

Name: \_\_\_\_\_

## AP BIOLOGY CHAPTERS 1-2 SUMMER WORKSHEET

### Part 1 – Multiple Choice

**Directions:** Read chapters 1 and 2 in OpenStax “Biology for AP Courses”, and then use the table of contents to navigate to the “Review Questions” and “Critical Thinking Questions” for each chapter. Write the letter of the correct answer on the line next to the number. Please use capital letters.

#### Chapter 1: The Study of Life – Review Questions

- |          |          |           |
|----------|----------|-----------|
| 1. _____ | 5. _____ | 9. _____  |
| 2. _____ | 6. _____ | 10. _____ |
| 3. _____ | 7. _____ | 11. _____ |
| 4. _____ | 8. _____ |           |

#### Chapter 1: The Study of Life – Critical Thinking Questions

- |           |           |           |
|-----------|-----------|-----------|
| 12. _____ | 14. _____ | 16. _____ |
| 13. _____ | 15. _____ | 17. _____ |

#### Chapter 2: The Chemical Foundation of Life – Review Questions

- |          |           |           |
|----------|-----------|-----------|
| 1. _____ | 7. _____  | 13. _____ |
| 2. _____ | 8. _____  | 14. _____ |
| 3. _____ | 9. _____  | 15. _____ |
| 4. _____ | 10. _____ | 16. _____ |
| 5. _____ | 11. _____ | 17. _____ |
| 6. _____ | 12. _____ |           |

#### Chapter 2: The Chemical Foundation of Life – Critical Thinking Questions

- |           |           |           |
|-----------|-----------|-----------|
| 18. _____ | 22. _____ | 26. _____ |
| 19. _____ | 23. _____ | 27. _____ |
| 20. _____ | 24. _____ | 28. _____ |
| 21. _____ | 25. _____ |           |

### Part 2 – Short Answer

**Directions:** Answer the following questions and prompts in complete sentences based on chapters 1 and 2 in your OpenStax “Biology for AP Courses” textbook.

29. What are the characteristics shared by the natural sciences?

---

---

---

---

30. What are the steps of the scientific method?

---

---

---

31. Identify and describe the properties of life.

---

---

---

32. List the levels of organization among living things.

---

---

---

33. How does atomic structure determine the properties of elements, molecules, and matter?

---

---

---

34. What are the differences among ionic bonds, covalent bonds, polar covalent bonds, and hydrogen bonds?

---

---

---

35. How does the molecular structure of water result in unique properties of water that are critical to maintaining life?

---

---

---

36. What are the role of acids, bases, and buffers in dynamic homeostasis?

---

---

---

37. Why is carbon important for life?

---

---

---

38. How do functional groups determine the properties of biological molecules?

---

---

---