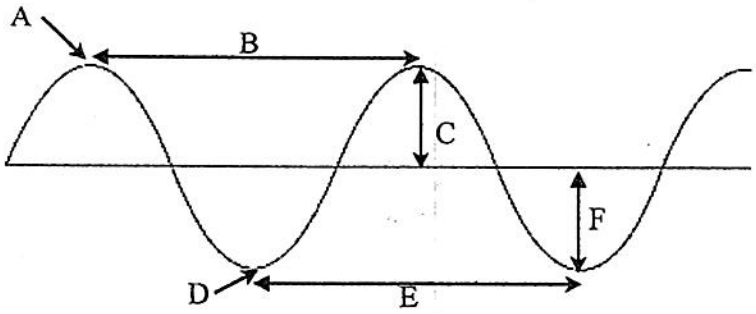
Name:_____ Date:_____

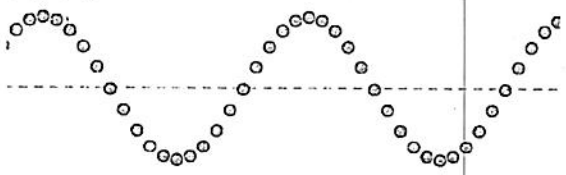
# Waves Worksheet

A: crest
B: wavelength
C: amplitude
D: trough
E: wavelength
F: amplitude

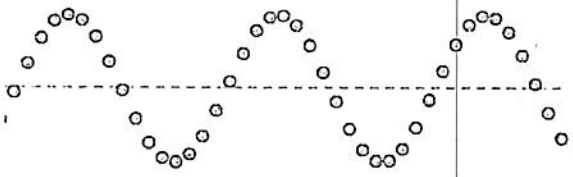



## Frequency

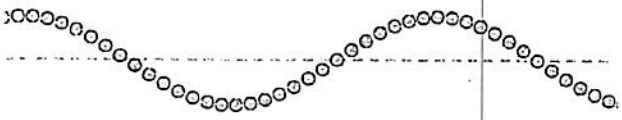
Wave 1:



Wave 2:



Wave 3:



1. How many wavelengths long is Wave 1?
2
2. How many wavelengths long is Wave 2?
2
3. How many wavelengths long is Wave 3?
1
4. Which wave has the highest frequency?
2
5. Which wave has the lowest frequency?
3
6. What is the definition of frequency?
The amount of waves that pass a point in a second.
7. How can you tell by looking at it if a wave has high or low frequency?
How close the waves are to eachother.

## Frequency Connection

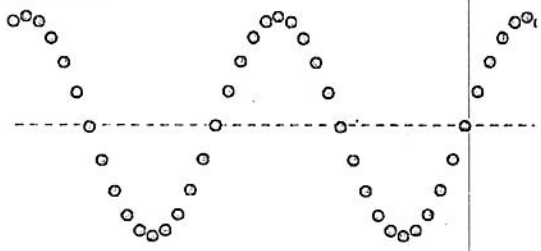
There are three members of a family. The dad has a deep, low voice. The mom has a medium-high voice, and the baby has the highest voice.

8. Which wave belongs to the dad's voice? 3
9. Which wave belongs to the mom's voice? 1
10. Which wave belongs to the baby's voice? 2

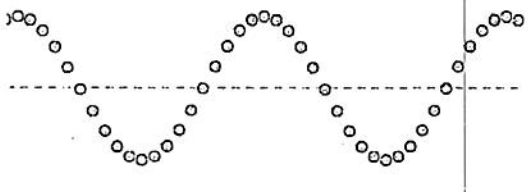
## *Amplitude*

Wave 4:

Wave 5:



Wave 6:



1. Which wave has the highest amplitude?

5

2. Which wave has the lowest amplitude?

4

3. Use a ruler and measure the amplitude of Wave 5:

1.5cm

4. What is the definition of amplitude?

The height of the wave from the resting position to the crest.

5. How can you tell by looking at it if a wave has high or low amplitude?

Distance from the resting position to the crest.

## *Amplitude Connection*

Juan is playing the piano. The music starts of at *meso-forte* (medium high volume). It then *crescendos* into *forte* (loud) and Juan plays dramatically. The music ends at *piano* (quietly) with a sweet melody.

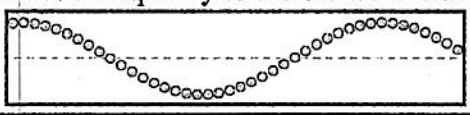
6. Which wave represents the music at the beginning? 6

7. Which wave represents the music in the middle? 5

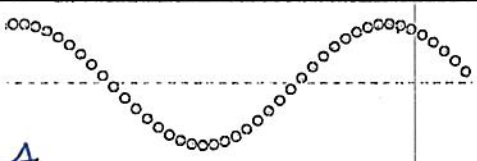
8. Which wave represents the music at the end? 4

## *Final Waves Goodbye*

Compare waves A-D by both amplitude and frequency to the Standard Wave. (Higher/Lower/Same)

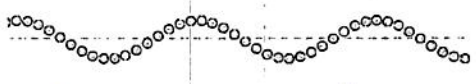
 Standard Wave

A



↑ Amplitude; same Frequency

B

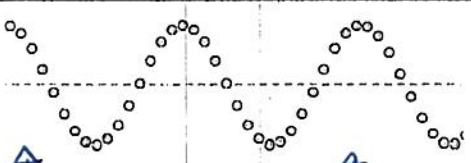


↓ Amplitude; ↑ Frequency

C

same Amplitude; ↓ Frequency

D



↑ Amplitude; ↑ Frequency