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

**PART II:**

1. Click on 🡪 [Waves](http://www.physicsclassroom.com/class/waves) 🡪 Lesson 4: Standing Waves
2. [**Lesson 4a**](http://www.physicsclassroom.com/class/waves/Lesson-4/Traveling-Waves-vs-Standing-Waves)**: Traveling Waves vs. Standing Waves**
	1. Watch the included animation. Be sure to include a brief description.
	2. What is the difference between standing waves and travelling waves?
3. [**Lesson 4b**](http://www.physicsclassroom.com/class/waves/Lesson-4/Formation-of-Standing-Waves)**: Formation of Standing Waves**
	1. Take notes in your journal. Make sure to include the following:
		1. Define ALL of the terms in **bold red** text.
		2.  Include ALL diagrams with labels as needed.
		3. Watch the included animation. Be sure to include a brief description.
4. [**Lesson 4c**](http://www.physicsclassroom.com/class/waves/Lesson-4/Nodes-and-Anti-nodes)**: Nodes and Anti-Nodes**
	1. Take notes in your journal. Make sure to include the following:
		1. Define ALL of the terms in **bold red** text.
		2.  Include ALL diagrams with labels as needed.
		3. Watch the included animation. Be sure to include a brief description.
	2. What is the difference between a node and an anti-node? How are they formed?
	3. Complete all 6 **Check Your Understanding** questions.