# UNIT 1: PROPERTIES OF MUSICAL TONES

A musical tone is characterized by its **pitch**, **duration**, **intensity** (or loudness), and **timbre** (or quality)

## *1.- PITCH:*

**Pitch** represents the frequency of sound, and tells the difference between **high** sounds and **low** sounds. Pitches are compared as "higher" and "lower", and are quantified as frequencies (cycles per second, or Hertz-Hz).

Pitch allows the construction of melodies; To represent the pitch we use the **staff** and the **notes**.

*The staff* (plural- staves) is written as five parallel lines. Most of the notes are placed on one of these lines or in a space between lines.
Extra **ledger lines** may be added to show higher or lower notes.

## *2.- DURATION:*

In sounds and music, a duration is a property of a tone that becomes one of the bases of rhythm. Durations may be described as **long** or **short**.

***PARTS OF A NOTE:***

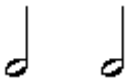
- **Head:** filled in:  or not filled in 
- **Stem:** 
- **Flag:** 

These are the relationship of values between the different symbols:

| Name (USA) | Name (England) | Duration | Symbol |
|---|---|---|---|
| Whole Note | Semibreve | 4 beats |  |
| Half Note | Minim | 2 beats |  |
| Quarter Note | Crotchet | 1 beat |  |

Look at the relationship of values between the different symbols:

Each whole note (semibreve): 

is divided into ***two half notes*** (minim): 

And each half note (minim),

is divided into two quarter notes (crotchet) 

Thus, each symbol will have half the value of the preceding shape.

There are smaller values that of the crotchet; here you can see symbols that take a half (50%) or a fourth (25%) of a beat:

| Symbols | Name | Value |
|---|---|---|
|  | Eighth note (quaver) | Half of a quarter note. We can have two eighth notes for each beat. |
|  | Sixteenth note (semiquaver) | One fourth of a quarter note. We can have four of these for each beat. |

It is common practice to beam together the flags of eighth notes and sixteenth notes that are part of the same beat, in order to facilitate reading.

In music, **silence** is just as important as sound. How do we notate silence? We notate silence by using symbols called **rest notes**, or simply **rests**. There is an equivalent rest symbol for each note value. Below we can see the corresponding rest symbols for the note values we already know:

| Note Name (USA) | Note Name (England) | Symbol | Rest |
|---|---|---|---|
| Whole Note | Semibreve |  |  |
| Half Note | Minim |  |  |
| Quarter Note | Crotchet |  |  |

There are also symbols to represent silence with the value of **eighth notes** (quaver) and **sixteenth notes** (semiquaver):

| Note | | Rest |
|---|---|---|
| Eighth (quaver) |  |  |
| Sixteenth (semiquaver) |  |  |

## *3.- INTENSITY:*

It is the sound's property that tells us the difference between a **loud sound** and **a soft sound**. It's represented with **dynamics**, and written with Italian terms. For example, the word ***piano*** (***p***) indicates softness; the word ***forte*** (***f***) indicates loudness.

Also we can use dynamics as: ***crescendo*** (gradually playing louder), ***decrescendo*** or ***diminuendo*** (gradually playing softer ).

## *4.-TIMBRE:*

Timbre describes all of the aspects of a musical sound that do not have anything to do with the sound's pitch, loudness, or length. In other words, if a flute plays a note, and then an oboe plays the same note, for the same length of time, at the same loudness, you can tell that the only difference in this: a flute sounds different from an oboe. This difference is in the timbre of the sounds.

Timbre is caused because each note from a musical instrument is a complex wave containing more than one frequency. For instruments that produce notes with a clear and specific pitch, the secondary frequencies that are involved in the sound are called **harmonics**.

# To SUM UP:

1. Complete this table to revise the new concepts:

| The 4 qualities of sound are… | **Term** *(in English)* | **Nombre** *(en español)* | **This quality represents….** | In Music, we use _____to represent |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

2. Complete the sentences using one of the words in the chart:

   a. People living in the city complain about _____ at the weekends.

   b. _____, please. You are in a hospital.

   c. Please, be quiet. There is too much _____ in the room.

   d. In Music we represent the silence with _____.

3. Ready to answer some questions? Have a try! If you don't know the answer, ask your teacher.

   a) Sound is a form of energy: **True / False**

   b) Sound travels in _____.

   1) waves 2) the wind 3) rivers

   c) Sound waves must travel to the _____ to be heard.

   1) brain 2) heart 3) ears

   d) Noise is an unwanted sound: **True / False**

   1) Why?

   **e)** Damage (in our ears) occurs when sounds are very…:

   1) high 2) loud 3) long

4. **With a partner:** discuss the differences between: SOUND - NOISE - SILENCE.