



AP Biology

Blackhawk High School
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TEXTBOOK: "Biology" (7th Edition-2005) Raven, Johnson, Losos, & Singer. Each student will also have access to the investigations contained in *AP Biology Investigative Labs: an Inquiry Based Approach*, as well as other laboratory investigations as deemed appropriate.

Online Learning Center: www.mhhe.com/raven7 and BioCourse.com also provide students with an abundance of online resources including chapter quizzes, flashcards, Chapter Outline, Bio Labs, Web Links, and *The Essential Study Partner* online tutorial for each chapter.

COURSE PHILOSOPHY: The AP Biology course is designed to be the equivalent of a first year, 2 semester college biology course usually taken by biology majors. The course differs from other biology courses offered at Blackhawk with respect to the type of text book utilized, range and depth of concepts taught, type of laboratory work required, and the time and effort needed by students. This course is designed around the AP Biology Curriculum Framework that focuses on the major concepts in Biology and their connections as defined by the College Board in the AP Biology Course Description. When possible, current events involving biology with relevancy towards these concepts will be integrated into the course.

CURRICULUM FRAMEWORK:

The instruction in this course will be designed around the 4 Big Ideas of Biology and the corresponding enduring understandings and essential knowledge.

- Big Idea 1:** The process of evolution drives the diversity and unity of life.
- Big Idea 2:** Biological systems utilize free energy and molecular building blocks to grow, to reproduce and to maintain dynamic homeostasis.
- Big Idea 3:** Living systems store, retrieve, transmit and respond to information essential to life processes.
- Big Idea 4:** Biological systems interact and these systems and their interactions possess complex properties.

SCIENCE PRACTICES FOR AP BIOLOGY:

The following science practices will be utilized in the labs and activities throughout the course. Each lab/activity will list the appropriate science practice(s) addressed by the lab investigation/activity.

1. The student can use representations and models to communicate scientific phenomena and solve scientific problems.
2. The student can use mathematics appropriately.
3. The student can engage in scientific questioning to extend thinking or to guide investigations within the context of the AP course.
4. The student can plan and implement data collection strategies appropriate to a particular scientific question.
5. The student can perform data analysis and evaluation of evidence.
6. The student can work with scientific explanations and theories.
7. The student is able to connect and relate knowledge across various scales, concepts and representations across domains.

COURSE OVERVIEW/SCHEDULE:

AP Biology is a 1.5 credit course that meets 1 period per day every day with an additional 1 period for lab work on an alternating A/B Day Schedule. Course content will be presented via teacher lecture and/or class discussion, small group discussion, computer simulated labs and supplemental material, internet research, independent reading, homework, online textbook resources, group projects. The laboratory component of this course will comprise at least 25% of this course therefore class attendance is extremely important.

TEACHING STRATEGIES:

AP Biology is centered around four Big Ideas (Evolution, Energy Processes, Information, and Interactions) as described in the Curriculum Framework outlined by College Board. These Big Ideas encompass the core scientific principles, theories, and processes that govern living organisms and biological systems. Each lesson, activity, and lab investigation will be centered around at least one of the four Big Ideas throughout the course. Evolution will often be referenced throughout the course as it is the foundation of Biological science. The process of science will be an integral part of both the laboratory investigations and class activities.

At the beginning of each unit, students will receive a description of the unit, the reading assignments, Big Ideas that will correspond to the unit, and the enduring understandings that will guide them through the unit of study. Students are encouraged to read the chapters ahead of time and to take notes during class discussions.

Throughout the course, students will be given case studies and articles to read in order to help them make connections between the course content and the significance of the course content to their every day experiences.

INVESTIGATIVE COMPONENT

Laboratory investigations will comprise a minimum of 25% of classroom instructional time. Students will conduct a minimum of 8 inquiry-based investigations (2 per Big Idea) as defined by the AP Curriculum Framework. Supplemental labs and activities will also be used to expand the topics covered in class and to give students additional opportunities for inquiry and hands-on learning. Through these labs and activities, all seven science practices

skills will be used by students regularly in order for students to be successful in open inquiry investigations. These investigations are "key" to understanding what we know about Biology and to be able to ask valuable questions about what we don't yet know about Biology.

Students will need to maintain a written lab notebook of investigations that are conducted in class. In addition students will be asked to do the following within the scope of AP Biology:

- At least 1 formal lab report per quarter that emphasizes the scientific process such as the development and testing of a hypothesis, collecting and organizing data, analyzing the data and discussing that analysis with scientific peers.
- Mini-poster presentations and/or utilizing other various media to present the main investigation components, to small groups or the whole class as deemed appropriate.

EVALUATION: The following work and guidelines will be used to measure student performance in the class throughout the school year. Students will be evaluated based on a percentage of the total points earned during each 9 weeks grading period.

- **Tests/Quizzes/Projects:** Tests will be given following each major unit of study. These tests will most likely encompass multiple chapters at one time. Tests will be formatted to closely match the format of the AP exam with emphasis placed on multiple choice and open ended questions. These tests will be announced in advance and will also be posted on my web page and Classroll.com. Quizzes may be announced or unannounced. These will occur frequently throughout the course and may occur at any time during a unit or following a lab. Please note: **Multiple Choice exams are not "memorization" based. This course is designed to teach you how to use information not simply memorize it and regurgitate it to me.** From time to time, take home tests or quizzes may be assigned. Lab Practical exams may also be given as part of this course. In addition, there will be several projects to complete during the course of the year. These will be done with a group and will require presentations to your classmates. A Mid-term and Final exam will also be given as per Blackhawk High School policy. **Students are also encouraged to take the AP Exam scheduled in May. Blackhawk School District will pay for this exam for all students wishing to take the exam. Depending on your score on this exam and the policy of the college you choose, you may receive college credit for this course.**
- **NOTEBOOK:** Students are required to keep a notebook to be utilized in this course alone. This notebook should be of a 3-Ring nature as there will be many supplementary handouts given to students. Students will also be required to keep work that is returned to them including Lab Reports in their binders. This binder/notebook will become an invaluable source of information in preparing students for the AP Biology Exam.

- QUARTERLY WRITING ASSESSMENTS: At least 1 time per grading period, students will be required to read an article from a scientific journal and respond to it in essay format. All students will be required to turn in the article with notations utilizing the "Talking to the Text" technique, the Blackhawk High School "Critical Reading Chart," a rough draft that has been "Peer Edited," and a final copy that is typed, double spaced, and in 12 font. These assessments will be evaluated based on the Science Department "Reading Response Rubric" and the "Characteristics of Effective Writing."
- HOMEWORK: Due to the pace and amount of material to be covered in this course, there will be work that must be completed outside of class time. These assignments are extremely important and must be completed on time in order for you to be prepared for the lecture/class discussions. Due dates will be given in advance and no late work will be accepted as this is a college level course. Students who do not turn in assignments by the due date will be given a zero unless extenuating circumstances exist. These will be determined on a case by case basis.
- CULMINATING PROJECT: Following the AP exam in May, students will be asked to complete a culminating project as there will be 6 weeks remaining in the school year. Details regarding the scope and content of this project will be discussed at a later time.
- ATTENDANCE: Due to the nature of this course, attendance is vital to your success. You will not be successful if you have a problem with attendance. This is especially vital to the laboratory work required for the course. If you are absent during a scheduled laboratory investigation, it is your responsibility to schedule a time either during a study hall or after school to gather necessary data. When you are absent, it will also be your responsibility to check classroll.com as well as to consult a classmate concerning missed activities, assignments, and/or lecture/class discussion notes. If you are absent the day prior to a test/quiz, you will be required to take it on its scheduled day regardless. If you are absent the day a test/quiz is scheduled, you will be required to take it the day of your return and an alternate assessment may be given. I will **NOT** come after you for missed assignments. If you do not make arrangements with me to make up missed work upon your return to school, you will receive a zero for these assignments. **This is a college level course. Please do not expect to receive credit for late work at the end of a nine weeks grading period. You must see me immediately following an absence in order to have the opportunity to make up your missed assignments.**
- EXTRA CREDIT: Extra credit is not an option for an AP course so please do not ask for extra credit.

- GRADING POLICY: Grades will be determined based on the percentage of points earned out of the total points possible for each 9 Weeks. The Blackhawk School District grading scale will be utilized to determine your grade in this course.

100%-91.5%	A
91%-82.5%	B
82%-73.5%	C
73%-64.5%	D
64% and Below	E

Cheating/Copying will not be tolerated. Any student caught cheating/copying an assignment will be given a zero for that assignment and the student's parent/guardian will be immediately notified. Even those assignments in which you are working with a group/partner require your own answers and responses to the activity. Details on the expectations for lab reports and assignments will be emphasized prior to the first lab report/assignment.

COURSE OUTLINE:

Unit 1: "Nature of Science" & Chemistry of Life (10-15 days)

Text Book Chapters: Chapter 1 "The Science of Biology"
Chapter 2 "The Nature of Molecules"
Chapter 3 "The Chemical Building Blocks of Life"

Big Ideas: 2, 3, & 4

Enduring understandings: 2A, 3A, 4A-B

Discussion Topics & Skills:

Students will be introduced to the four big ideas and the enduring understandings.
Students will be able to connect these two using concept mapping.

Essential Questions Connected to the Big Ideas being addressed in the unit:

- In what ways have biologists and other scientists worked together to investigate the science behind biological concepts?
- Describe how scientists build on the work and discoveries of other scientists to develop a more complete understanding of Biology in the world around us.
- How do scientists test the validity of their ideas?
- How do structural and chemical adaptations of organisms contribute to their resilience and success?
- How is evolutionary change impacted by individual species, populations, & biomes?
- How does energy transfer occur at the molecular level in cells?
- What are some examples of the relationship between evolution of organisms and energy transfer?
- How is it possible for continuity within a species be maintained while still allowing for gradual evolutionary change over time?
- How does structure control function at the molecular, cellular, and organism levels?
- Describe the regulation of moving molecules into and out of cells.
- How is homeostasis maintained by an organism?
- How can interdependence in nature be seen at the molecular level?
- How do the cells of one organ/tissue rely on the existence of cells in other organs/tissues?
- How are organisms dependent on each other?
- How is the interdependence of organisms relate to evolution?
- How do advances in laboratory technology aid scientists to simulate the natural world?
- How is society affected by scientific research and technological innovations?

Activities and Labs: Introduction to Scientific Inquiry, Mysterious Liquids Inquiry Activity, Animal Behavior using Pillbugs Lab, Enzyme Catalysis Lab, Generating Hypotheses & Experimental Design Activities 1 & 2, 3-D Molecular Designs Protein Folding Activity, Enzymes and Cellular Regulation Activity, Water Structure Activity, Case Studies

Free Response Questions from Previous AP Exams:

2010-#2, 2002-#2, 2005-#1, 2003B-#3, 2000-#1

Unit 2: Evolutionary Biology (15–25 Days)

Text Book Chapters: Chapter 4 "The Origin and Early History of Life"
Chapter 21 "Genes Within Populations"
Chapter 22 "The Evidence for Evolution"
Chapter 23 "The Origin of Species"
Chapter 24 "Evolution of Genomes & Developmental Mechanisms"
Chapter 25 "Systematics and the Phylogenetic Revolution"

Big Ideas: 1, 2, 3, & 4

Enduring understandings: 1, 2A-B, 2D-E, 3A, 3C, 4B, 4C

Discussion Topics & Skills:

Early evolution of life, Evidence for Evolution, Mechanisms of Evolution

Essential Questions Connected to the Big Ideas being addressed in the unit:

- Describe and justify the evidence Darwin used to develop the theory of natural selection.
- Differentiate between microevolution and macroevolution.
- How are differences among gene pools, alleles, and allele frequency related to each other?
- How can allele frequencies in populations be calculated using Hardy-Weinberg equilibrium?
- Differentiate between the founder effect and the bottleneck effect.
- How is an adaptation different from an evolutionary adaptation?
- How do pre/post-zygotic mechanisms, allopatric and sympatric speciation contribute to the biological species concept?
- Explain the relationship between gene flow and genetic divergence.
- Evaluate phylogenetic trees to see how classification reflects evolutionary history.
- Summarize and compare current hypotheses for how and where life began.
- Explain how we know that DNA is the hereditary material as opposed to other molecules.
- Describe the significance of the endosymbiosis theory relative to the origin of eukaryotic cells and use modern evidence to support this idea.

Activities and Labs: The Controversy Over Evolution activity, Natural Selection of "Strawfish" Lab, Cladogram Activities, Population Genetics Lab, Artificial Selection Investigation 1, Mathematical Modeling: Hardy Weinberg Investigation 2, Comparing DNA Sequences to Understand Evolutionary Relationships with BLAST Investigation 3, Evolution by Natural Selection Lab, Random Genetic Drift Lab, The Case of the Threespine Stickleback–A Model of Macroevolution, Natural Selection using Brine Shrimp Lab.

Free Response Questions from Previous AP Exams:

2011 B-#4, 2009-#3, 2008B-#4, 2008B-#3, 2005B-#2, 2004-#2

Unit 3: Ecology and Behavior (15-20 Days)

Text Book Chapters: Chapter 52 "Behavioral Biology"
Chapter 53 "Population Ecology"
Chapter 54 "Community Ecology"
Chapter 55 "Dynamics of Ecosystems"
Chapter 56 "The Biosphere"
Chapter 57 "Conservation Biology"

Big Ideas: 1, 2, 3, & 4

Enduring understandings: 1A, 2A, 2C-2E, 3E, 4

Discussion Topics & Skills:

Behavioral biology, populations and communities, dynamics of ecosystems, biosphere, and conservation to preserve biodiversity

Essential Questions Connected to the Big Ideas being addressed in the unit:

- How do we analyze and interpret logistic and exponential growth curves?
- What is the importance of the carrying capacity in maintaining biodiversity?
- Compare and contrast symbiotic relationships.
- How do community interactions relate to coevolution?
- Compare and contrast succession within different communities.
- How do the niches of different organisms affect biogeochemical cycles?
- Analyze trophic levels and calculate the flow of energy through food chains/webs/pyramids.
- How do the characteristics of various biomes affect the biodiversity found within them?
- Describe the impact of humans on the biosphere. How can humans impact the biosphere in positive and negative ways? How do our decisions/actions affect the biosphere?
- Compare animal behavior in different environments and to different stimuli.
- Compare/contrast the role of the environment and genes on behavior within both plant and animal species.
- Explain how adaptive behavior, social behavior, selfish behavior, and altruism can all promote individual reproductive success and what are the costs/benefits of such behavior?

Activities and Labs: Dissolved Oxygen and Primary Productivity Lab, Biome Project and presentation, Biodiversity Warriors Project, Competition on Mystery Island Lab, Energy Dynamics Investigation 10, Transpiration Investigation 11, Ecology and Diversity Lab, Case Studies

Free Response Questions from Previous AP Exams:

2011B-#2, 2011B-#3, 2010-#4, 2007-#3

Unit 4: Introduction to Homeostasis & Response to the Environment (10-15 Days)

Text Book Chapters: Chapter 5 "Cell Structure"
Chapter 6 "Membranes"
Chapter 7 "Cell to Cell Interactions"
Chapter 27 "Prokaryotic Cells"
Chapter 49 "Maintaining the Internal Environment"

Big Ideas: 1, 2, 3, & 4

Enduring understandings: 1B-1C, 2A-2D, 3B, 3D-3E, 4

Discussion Topics & Skills:

Microscopy skills, the movement of materials into and out of the cell as well as within cells, structure and function of cells, cell communication, communication within an organism's body, homeostatic controls in organisms

Essential Questions Connected to the Big Ideas being addressed in the unit:

- How can microscopes be used to study cellular structure and function?
- How do the structure and function of cellular components relate to evolution?
- How does the surface to volume ratio of cells affect the efficiency of those cells?
- Differentiate between prokaryotic and eukaryotic cell structure by creating models.
- Create models of the fluid mosaic model of the plasma membrane.
- Explain the concept of selective permeability as it relates to cell membrane function.
- Differentiate between passive and active transport.
- Compare cell communication process in different types of organisms.
- Describe homeostasis in relation to the internal environment of organisms.
- Compare and contrast negative and positive feedback systems relative to homeostasis in organisms.

Activities and Labs: Diffusion and Osmosis Lab Investigation 4, Case Studies, Cell Structure Lab, Sell that Organelle, Toothpickase Lab, Pathways with Friends Activity

Free Response Questions from Previous AP Exams:

2011-#1, 208B-#2, 2008-#3, 2006B-#2, 2005B-#4, 2004B-#3, 2002-#4

Unit 5: Cell Processes/Connections: Respiration & Animal Homeostasis (15-20 Days)

Text Book Chapters: Chapter 9 "How Cells Harvest Energy"
Chapter 45 "The Nervous System"
Chapter 42.6 "Muscle Contraction Powers Animal Locomotion"
Chapter 46 "Sensory Systems"-Sections 1 & 2
Chapter 47 "The Endocrine System"
Chapter 48 "The Immune System"

Big Ideas: 1, 2, & 4

Enduring understandings: 1B-1C, 2A, 4

Discussion Topics & Skills:

Communication within an organism controls homeostasis through several body systems, Energy is required within organisms in order for an organism to function and maintain homeostasis

Essential Questions Connected to the Big Ideas being addressed in the unit:

- How do cells release chemical energy?
- Differentiate between aerobic and anaerobic respiration at the cellular level.
- Compare the major stages of aerobic and anaerobic respiration in plants and animals and associate each with the appropriate cell component.
- List some sources of energy other than glucose that can be fed into the cellular respiration pathway.
- What roles does each of the following play in maintaining homeostasis in animals?
 - Neural control
 - Sensory perception
 - Endocrine control/hormones
 - Immunity
 - Neuromuscular junction

Activities and Labs: Cellular respiration using peas and Lab probes, Cricket Respiration, ATP and Metabolic Activity Exercise, Celery Mitochondria Lab, Lights, Camera, Action Potential Lab Activity, Jumpin' the Gap Activity, Specific Immunity in Two Acts Activity

Free Response Questions from Previous AP Exams:

2011-#2, 2010B-#2, 2010-#1, 2009-#2, 2009B-#4

Unit 6: Cell Process/Connections: Photosynthesis & Plant Homeostasis (10-15 Days)

Big Ideas: 1, 2, & 4

Enduring Understandings: 1B, 2A, 2E, 4A, 4C

Discussion Topics and Skills:

Illustrate the major steps in photosynthesis, Describe how transpiration occurs in plants and the importance of transpiration in moving materials in plants, describe the importance of transpiration as it relates to plant homeostasis

Text Book Chapters:

- Chapter 10 "Photosynthesis"
- Chapter 35 "Plant Form"
- Chapter 37 "Transport in Plants"
- Chapter 40 "Sensory Systems in Plants"

Essential Questions Connected to the Big Ideas being addressed in the unit:

- Describe the process of photosynthesis.
- Compare and contrast the process of photosynthesis and cellular respiration.
- Describe why plants need both the process of photosynthesis and cellular respiration.
- Describe the major processes that occur in the two stages of photosynthesis and associate each reaction with the appropriate cell component.
- Compare/contrast noncyclic and cyclic pathways. Relate these pathways to evolution in plants.
- Describe evolutionary trends in plants that led to plant adaptations to deal with various climate conditions ie. C_3 , C_4 , and CAM plants.
- Explain how plant cells regulate the movement of water and organic materials.
- Explain how the properties of cohesion and adhesion aid in the movement of water throughout a plant.

Activities and Labs: Photosynthesis Lab Investigation 5, Transpiration Lab Investigation 11, Photosynthesis-A Drama in Two Acts

Free Response Questions from Previous AP Exams:

2011-#4, 2010B-#1, 2006-#3, 2006B-#3, 2003B-#2

Unit 7: Making New Cells & Organisms (15-20 Days)

Big Ideas: 1, 2, 3, & 4

Enduring Understandings: 1A, 1C, 2A, 2A, 3A, 3C, 4A, 4C

Discussion Topics and Skills:

Mitosis vs Meiosis, Sexual reproduction creates diversity among organisms and preserves species, the evolution of sexual reproduction, Mendelian Genetics, Human Genetics, Genes are located on the chromosomes

Text Book Chapters:

Chapter 11 "How Cells Divide"

Chapter 12 "Sexual Reproduction and Meiosis"

Chapter 13 "Patterns of Inheritance"

Chapter 20 "Cancer Biology and Cell Technology"

Essential Questions Connected to the Big Ideas being addressed in the unit:

- How do cells reproduce?
- Describe each stage of the cell cycle.
- Discuss control features of the cells cycle in normal cells vs. cancerous cells.
- Differentiate mitotic division and cytokinesis.
- Compare/contrast mitotic division and cytokinesis in plants and animal cells.
- Discuss the process by which cancer forms.
- Discuss experimental data about cell differentiation.
- Compare/contrast the processes of mitosis and meiosis.
- Distinguish between somatic and germ cells (gametes).
- Explain why meiosis is important for the survival of a species and relate to evolutionary processes.
- Discuss the importance of crossing over in maintaining species diversity.
- Discuss evolutionary fitness relative to the reproductive mechanisms that increase genetic variation.
- Differentiate between growth and development and discuss regulation mechanisms.
- Discuss the significance of Mendel's work.
- Collect and analyze data related to several different inheritance patterns.
- Construct and interpret Punnett squares and apply the product rule.
- Interpret and construct pedigrees.
- List several examples of human inheritance patterns and compare and contrast how they are inherited.
- Describe some benefits of genetic screening and genetic counseling.

Activities and Labs: Cell Division: Mitosis and Meiosis Lab Investigation 7, Genetics of Chromosomes Activity, Blood Typing Simulation Lab, Case Studies, M & M Chi Square Lab, Recovering the Romanovs-DNA Interactive on-line activity - <http://www.dnai.org/d/index/html>, Pedigree Analysis and Construction Activity

Free Response Questions from Previous AP Exams:

2011-#3, 2011B-#1, 2008-#4, 2004-#1, 2002B-#4, 2005-#3, 2006B-#1

Unit 8: All About Proteins (20-25 Days)

Big Ideas: 1, 2, 3, & 4

Enduring Understandings: 1, 2E, 3A, 3B, 3C, 4A, 4C

Discussion Topics & Skills:

Role of DNA as the genetic material, structure and function of DNA, DNA history, the role of DNA in the construction of proteins, controlling gene expression in prokaryotes and eukaryotes

Text Book Chapters:

Chapter 14 "DNA: The Genetic Material"

Chapter 15 "Genes and How They Work"

Chapter 16 "Gene Technology"

Chapter 17 "Genomes"

Chapter 18 "Control of Gene Expression"

Chapter 19 "Cellular Mechanisms of Development"

Essential Questions Connected to the Big Ideas being addressed in the unit:

- Discuss the history of our current knowledge of DNA.
- Be able to make an accurate representation/model of DNA that indicates knowledge of the parts of DNA.
- Discuss the process of DNA replication.
- Compare/contrast DNA and RNA.
- Describe the steps of protein synthesis.
- Translate a DNA code into a polypeptide chain.
- Using a specific example, discuss how a change in one DNA base pair that has a profound effect on the human phenotype (sickle cell anemia)
- Discuss how a person heterozygous for sickle cell has an advantage in areas where malaria is prevalent.
- Investigate some environmental agents that can cause mutations and the type of mutations these agents cause.
- Explain why mutations in germ cells (gametes) are more problematic than mutations in somatic cells.
- Describe how the genetic code is universal.
- What are the evolutionary implications of a "universal genetic code?"
- List and define the levels of gene control in eukaryotes. Contrast these controls with the control of genes in prokaryotes.
- Discuss the value of using modern techniques such as recombinant DNA, the use of DNA fragments, and the production of transgenic organisms.
- Explain how the knowledge of gene composition can help scientists derive counterattacks against rapidly mutating organisms.
- How can the evolutionary history of life be reconstructed using the knowledge of genetic makeup of Earth's organisms.
- What are the problems associated with the cloning of organisms that are living today and those that are extinct?

Activities and Labs: Making a model of DNA Activity, From Gene to Protein—Transcription and Translation Activity, DNA Extraction Lab, Turning Genes On and Off Lab using the Operon, "Ghost in Your Genes" Activity, Connect the Dots—DNA to Disease Activity, Amino Acid Sequences and Evolutionary Relationships Activity, James Bond Cellular Spy Activity using "Beyond Bead Biology" Kit, Modeling DNA, DNA

Replication & Protein Synthesis Activity, From DNA to Disorder Activity, Gene Expression Activity from Howard Hughes Medical Institute Resources, Paper Microarray Lab, Homeobox Genes Activity, Mutation Activity, Biotechnology: Bacterial Transformation Investigation 8, Biotechnology: Restriction Enzyme Analysis of DNA Investigation 9, Case Studies

Free Response Questions from Previous AP Exams:

2009B-#1, 2009-#4, 2005-#2, 2005B-#3, 2002-#1, 2001-#4

Review of Course/Final Preparation for AP Exam (10-15 Days)

For the final days prior to the AP Exam, we will review as much material as possible concentrating on those areas where students have the most confusion as determined and communicated by the students. Students will be given a full length practice AP exam that will serve as the final exam for the course prior to the AP exam. We will review the results of this exam in class and students will be able to utilize the exam as a "diagnostic" to direct their final study and preparation for the AP exam.