

LESSON 5: PITCH AND FREQUENCY

MAIN COGNITIVE OBJECTIVE(S): Student(s) will acquire knowledge and gain understanding of pitch and frequency.

MATERIALS: voice box or piano/keyboard or piano app (*If you don't know music, I suggest a piano app that labels the white and black keys with the letter/name of the note*)

**Students who are able to generate open ended responses by pointing to letters to spell, typing, signing, or speaking, do NOT need to use the options provided.*

ATTENTION ACTIVITY: If you have to choose one, which is the least painful to hear? A really (HIGH or LOW) sound?

Comment on the student's response.

TEACH: The pitch is how high or low the sound or note is.

ASK: If we talk about how high or low a sound is, we are referring to (PITCH. or COLOR)?

EXPAND: And I am thinking of a sport where someone will pitch a ball. That sport is (AEROBICS or BASEBALL.)?

"Yes, baseball. Of course, we are using the word 'pitch' in a different way."

TEACH: High notes or pitches are made when sounds waves vibrate quickly and more times per second.

ASK: So, quick vibration equals (HIGH. or LOW) pitch?

EXPAND: Which would be a higher pitch? A sound wave vibrating (5 or 10,000.) times per second?

"Yes, 10,000 per second. The faster vibration creates a higher pitch."

TEACH: Low pitches are made when sound waves vibrate slowly and less times per second.

ASK: When sound waves vibrate slowly, we get a (LOW. or FAST) pitch?

"We get a low pitch."

TEACH: The amount of times a sound wave vibrates a second is called frequency.

SPELL: Let's spell FREQUENCY.

EXPAND: If something happens frequently, it happens (OFTEN. or RARELY)?

TEACH: Frequency is measured in Hertz after a German scientist.

ASK: So, frequency is measured in (HERTZ. or CYLINDERS)?

"Yes, in Hertz."

SPELL: And let's spell GERMAN.

EXPAND: Do you think it would be fun to speak German? (PROBABLY or NOPE)?

Comment on the student's response.

TEACH: Now let's hear a high note (*play a note on the right side of the piano or make a high pitch with your voice*) and a low note (*play a note on the left side of the piano or make a low note with your voice*).

EXPAND: So, which did you like that best? (HIGH or LOW) pitch?

Comment on the student's response.

EXTENSION ACTIVITY: Write an acrostic poem with the first letter in pitch starting each line: P-I-T-C-H.

P (PITCH or PEAK)?

I (ICKY or INTERESTING SQUEAK)?

T (TOP NOTE or TIMED NOTE)?

C (CALM or CRAZY)?

H (HIGH NOTE or HIDDEN NOTE)?

Practice these words to improve skills: HERTZ, PITCH, LOW, HIGH, SOUND

From book by Lenae Crandall *Music for Non-speaking and Minimally Verbal Students: Lessons for SomaRPM and Other Choice Based Systems* (Page 35-36).