List of Video to Watch for AP Biology

Check off each video after you watch it.

## Big Idea 4:  System

[042 - Biological Molecules](http://www.bozemanscience.com/042-biologoical-molecules)
[043 - Cellular Organelles](http://www.bozemanscience.com/043-cellular-organelles)
[044 - Cellular Specialization](http://www.bozemanscience.com/044-cellular-specialization)
[045 - Organ System](http://www.bozemanscience.com/045-organ-systems)
[046 - Communities](http://www.bozemanscience.com/046-communities)
[047 - Ecosystems](http://www.bozemanscience.com/047-ecosystems)
[048 - Enzymes](http://www.bozemanscience.com/048-enyzmes)

[049 - Cooperative Interactions](http://www.bozemanscience.com/049-cooperative-interactions)
[050 - Populations](http://www.bozemanscience.com/050-populations)
[051 - Ecosystem Changes](http://www.bozemanscience.com/051-ecosystem-change)
[052 - Cellular Variation](http://www.bozemanscience.com/052-cellular-variation)
[053 - Genotype Expression](http://www.bozemanscience.com/053-genotype-expression)
[054 - Population Variation](http://www.bozemanscience.com/054-population-variation)
[055 - Biodiversity](http://www.bozemanscience.com/055-biodiversity)

Big Idea 1:  Evolution

[001 - Natural Selection](http://www.bozemanscience.com/001-natural-selection)
[002 - Examples of Natural Selection](http://www.bozemanscience.com/002-examples-of-natural-selection)
[003 - Genetic Drift](http://www.bozemanscience.com/003-genetic-drift)
[004 - Evidence for Evolution](http://www.bozemanscience.com/004-evidence-for-evolution)
[005 - Essential Characteristics of Life](http://www.bozemanscience.com/005-essential-characteristics-of-life)
[006 - Phylogenetics](http://www.bozemanscience.com/006-phylogenetics)

[007 - Speciation and Extinction](http://www.bozemanscience.com/007-speciation-and-extinction)
[008 - Speciation](http://www.bozemanscience.com/speciation)
[009 - Evolution Continues](http://www.bozemanscience.com/evolution-continues)
[010 - Abiogenesis](http://www.bozemanscience.com/010-abiogenesis)
[011 - The Origin of Life - Scientific Evidence](http://www.bozemanscience.com/011-the-origin-of-life-scientific-evidence)

## Big Idea 2:  Free Energy

[012 - Life Requires Free Energy](http://www.bozemanscience.com/012-life-requires-free-energy)
[013 - Photosynthesis & Respiration](http://www.bozemanscience.com/013-photosynthesis-and-respiration)
[014 - Environmental Matter Exchange](http://www.bozemanscience.com/014-environmental-matter-exchange)
[015 - Cell Membranes](http://www.bozemanscience.com/015-cell-membrane)
[016 - Transport Across Cell Membranes](http://www.bozemanscience.com/016-transport-across-cell-membranes)
[017 - Compartmentalization](http://www.bozemanscience.com/017-compartmentalization)
[018 - Positive & Negative Feedback Loops](http://www.bozemanscience.com/positive-and-negative-feedback-loops)
[019 - Response to External Environments](http://www.bozemanscience.com/019-response-to-external-envirnoments)

[020 - Biotic and Abiotic Factors](http://www.bozemanscience.com/020-biotic-and-abiotic-factors)
[021 - Homeostatic Evolution](http://www.bozemanscience.com/021-homeostatic-evolution)
[022 - Homeostatic Disruptions](http://www.bozemanscience.com/022-homeostatic-disruptions)
[023 - Plant & Animal Defenses](http://www.bozemanscience.com/023-plant-and-animal-defense)
[024 - Development: Timing & Coordination](http://www.bozemanscience.com/024-development-timing-and-coordination)
[025 - Mechanisms of Timing & Control](http://www.bozemanscience.com/025-mechanisms-of-timing-and-control)
[026 - Behavior & Natural Selection](http://www.bozemanscience.com/026-behavior-and-natural-selection)

Big Idea 3:  Information

[027 - DNA & RNA - Part 1](http://www.bozemanscience.com/027-part-1-dna-rna)
[027 - DNA & RNA - Part 2](http://www.bozemanscience.com/027-part-2-dna-rna)
[028 - Cell Cycle, Mitosis & Meiosis](http://www.bozemanscience.com/028-cell-cycle-mitosis-and-meiosis)
[029 - Mendelian Genetics](http://www.bozemanscience.com/029-mendelian-genetics)
[030 - Advanced Genetics](http://www.bozemanscience.com/030-advanced-genetic)
[031 - Gene Regulation](http://www.bozemanscience.com/031-gene-regulation)
[032 - Signal Transmission](http://www.bozemanscience.com/032-signal-transmission-and-gene-expression)
[033 - Genotypes & Phenotypes](http://www.bozemanscience.com/033-genotypes-and-phenotypes)

[034 - Increasing Genetic Variation](http://www.bozemanscience.com/034-mechanisms-that-increase-genetic-variation)
[035 - Viral Replication](http://www.bozemanscience.com/035-viral-replication)
[036 - Evolution of Cell Communication](http://www.bozemanscience.com/036-evolutinary-significance-of-cell-communication)
[037 - Cell Communication](http://www.bozemanscience.com/037-cell-communication)
[038 - Signal Transduction in Pathways](http://www.bozemanscience.com/038-signal-transduction-pathways)
[039 - Effects of Changes in Pathways](http://www.bozemanscience.com/039-effects-of-changes-in-pathways)
[040 - Information Exchange](http://www.bozemanscience.com/039-information-exchange)
[041 - The Nervous System](http://www.bozemanscience.com/nervous-system)

## [Immune System](https://www.youtube.com/watch?v=z3M0vU3Dv8E)

[**Endocrine System**](https://www.youtube.com/watch?v=-S_vQZDH9hY)

## AP Biology Labs

[01 - Diffusion & Osmosis](http://www.bozemanscience.com/ap-bio-lab-1-diffusion-osmosis)
[02 - Enzyme Catalysis](http://www.bozemanscience.com/ap-bio-lab-3-enzyme-catalysis)
[03 - Mitosis & Meiosis](http://www.bozemanscience.com/ap-bio-lab-3-mitosis-meiosis)
[04 - Plant Pigments & Photosynthesis](http://www.bozemanscience.com/ap-bio-lab-4-plant-pigments-photosynthesis)
[05 - Cellular Respiration](http://www.bozemanscience.com/ap-bio-lab-5-cellular-respiration)
[06 - Molecular Biology](http://www.bozemanscience.com/ap-bio-lab-6-molecular-biology)
[07 - Genetics of Drosophila](http://www.bozemanscience.com/ap-bio-lab-7-genetics-of-drosophila)
[08 - Population Genetics & Evolution](http://www.bozemanscience.com/ap-bio-lab-8-population-genetics-evolution)
[09 - Transpiration](http://www.bozemanscience.com/ap-bio-lab-9-transpiration)
[10 - Circulatory System Physiology](http://www.bozemanscience.com/ap-bio-lab-10-physiology-of-the-circulatory-system)
[11 - Animal Behavior](http://www.bozemanscience.com/ap-bio-lab-11-animal-behavior)
[12 - Dissolved Oxygen](http://www.bozemanscience.com/ap-bio-lab-12-dissolved-oxygen)

[AP Bio Labs - Part 1](http://www.bozemanscience.com/ap-bio-labs-part-1)
[AP Bio Labs - Part 2](http://www.bozemanscience.com/ap-bio-labs-part-2)
[Chi-squared Test](http://www.bozemanscience.com/chi-squared-test)
[Comparing DNA Sequences](http://www.bozemanscience.com/comparing-dna-sequences)
[Diffusion Demo](http://www.bozemanscience.com/diffusion-demo)
[Finding Stomata](http://www.bozemanscience.com/finding-stomata)
[Population Modeling](http://www.bozemanscience.com/population-modeling)
[Cellular Respiration Lab Walkthrough](http://www.bozemanscience.com/cellular-respiration-lab-walkthrough)
[Osmosis Lab Walkthrough](http://www.bozemanscience.com/osmosis-lab-walkthrough)
[Photosynthesis Lab Walkthrough](http://www.bozemanscience.com/photosynthesis-lab-walkthrough)

## AP Biology Practices

[1 - Models & Representation](http://www.bozemanscience.com/apb-practice-1-models-representations)
 [2 - Using Mathematics](http://www.bozemanscience.com/apb-practice-2-using-mathematics)
[3 - Scientific Questioning](http://www.bozemanscience.com/apb-practice-3-scientific-questioning)
[4 - Data Collection Strategies](http://www.bozemanscience.com/apb-practice-4-data-collection-strategies)

[5 - Analysis & Evaluation of Evidence](http://www.bozemanscience.com/apb-practice-5-analysis-evaluation-of-evidence)
[6 - Scientific Explanations & Theories](http://www.bozemanscience.com/apb-practice-6-scientific-explanations-theories)
[7 - Scales, Concepts & Representations](http://www.bozemanscience.com/apb-practice-7-scales-concepts-representations)

## Supplemental AP Biology Resources

[AP Biology Test:  A User Guide](http://www.bozemanscience.com/ap-biology-test-user-guide)
[ATP: Adenosine Triphosphate](http://www.bozemanscience.com/atp-adenosine-triphosphate)
[Biology](https://paul-andersen.squarespace.com/biology)
[Cell Division](http://www.bozemanscience.com/cell-division)
[Diploid vs Haploid](http://www.bozemanscience.com/diploid-vs-haploid)
[Endosymbiosis](http://www.bozemanscience.com/endosymbiosis)
[Epigenetics](https://paul-andersen.squarespace.com/epigenetics)
[Exponential Growth](https://paul-andersen.squarespace.com/exponential-growth)
[Genetics Preview](http://www.bozemanscience.com/ap-genetics-preview)
[Gibbs Free Energy](https://paul-andersen.squarespace.com/gibbs-free-energy)
[Hardy-Weinberg Punnett Square](http://www.bozemanscience.com/hardy-weinberg-punnett-square)
[Homeostasis Preview](http://www.bozemanscience.com/ap-homeostasis-preview)
[Logistic Growth](http://www.bozemanscience.com/logistic-growth)

[Probability in Genetics](http://www.bozemanscience.com/probability-in-genetics)
[Q10 - The Temperature Coefficient](http://www.bozemanscience.com/q10-the-temperature-coefficient)
[Review - Homeostasis](http://www.bozemanscience.com/ap-homeostasis-review)
[Review - Natural Selection](http://www.bozemanscience.com/ap-natural-selection-review)
[Review - Speciation](http://www.bozemanscience.com/ap-speciation-reivew)
[Sodaria Cross](http://www.bozemanscience.com/the-sodaria-cross)
[Solving Hardy-Weinberg Problems](http://www.bozemanscience.com/solving-hardy-weinberg-problems)
[Stickleback Evolution](http://www.bozemanscience.com/stickleback-evolution)
[The Importance of Oxygen](http://www.bozemanscience.com/the-importance-of-oxygen)
[The Operon](http://www.bozemanscience.com/the-operon)
[Three Domains of Life](http://www.bozemanscience.com/three-domains-of-life)
[Water: A Polar Molecule](http://www.bozemanscience.com/water-a-polar-molecule)

[Acid, Base, and pH](https://www.youtube.com/watch?v=Xeuyc55LqiY)

[The New AP Biology Exam - A User's Guide](http://www.bozemanscience.com/new-ap-biology-exam-users-guide)

[The 2013 AP Biology Exam Reflections](http://www.bozemanscience.com/the-2013-ap-biology-exam)

[AP Biology Review Cards (PDF)](http://www.bozemanscience.com/s/APBioReviewCards-3.pdf)