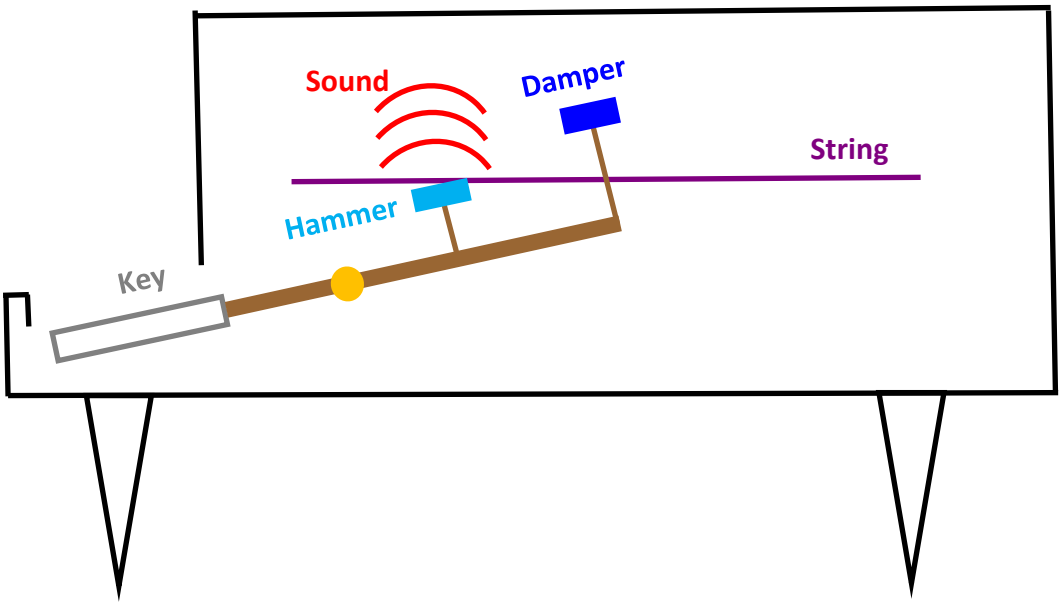
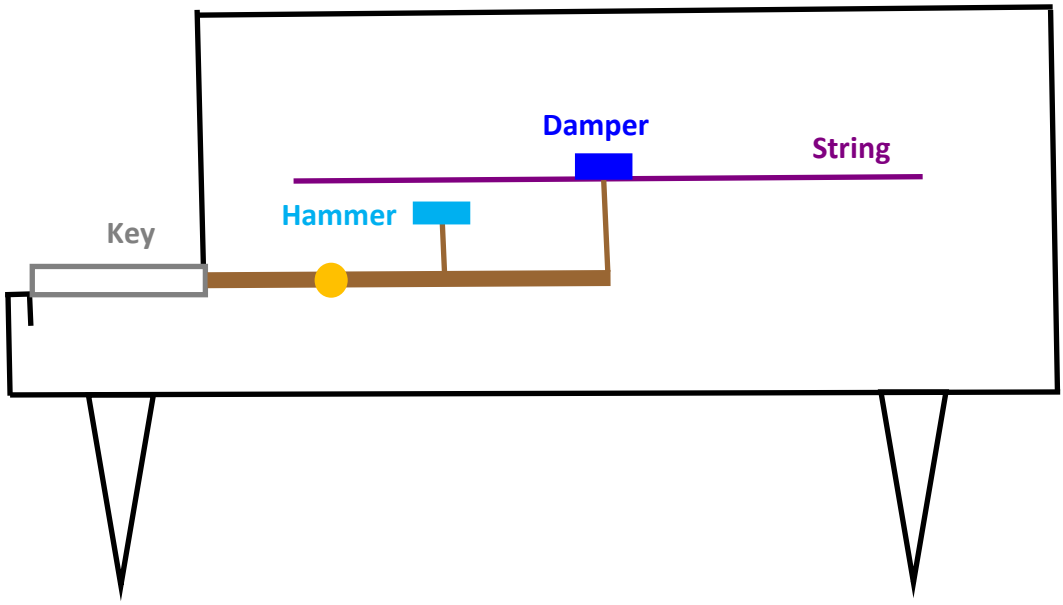
How The Piano Works and Tone

The piano is a percussive instrument. An acoustic piano works by pressing a key that is attached to a hammer to hit a string and make it vibrate. When you play a key, the hammer "hits" the string causing it to vibrate and make a note sound. When you press the key with a little weight, you make a soft tone and when you use more weight, you make a louder tone. If you use a lot of sudden weight, the sound will be loud and percussive.



When you release a key, the damper comes back down on the string to stop it from vibrating. How quickly you release a key determines the quality of the note cessation as the string stops vibrating. If you release the key abruptly, you will have a sudden stop of the vibrating string, if you release the key slowly, you will have a gradual stop of the vibrating string.



- When you press the damper pedal, all the individual string dampers stay up after the key is released so that the string will keep vibrating.

Tone is the quality of sound produced by pianist.

Sound on the piano is produced by pressing the keys with fingers to make hammers hit strings. Whether or not we consider the sounds produced to be beautiful depends on when the keys are pressed in time and how they pressed and released to create a musical idea. Pianists can create an infinite variety of moods with how they press and release their fingers from the keys.

It is important to remember how a piano works when trying to create a beautiful tone. For instance, pressing the key harder after the hammer strikes the string does nothing for the actual tone production. Having both temporal (where the note is in time) and physical control over the finger's descent and release from the key in a musical context is required for quality tone production. In addition, having good overall posture, upper body and wrist positioning to help with decent and release of the fingers into the keys, and proper positions of the fingers themselves while pressing and releasing the keys all impact the ability of the pianist to produce good quality tone.

Use of the pedals also affect tone production. Because all the individual string dampers stay up when the damper pedal is pressed even after the key is released, more harmonics are heard as other strings vibrate "in sympathy" with the original string vibration. Depressing the Una corda pedal fully makes the entire hammer action shift to the right (on a grand piano), allowing the hammers to strike one string fewer than usual, therefore reducing the sound and resonance to produce a different quality of sound.

"The pianist can change tonal quality with his unlimited ability to mix many or few sounds with an infinite number of degrees of loudness and sound duration. Various degrees of overlapping legato will also enrich tone quality. The employment of the different pedals on the piano will have the same effect."
- Reginald R. Gerig from "Famous Pianists and Their Technique"

"Music is a tonal art. It produces no visual image, it does not speak with words or ideas. It speaks only with sounds…….the best tone, and consequently the most beautiful, is the one which renders a particular meaning in the best possible manner."
- Heinrich Neuhaus from "The Art of Piano Playing"

"Tone or sound on the piano is produced by pressing the keys with your fingers. It's how this is executed that makes the difference. Not by hitting the keys or banging them. There are many aspects involved in good tone production. It's important to know that it's the whole body and mind that helps create the beautiful sound, not just the fingers. "
- Sonja Joubert, https://www.londonpianoinstitute.co.uk/how-to-improve-your-tone-production-on-the-piano/, Retrieved: 13 September 2020