

WEEK OF: January 18, 2021

CLASS: Physics 103 – C/D Blocks

TEACHER: Mrs. Burke

CONTACT INFO: Deborah.Burke@thedeltahighschool.com (contact via direct email, through Teams, and through Remind = Dphys103T2)

OBJECTIVES:

- Practice algebraic manipulation for problem solving
- Develop understanding of wave behavior in string systems
- Understand the relationship between string length and frequency
- Develop musical notation knowledge (note names)

ZOOM LINKS:

Check TEAMS POSTS for link information (we will use Zoom if it is working, Teams if Zoom is unavailable).

YOUR ASYNCHRONOUS RESPONSIBILITIES BEFORE ZOOM LESSON #1:

Journal Entries:

- Wave description in an open tube
- Drawings of fundamental and harmonic wave patterns in open and closed tube systems
- Formulas for fundamental frequency calculation in open and closed tube systems
- Formulas for harmonic and overtone frequencies in open and closed tube systems
- Definitions for open and closed tube systems, fundamental and harmonic frequencies, and overtones
- Example and practice problems, including Check Your Understanding problems from readings

Resource Interaction:

- Key Concepts
 - Example problem(s)
 - Questions
1. [Closed-End Air Columns](#) reading
 2. [Open-End Air Columns](#) reading

SYNCHRONOUS MEETING #1:

- Wave behavior in string systems
- Anatomy of a wave on a string
- Bookmark <https://www.apronus.com/music/onlineguitar.htm>
- Fundamental frequency calculations and the relationship to string length
- Note names

YOUR RESPONSIBILITIES AFTER ZOOM #1:

- Have notes detailing the learning you've experienced toward meeting the objectives state above. Put these into your Teams > Class Notebook > Journal

YOUR ASYNCHRONOUS RESPONSIBILITIES AFTER ZOOM #1

- Begin string lab activity: Part A – “note names”
- Come to office hours with your study group

YOUR ASYNCHRONOUS RESPONSIBILITIES BEFORE ZOOM LESSON #2 :

- [Guitar Strings](#) reading
- Attempt the Check Your Understanding problems at the end of the reading selection

SYNCHRONOUS MEETING #2:

- Harmonics and overtones in string systems
 - Wave shapes
 - Mathematical descriptions
- String lab work
 - Measuring vibrating string length
 - Calculating wavelength
 - Determining relationship between fret position and frequency

YOUR RESPONSIBILITIES AFTER ZOOM #2:

- Have notes detailing the learning you've experienced toward meeting the objectives state above. Put these into your Teams > Class Notebook > Journal
- Complete String Lab activities

Journal Entries:

- Wave description in a string system
- Drawings of fundamental and harmonic wave patterns in a string system
- Formulas for fundamental frequency calculation in a string system
- Formulas for harmonic and overtone frequencies in a string system
- Definitions for vibrating string length, fret, amplitude
- String Lab activity data and responses
- Example and practice problems, including Check Your Understanding problems from readings

Resource Interaction:

[Guitar Strings](#) reading

- Key Concepts
- Example problem(s)
- Questions

IDEAS FOR USING YOUR ASYNCHRONOUS TIME:

Study TOGETHER

Reading interaction

“Check Your Understanding” problems

Journal entries

Lab activities

DUE DATES:

- ALL journal entries are due by 1:00 pm on Monday Jan 25th

OFFICE HOURS:

11:45-12:45: Look in Teams Posts for Zoom link. Drop-in format. If you are taking this course for college credit, you are expected to attend office hours weekly. This is a good opportunity to work together in a study group. You may also request a breakout room for a study group for any other class.

Other contact options: email, Remind, Teams post