

WAVE BEHAVIOR AND BOUNDARY CONDITIONS

INSTRUCTIONS: Follow the links below, read the text on the page, follow the instructions given and answer the questions as directed below in your journal. **Formulate thoughtful responses** after careful study of the entire website lesson, rather than just trying to “look up” an answer.

PART I:

1. Click on → [Waves](#) → Lesson 3: Behavior of Waves
2. **Lesson 3a: Boundary Behavior**
 - a. Take notes in your journal. Make sure to include the following:
 - i. Define ALL of the terms in **bold red** text.
 - ii. Include ALL diagrams with labels as needed.
 - b. Watch all 3 **▶ Animation** s provided. Be sure to include a brief description.
 - c. Compare and contrast fixed and free end reflection.
 - d. Complete either Case 1 OR Case 2 in the **Check Your Understanding** Questions.
3. **Lesson 3b: Reflection, Refraction, and Diffraction**
 - a. Take notes in your journal. Make sure to include the following:
 - i. Define ALL of the terms in **bold red** text.
 - ii. Include ALL diagrams with labels as needed.
 - b. Compare and contrast reflection, refraction, and diffraction.
4. **Lesson 3c: Interference of Waves**
 - a. Take notes in your journal. Make sure to include the following:
 - i. Define ALL of the terms in **bold red** text.
 - ii. Include ALL diagrams with labels as needed.
 - b. How can you tell if waves will interfere constructively or destructively?
 - c. Complete both questions in the **Check Your Understanding** section.

Continued on back →

PART II:

5. Click on → [Waves](#) → Lesson 4: Standing Waves
6. **Lesson 4a: Traveling Waves vs. Standing Waves**
 - a. Watch the included ▶ **Animation** . Be sure to include a brief description.
 - b. What is the difference between standing waves and travelling waves?
7. **Lesson 4b: Formation of Standing Waves**
 - a. Take notes in your journal. Make sure to include the following:
 - i. Define ALL of the terms in **bold red** text.
 - ii. Include ALL diagrams with labels as needed.
 - iii. Watch the included ▶ **Animation** . Be sure to include a brief description.
8. **Lesson 4c: Nodes and Anti-Nodes**
 - a. Take notes in your journal. Make sure to include the following:
 - i. Define ALL of the terms in **bold red** text.
 - ii. Include ALL diagrams with labels as needed.
 - iii. Watch the included ▶ **Animation** . Be sure to include a brief description.
 - b. What is the difference between a node and an anti-node? How are they formed?
 - c. Complete all 6 **Check Your Understanding** questions.