

AP Biology Summer Assignment



These activities will definitely enhance your understanding of biology, keep your brain fresh, and hopefully get you excited about the world around you!

You will choose ONE of the 3 options below to complete over the summer. You will present to the class during the first week of school. This will count as your first grade (minor assessment)! Enjoy!

1. **Grow something** from seed and keep it alive until the first day of school. Photo-document its growth. **Include information such as the species grown, temperature conditions, amount of watering, amount of sunlight, etc.** Create a Google Slides Presentation documenting the growth and health of your plant, being sure to describe the visuals too. You will present to the class.
2. Go on **at least 5 hikes** somewhere (visit a state park, national park, or local forest preserve). **Keep a nature journal (a log of the life you observe)**. This can be written, drawn, or photographed. Try to identify all the species you observe. **Include a mix of plants and animals, potentially fungi. Specify where the hikes are.** Create some type of presentation so that you can share your information with the class during the first week of school.
3. **Read** a biology-related book from the list below (13 options!). You will create a presentation or some visual aid to summarize the book and to share with the class.
 - a. [Survival of the Sickest: The Surprising Connections Between Disease and Longevity](#) by Dr. Sharon Moalem
 - b. [American Wolf: A True Story of Survival and Obsession in the West](#) by Nate Blakeslee
 - c. [The Big Picture: On the Origins of Life, Meaning, and the Universe Itself](#) by Sean Carroll

- d. [Cowed](#) by Denis Hayes and Gail Boyer Hayes
- e. [Cod](#) by Mark Kurlansky
- f. [The Hot Zone](#) by Richard Preston
- g. [The Immortal Life of Henrietta Lacks](#) by Rebecca Skloot
- h. [Jurassic Park](#) by Michael Crichton
- i. [League of Denial](#) by Mark Fainaru-Wada and Steve Fainaru
- j. [Second Nature: The Inner Lives of Animals](#) by Jonathon Balcombe
- k. [The Code Breaker: Jennifer Doudna, Gene Editing, and the Future of the Human Race](#) by Walter Isaacson
- l. [Your Inner Fish: A Journey into the 3.5-Billion-Year History of the Human Body](#) by Neil Shubin
- m. [Neanderthal Man](#) by Svante Paabo

Rubric (30 Points)

Criteria	Exemplary	Proficient	Developing	Inadequate
Task Completion & Content Knowledge (15 points)	13-15 points <ul style="list-style-type: none"> • Demonstrates exceptional understanding of biological concepts relevant to chosen task • Shows deep engagement with scientific observation, analysis, or synthesis • Makes meaningful connections between observations and biological principles 	8-12 points <ul style="list-style-type: none"> • Shows solid understanding of relevant biological concepts • Demonstrates good scientific observation or analysis skills • Makes some connections to biological principles 	3-7 points <ul style="list-style-type: none"> • Shows basic understanding of biological concepts • Limited scientific observation or analysis • Few or superficial connections to biology 	0-2 points <ul style="list-style-type: none"> • Little to no evidence of biological understanding • Poor or missing scientific observation and analysis • No clear connections to biological concepts
Presentation Quality & Communication (10 points)	9-10 points <ul style="list-style-type: none"> • Clear, engaging, and well-organized presentation • Effective use of visual aids (photos, slides, graphics) • Demonstrates excellent communication skills • Appropriate length and pacing for classroom sharing 	7-8 points <ul style="list-style-type: none"> • Well-organized and clear presentation • Good use of visual aids • Communicates effectively to audience • Appropriate length and content 	4-6 points <ul style="list-style-type: none"> • Somewhat organized presentation • Limited or poor use of visual aids • Communication could be clearer • May be too short or too long 	0-3 points <ul style="list-style-type: none"> • Poorly organized or unclear presentation • Little to no visual aids or ineffective use • Difficult to understand or follow • Inappropriate length or content

<p>Scientific Process & Documentation <i>(5 points)</i></p>	<p>5 points</p> <ul style="list-style-type: none"> • Excellent record-keeping and documentation throughout the process • Shows systematic approach to observation or research • Demonstrates scientific thinking and methodology • High attention to detail and accuracy 	<p>3-4 points</p> <ul style="list-style-type: none"> • Good documentation and record-keeping • Shows organized approach to task • Some evidence of scientific thinking • Generally accurate and detailed 	<p>1-2 points</p> <ul style="list-style-type: none"> • Basic documentation provided • Limited organization or systematic approach • Minimal evidence of scientific thinking • Some inaccuracies or lack of detail 	<p>0 points</p> <ul style="list-style-type: none"> • Poor or missing documentation • No clear systematic approach • Little evidence of scientific process • Significant inaccuracies or lack of effort
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