STATION 1: Period

1) What is the definition of period in your own words?
2) What is the unit for period? What is the symbol used to represent period?
3) Write down two equations you can use to solve for period.
4) A swimmer takes 48 seconds to make 1 lap. What is their period? *(48s)*
5) A clock ticks 6 times every 8 seconds. Find the period. *(1.33s)*
6) A man exercising can do 20 pushups in 25 seconds. Find the period. *(1.25 s)*
7) If 12 waves hit a dock every 18 seconds, what is the period? *(1.5 s)*
8) Current switches directions 120 times every 2 seconds. What is the period? (0.016 s)
9) A pendulum makes exactly 30 vibrations in 10.0 s. What is its period? (0.33 s)
10) A frequency of 8 Hz would be equivalent to what period? (0.125 s)
11) What is the relationship between period and frequency? If you know your frequency, what equation can you use to solve for period?

STATION 2: Frequency

1) What is the definition of frequency in your own words?
2) What is the SI unit for frequency? What is the symbol used to represent frequency?
3) Write down two equations you can use to solve for frequency.
4) A swimmer takes 48 seconds to make 1 lap. What is their frequency? *(0.02 Hz)*
5) A clock ticks 6 times every 8 seconds. Find the frequency. *(0.75 Hz)*
6) A man exercising can do 20 pushups in 25 seconds. Find the frequency. *(0.8 Hz)*
7) If 12 waves hit a dock every 18 seconds, what is the frequency? *(0.67 Hz)*
8) Current switches directions 120 times every 2 seconds. What is the frequency? (60 Hz)
9) A pendulum makes exactly 30 vibrations in 10.0 s. What is its frequency? *(3 Hz)*
10) A period of 10 second would be equivalent to what frequency? Is this wave bigger or smaller than the wave in #9? (0.1 Hz)
11) What is the relationship between frequency and period? If you know your period, what equation can you use to solve for frequency?

STATION 3: Wave Speed

1) What is the velocity of a wave with a frequency of 850 Hz and a wavelength of 0.55 m? *(467.5 m/s)*
2) What is the wavelength of a sound wave with a frequency of 70 Hz? (Speed of sound is 342 m/s) *(4.88 m)*
3) Waves in a lake are 3 m apart and pass a raft every 2 s. What is the speed of the waves? *(1.5 m/s)*
4) What is the frequency of a pendulum that is moving at 40 m/s with a wavelength of 0.25 m? *(160 Hz)*
5) A wave with a frequency of 30 Hz travels through rubber with a wavelength of 0.4 m. What is the speed of the wave? *(12 m/s)*
6) What is the wavelength of a sound wave moving at 340 m/s with a frequency of 351 Hz? *(0.97 m)*
7) A wave in a string has a wavelength of 0.15 m and a frequency of 12 Hz. Calculate the speed of the wave.
   (1.8 m/s)
8) A wave generator produces 24 wave pulses per second. If the speed of each wave is 3 m/s, what is the length of each wave? *(0.125m)*
9) An earthquake generates very low frequency shock waves (about 0.050 Hz). If they travel at 8500 m/s, what is their wavelength? *(17,000 m)*
10) What is the relationship between frequency and wavelength? What does that mean? *(inversely proportional, explain)*

STATION 4: Transverse and Longitudinal Waves

Cut and Paste the **transverse wave** onto **page 6** of your notebook and label each part of the wave using the word bank provided.

Provide a 3-4 sentence summary describing the parts of the wave and a real-world example of this type of wave. For example what is the highest point on this wave called, etc.

Cut and Paste the **longitudinal wave** onto **page 6** of your notebook and label each part of the wave using the word bank provided.

Provide a 3-4 sentence summary describing the parts of the wave and a real-world example of this type of wave. For example what is the highest point on this wave called, etc.