**Quamichan Grade 8: Science**

Week #2 - April 15-21

**Learning Intentions:**

* To investigate the features of a wave.
* To investigate frequency and wavelength.
* To continue the process of online learning in this new setting (completing the assignment and sending back to your Science Teacher in a receivable format).

**Assignment Instructions:**

* ***Read*** the attached section (4.1) of the BC Science 8 Textbook.
  + Note: Section 4.1 can also be accessed via this link: <https://drive.google.com/drive/folders/0B3EbWHKwTyj2VUJVTDRHNHBPeEE>
* ***Complete*** the work sheet “Grade 8 Science: Features of a Wave”
  + This worksheet is included as a word document and will also be available in your Class Notebook.
  + Send the completed worksheet to your Science teacher using one of the following options:
    - Fill in the worksheet in your **Class Notebook on your Office 365 school account online**. Ask your teacher for support if you are not able to access your Class Notebook.
    - Type the answers in a document on a phone or computer and attach it to an email to your Science Teacher.
    - Type the answers directly in an email to your Science Teacher
    - Write the answers on a piece of paper, take a **quality** picture, and email it to your science teacher
* ***Demonstrate*** how different waves make different sounds by creating a “music video” with a hard surface and a ruler. Hold the ruler firmly at one end and flick the other end to make a sound (you’ve all done this before). Experiment with different items at different lengths to create a 15 second “song” which you record and send to your teacher. [See example here.](https://www.youtube.com/watch?v=ZFK9u-z86Mk&feature=youtu.be) **Note**: this video is for example purposes only. Yours will be much better ;)
  + Send the completed ~15 second video to your Science teacher using one of the following options:
    - Insert it in the Science Section of your **Class Notebook on your Office 365 school account online**. Ask your teacher for support if you are not able to access your Class Notebook.
    - Email it to your Science teacher (making sure that it is only 15 seconds long)
    - Post the video to your you tube account and send your teacher a link to the video

**Criteria:**

* All questions are completed with complete sentences.
* Questions on worksheet are answered correctly.
* Video demonstrates you can make different pitches of sound by varying wavelengths.

**Extending Your Learning (Optional):**

* **Play an actual song** with multiple rulers or one ruler changing length. Think simple like Hot Cross Buns.
* **Include an explanation** of why the different length of ruler makes a different pitch. Your explanation would talk about wavelengths. This could be written or included in your video.
* **Activity 4-1. Watching Water Waves.** This optional activity is from the pdf version of your textbook on page 134. You could video this (it may look cool in slow motion) and send a video to your teacher.

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Div. \_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_

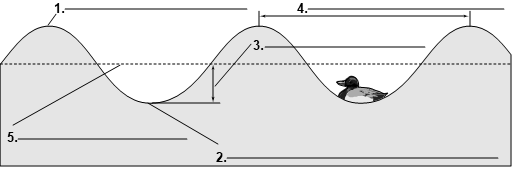
**Grade 8 Science:**

**Week 2: Apr. 15 – 21**

**Features of a Wave:**

**Use the vocabulary words below to label the parts of a wave.**

* Amplitude
* Crest
* Trough
* Wavelength
* Rest Position



**Define each of the terms below:**

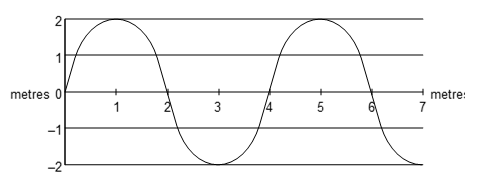
* Amplitude:
* Crest:
* Trough:
* Wavelength:
* Rest position:

**Characteristics of Waves**

**Use the information in the graphs to answer the questions.**

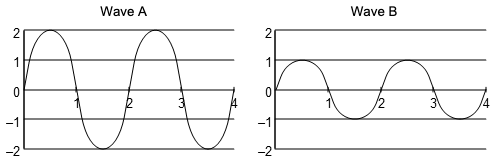
1) How long is the wavelength of the wave **below**?

2) How large is the amplitude of the wave **below**?



3) Which of the following waves **below** has the smaller amplitude, A or B?

4) Which wave carries more energy, A or B?



5) What is the same for waves X and Y **below**: amplitude, wavelength, or frequency?

6) Which wave has a greater frequency, X or Y?

7) Which wave has a longer wavelength, X or Y?

