area or discipline

deductive — A type of reasoning that constructs general propositions that are supported with evidence or cases

evidence — Information (e.g., data, quotations, excerpts from texts) used as proof to support a claim or thesis

fallacy — Evidence or reasoning that is false or in error

implication — A possible future effect or result

inductive — A type of reasoning that presents cases or evidence that lead to a logical conclusion

inquiry — A process for seeking truth, information, or knowledge

interdisciplinary — Involving two or more areas of knowledge

issue — Important problem for debate or discussion

lens — Filter through which an issue or topic is considered or examined

limitation — A boundary or point at which an argument or generalization is no longer valid

line of reasoning — Arrangement of claims and evidence that leads to a conclusion

perspective — A point of view conveyed through an argument

plagiarism — Failure to acknowledge, attribute, and/or cite any ideas or evidence taken from another source

point of view — A position or standpoint on a topic or issue

qualification — A condition or exception

qualitative — Having to do with text, narrative, or descriptions

quantitative — Having to do with numbers, amounts, or quantities

rebuttal — Contradicting an opposing perspective by providing alternate, more convincing evidence

refutation — Disproving an opposing perspective by providing counterclaims or counterevidence

reliability — The extent to which something can be trusted to be accurate

resolution — The act of solving a problem or dispute

solution — A means of answering a question or addressing a problem or issue

text — Something composed (e.g., articles; research studies; foundational, literary, and philosophical texts; speeches, broadcasts, and personal accounts; artistic works and performances) that conveys a perspective and can be examined

thesis — A claim or position on an issue or topic put forward and supported by evidence

tone — The way in which an author expresses an attitude about his or her topic or subject through rhetorical choices

validity — The extent to which an argument or claim is logical

vocal variety — Changing vocal characteristics (e.g., pitch, volume, speed) in order to emphasize ideas, convey emotion or opinion, or achieve other specific purposes

AP Seminar: QUEST Framework



Question and Explore

Challenge and expand the boundaries of your current knowledge

- ▶ How does the context of a problem or issue affect how it is interpreted or presented?
- ▶ How might others see the problem or issue differently?
- ▶ What questions have others failed to ask?
- ▶ What voices or perspectives are missing from my research?
- ▶ What do I want to know, learn, or understand?
- ▶ How does my research question shape how I go about trying to answer it?
- ▶ What keywords should I use to search for information about this topic?



Understand and Analyze Arguments

Contextualize arguments and comprehend authors' claims

- ▶ What strategies will help me comprehend a text?
- ▶ What is the argument's main idea and what reasoning does the author use to develop it?
- ▶ Why might the author view the issue this way?
- ▶ What biases may the author have that influence his or her perspective?
- ▶ Does this argument acknowledge other perspectives?
- ▶ How do I know whether something is true?
- ▶ What are the implications of these arguments?
- ▶ How does this conclusion impact me and my community? Or my research?



Evaluate Multiple Perspectives

Consider individual perspectives and the larger conversation of varied points of view

- ▶ What patterns or trends can be identified among the arguments about this issue?
- ▶ What are the implications and/or consequences of accepting or rejecting a particular argument?
- ▶ How can I connect these perspectives? What other issues, questions, or topics do they relate to?
- ▶ How can I explain contradictions within or between arguments?
- ▶ From whose perspective is this information being presented, and how does that affect my evaluation?



Synthesize Ideas

Combine knowledge, ideas, and your own perspective into an argument

- ▶ How do I connect and analyze the evidence in order to develop an argument and support a conclusion?
- ▶ What line of reasoning and evidence would best support my argument? Is my reasoning logical?
- ▶ Are there other conclusions I should consider?
- ▶ What am I taking for granted? How do I acknowledge and account for my own biases and assumptions?
- ▶ What is the best way to acknowledge and attribute the work of others that was used to support my argument?
- ▶ What are the consequences of plagiarism?



Team, Transform, and Transmit

Collaborate, reflect, and communicate your argument in a method suited to your audience

- ▶ How can I best appeal to and engage my audience?
- ▶ What is the best medium or genre through which to reach my audience?
- ▶ What common misconceptions might my audience have?
- ▶ How do I adapt my argument for different audiences and situations?
- ▶ How do my communication choices affect my credibility with my audience?
- ▶ What contributions can I offer to a team?
- ▶ What is the benefit of revision?
- ▶ How can I benefit from reflecting on my own work?

AP[®] SEMINAR

BEGINNING 2014-15 ACADEMIC YEAR



About the Advanced Placement Program[®] (AP[®])

The Advanced Placement Program[®] enables willing and academically prepared students to pursue college-level studies — with the opportunity to earn college credit, advanced placement, or both — while still in high school. AP Exams are given each year in May. Students who earn a qualifying score on an AP Exam are typically eligible to receive college credit and/or placement into advanced courses in college. Every aspect of AP course and exam development is the result of collaboration between AP teachers and college faculty. They work together to develop AP courses and exams, set scoring standards, and score the exams. College faculty review every AP teacher's course syllabus.

AP Capstone™ Program

AP Capstone™ is an innovative diploma program from the College Board that equips students with the independent research, collaborative teamwork, and communication skills that are increasingly valued by colleges. AP Capstone is built on the foundation of two AP courses — **AP Seminar** and **AP Research** — and is designed to complement and enhance the in-depth, discipline-specific study experienced in other AP courses.

In AP Seminar, students investigate real-world issues from multiple perspectives, gathering and analyzing information from various sources in order to develop credible and valid evidence-based arguments.

In AP Research, students cultivate the skills and discipline necessary to conduct independent research in order to produce and defend a scholarly academic thesis.

Students who earn scores of 3 or higher in AP Seminar and AP Research and on four additional AP Exams of their choosing will receive the AP Capstone Diploma. Students who earn scores of 3 or higher in AP Seminar and AP Research but not on four additional AP Exams will receive the AP Seminar and Research Certificate. AP Seminar may also be taken as a stand-alone option.

AP Seminar Course Overview

AP Seminar is a foundational course that engages students in cross-curricular conversations that explore the complexities of academic and real-world topics and issues by analyzing divergent perspectives. Using an inquiry framework, students practice reading and analyzing articles, research studies, and foundational literary and philosophical texts; listening to and viewing speeches, broadcasts, and personal accounts; and experiencing artistic works and performances. Students learn to synthesize information from multiple sources, develop their own perspectives in research-based written essays, and design and deliver oral and visual presentations, both individually and as part of a team. Ultimately, the course aims to equip students with the power to analyze and evaluate information with accuracy and precision in order to craft and communicate evidence-based arguments.

PREREQUISITE

There are no prerequisites for the AP Seminar course.

AP Seminar Course Content

Students engage in conversations about complex academic and real-world issues through a variety of lenses, considering multiple points of view. Teachers have the flexibility to choose one or more appropriate themes that allow for deep interdisciplinary exploration based on:

- Concepts or issues from other AP courses
- Student interests
- Local and/or civic issues
- Academic problems or questions
- Global or international topics

Exploring different points of view and making connections across disciplines are fundamental components of the AP Seminar experience. Students consider each topic through a variety of lenses and from multiple perspectives, many of which are divergent or competing. Analyzing topics through multiple lenses aids in interdisciplinary understanding and helps students gain a rich appreciation for the complexity of important issues. Teachers should encourage students to explore a topic through several of the following lenses:

- Cultural and social
- Artistic and philosophical
- Political and historical
- Environmental
- Economic
- Scientific
- Futuristic
- Ethical

Pedagogical Framework

Throughout the program, students consider and evaluate multiple points of view to develop their own perspectives on complex issues and topics through inquiry and investigation. The AP Capstone program provides students with a framework that allows them to develop, practice, and hone their critical and creative thinking skills as they make connections between various issues and their own lives.

Students use the following framework as they explore issues and topics:

- Question and Explore
- Understand and Analyze Arguments
- Evaluate Multiple Perspectives
- Synthesize Ideas
- Team, Transform, and Transmit

AP Seminar Assessment Structure

Students are assessed with two through-course performance assessment tasks and one end-of-course exam. All three assessments are summative and will be used to calculate a final AP score (using the 1–5 scale) for AP Seminar.

Format of Assessment

Team Project and Presentation | 25% of AP Score

- Individual Research and Reflection
- Written Team Report
- Team Multimedia Presentation and Defense

Individual Research-Based Essay and Presentation | 35% of AP Score

- Individual Written Argument
- Individual Multimedia Presentation
- Oral Defense

End-of-Course Exam (3 Hours) | 40% of AP Score

- Understanding and analyzing an argument (3 short-answer questions)
- Evaluating and comparing the effectiveness of arguments (essay)
- Synthesizing information to develop an evidence-based argument essay (evidence-based argument essay)

Overview of Assessment Tasks

Team Project and Presentation

In this project, three to six students collaborate as a team to identify a problem or issue (e.g., local, national, global, academic/theoretical/philosophical) and conduct initial research. They identify approaches, perspectives, or lenses and divide responsibilities among group members for individual research that will address the team's research question.

Individually, students investigate an approach, perspective, or lens on the problem, question, or issue. Each student presents his or her findings and analysis to the group in an individual report that

- identifies the area of investigation and its relationship to the overall problem, question, or issue;
- describes and analyzes the line of reasoning and evidence of the information collected;
- explains and synthesizes the range of information and perspectives considered and the relevance of that information to the problem, question, or issue;
- justifies the inclusion and exclusion of information advanced to the team; and
- cites and attributes any information included.

Working collaboratively, the team considers all the research and analyses from individual team members for the purpose of proposing or creating one or more solutions, conclusions, or recommendations. Together, the team prepares a written report that

- introduces, situates, contextualizes, and/or explains the problem, question, or issue;
- evaluates various perspectives;

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- synthesizes evidence;
- proposes one or more solutions, conclusions, or recommendations to the problem, question, or issue;
- appropriately acknowledges, attributes, and/or cites the ideas and work of authors of outside sources; and
- includes a bibliography of works cited.

The team develops an 8–10 minute presentation and delivers it to the class using appropriate media. The presentation should reflect the major components of the written team report. Following the presentation, the team will defend its argument, with each student responding to a question posed by the teacher.

Finally, each student writes a reflection, which will be added to his or her individual research report, that explains the impact of this project, including discussion of:

- the collaborative process and individual contributions to the team
- personal views on the issue (before and after)
- the approach to research and problem solving

Individual Research-Based Essay and Presentation

On or about Jan. 2 of each year, the College Board will release academic, cross-curricular stimulus material (texts) focused on a theme representing a range of perspectives from each of the following domains:

- Natural Sciences, Technology, Mathematics, Environment
- Social Sciences, Politics, Economics, Psychology
- Arts (Visual Arts, Music, Dance, Theater)
- Culture, Languages, Linguistics
- History
- Literature, Philosophy, Critical Theory/Criticism

The following will be represented in the texts:

- Visual text and/or multimedia
- Quantitative data

Students identify a research question of their own prompted by the stimulus material. They then gather additional information through research; analyze, evaluate, and select evidence; and develop a logical, well-reasoned argument of approximately 2,000 words. The final paper must refer to and incorporate at least one of the sources provided.

Students must avoid plagiarism by acknowledging, attributing and/or citing sources throughout the paper and including a bibliography.

Students each develop a 6–8 minute presentation using appropriate media and present it to an audience. This presentation is an opportunity for students to present their conclusions by building arguments that convey their perspectives. The presentations should use the evidence to support students' own arguments and situate their perspectives in their larger contexts rather than merely summarizing student research. Finally, students defend their research process, use of evidence, and conclusion through oral responses to two questions asked by the teacher.

End-of-Course Exam

During the AP Exam administration window, students will take the AP Seminar End-of-Course Exam. The exam consists of five items (three short-answer and two essay questions). The three short-answer questions assess analysis of an argument in a single source or document. The first essay question requires the students to perform a close reading of two documents and perform a comparative analysis and evaluation of the authors' arguments. The second essay question assesses students' skills in synthesizing and creating an evidence-based argument.



AP[®] RESEARCH

BEGINNING 2015-16 ACADEMIC YEAR



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In AP Research, students cultivate the skills and discipline necessary to conduct independent research in order to produce and defend a scholarly academic thesis.

Students who earn scores of 3 or higher in AP Seminar and AP Research and on four additional AP Exams of their choosing will receive the AP Capstone Diploma. Students who earn scores of 3 or higher in AP Seminar and AP Research but not on four additional AP Exams will receive the AP Seminar and Research Certificate. AP Seminar may also be taken as a stand-alone option.

AP Research Course Overview

AP Research allows students to deeply explore an academic topic, problem, or issue of individual interest. Through this exploration, students design, plan, and conduct a yearlong mentored, 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 methods; employing ethical research practices; and accessing, analyzing, and synthesizing information as they address a research question. The course culminates in an academic thesis paper of approximately 5,000 words and a presentation, performance, or exhibition with an oral defense.

PREREQUISITE

Students must have completed the AP Seminar course.

AP Capstone Research Course Content

Although 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 qualitative and quantitative research methods.
- Employ appropriate disciplinary research methods to develop, manage, and conduct an in-depth study or investigation in an area of student's own interest, culminating in an approximately 5,000-word paper.
- Present (using appropriate media), exhibit, or perform and defend the research design, approach, and findings.
- Document and reflect upon the research process and communication with mentor using a research log.

Pedagogical Framework

Throughout the program, students consider and evaluate multiple points of view to develop their own perspectives on complex issues and topics through inquiry and investigation. The AP Capstone program provides students with a framework that allows them to develop, practice, and hone their critical and creative thinking skills as they make connections between various issues and their own lives.

Students use the following framework as they explore issues and topics:

- Question and Explore
- Understand and Analyze Arguments
- Evaluate Multiple Perspectives
- Synthesize Ideas
- Transform and Transmit

AP Research Assessment Structure

Students are assessed on the research process; academic thesis paper; presentation, performance, or exhibition; and oral defense of research and presentation. The academic thesis paper is approximately 5,000 words, and the presentation and defense take approximately 15 minutes.

Assessment Overview

- Research Process Documentation — 15% of score
 - Research Proposal
 - Research Log
 - Work with Mentor
 - Final Reflection
- Academic Thesis Paper — 70% of score
- Presentation and Oral Defense — 15% of score

Format of Assessment

- Research Process Documentation
- Academic Thesis Paper
 - Introduces and contextualizes the research question
 - Synthesizes information and perspectives related to the research question
 - Explains and rationalizes the research method
 - Analyzes and interprets the evidence
 - Illustrates a cogent argument that uses a clear line of reasoning based on evidence provided. Reflects on the research project and the implications and limitations of the conclusion(s) reached.
 - Acknowledges and cites sources
- Presentation and Oral Defense
 - Students choose an appropriate format or medium (e.g., multimedia presentation, performance, exhibition)
 - The defense will include three to four questions from a panel of a minimum of two trained evaluators

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Students: apstudent.collegeboard.org/apcourse/ap-research



AP Seminar Timeline

NOTE: Shaded rows indicate **AP Research** key activities and dates.

Academic Year Before Implementation

Date	Key Activity
January	Receive AP Capstone Welcome Kit (AP Seminar)
February	Annual student recruitment and enrollment for new cohort begins
April	Provide AP Seminar teacher information and projected student enrollment to AP Program
May	Deadline for AP Seminar professional development registration; all AP Seminar teachers must enroll in one of the three professional development sessions
July/August	AP Seminar teacher training

Academic Year 1 **AP Seminar instruction begins in the fall**

Date	Key Activity
August/September	Begin AP Seminar instruction
October 1	AP Seminar syllabus due to the College Board
October 31	Revised syllabus due to the College Board
October/November	Attend informational webinar for AP Research course
January	Receive AP Capstone Welcome Kit (AP Research)
January	AP Seminar teachers complete online assessment training for Team Project and Presentation and stimulus material is released for Individual Research-Based Essay and Presentation
January 31	Deadline for administrators to approve Course Audit forms
March	AP Seminar teachers complete online assessment training for Individual Research-Based Essay and Presentation
April	Provide AP Research teacher information to AP Program for professional development planning
April	Submit estimated annual student enrollment for AP Research (based on student performance to date)
April	Individual and Team Projects scored by teachers and submitted to AP
May	Administer AP Seminar End-of-Course Exam
May	Deadline for AP Research professional development registration; all AP Research teachers must enroll in one of the professional development sessions
July	AP Seminar Score Reports released

Academic Year 2 **AP Research instruction begins in the fall**

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AP[®] Seminar Course and Exam Description 2014-15

AP Seminar is the first course in the two-year sequence of AP Capstone[™] — a program that allows students to explore real-world issues while developing the analytic, research, problem-solving, and communication skills that colleges look for in their applicants.

This course and exam description includes:

- AP Capstone Pedagogical Framework
- AP Seminar Curriculum Framework
- Reproducible AP Seminar End-of-Course Exam

For more information about AP Capstone, visit www.collegeboard.org/apcapstone