

UNIT 1: THE SOUND AND ITS QUALITIES

1. Sound, noise and silence

Essentially, music is sound. **SOUND** is produced when an object vibrates and it is what can be perceived by a living organism through its sense of hearing. It travels through **PHYSICAL MEDIUMS** by sound waves and it is normally a pleasant feeling.

NOISE is a disagreeable auditory experience but this is a subjective definition (for instance, most of the percussion instruments produce noises when they are played). Anyway, the physical difference between sound and noise is the sort of waves: sound waves are regular and in a noise the wave is irregular (look at the pictures in your book). Finally, **SILENCE** is the absence of sound or noise.

2. Qualities of sound. There are four basic qualities.

PITCH (Hz) Low sound/High sound

DURATION (Sec.) Short sound/Long sound

INTENSITY (dB) Forte/Piano

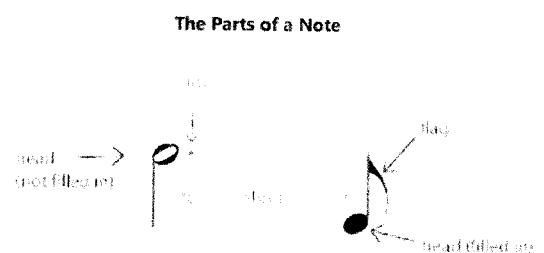
TIMBRE (Harmonics)

2.1. PITCH

This is the characteristic of sound that tells us the difference between a high sound and a low sound. To represent the pitch we use the staff and the notes. The staff (plural staves) is written as five horizontal parallel lines. Most of the notes of the music are placed on one of these lines or in a space between lines. Extra ledger lines may be added to show a note that is too high or too low to be on the staff.

2.2. DURATION

This is the characteristic of sound that tells us the difference between a short sound and a long sound. The duration of a sound is indicated using several symbols. In standard notation, a single musical sound is written as a note.




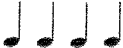


All of the parts of a written note affect how long it lasts.

2.2.1. Notes and values.



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

Note 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. The smallest value we have seen up to this point is that of the quarter note, which lasts for a whole beat. Of course, there are symbols for notes of shorter duration.

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



2.2.2. Rests In all music, silence is just as important as audible notes. How do we indicate/show silence? We do so 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	Rest
Whole Note (USA) Semibreve (England) 	
Half Note (USA) Minim (England) 	
Quarter Note (USA) Crotchet (England) 	

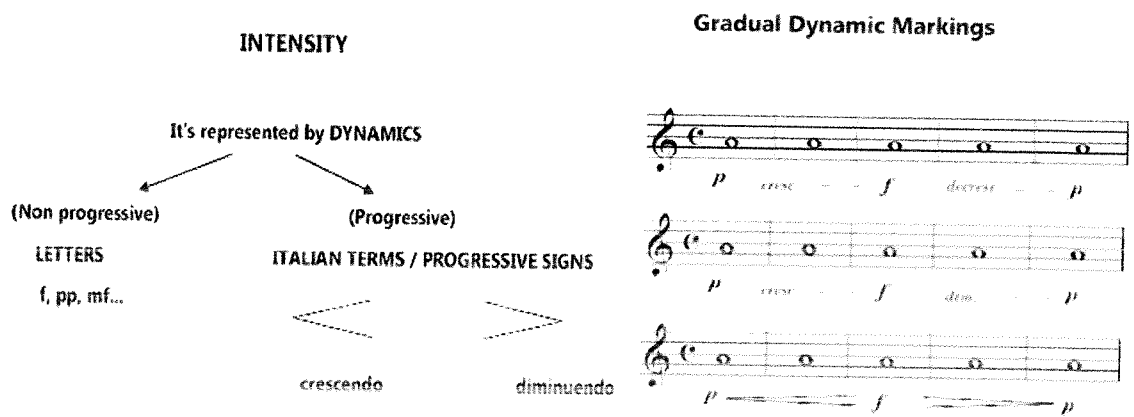
There are also symbols to represent silence with the value of eighth notes (quaver) and sixteenth notes (semiquaver).

Note	Rest
Eighth (quaver) 	
Sixteenth (semiquaver) 	

2.3. INTENSITY

This is the characteristic of sound that tells us the difference between a loud sound and a soft sound. Dynamics are the loudness or softness of a composition. The term piano (p) is used to indicate softness and forte (f) to indicate loudness. Each of these is augmented if the letter symbolizing it is doubled or tripled (e.g. "pp" - "pianissimo", "very soft"; "ppp" - "pianississimo", "very, very soft"). Each one is also lessened if preceded by mezzo (m) (e.g. "mf" - "mezzo forte", "somewhat loud"). Also included in

dynamics are the crescendo ("slowly growing louder"), decrescendo ("slowly growing softer"), and the sforzando ("sudden loudness").



2.4. TIMBRE

One of the basic elements of music is called color, or timbre. Timbre describes all of the aspects of a musical sound that do not have anything to do with its 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 is this, a flute sounds different from an oboe. This difference is in the timbre of the sounds. Timbre is caused by the fact that 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. The human ear and brain are capable of hearing and appreciating very small variations in timbre. Another approach would make possible to look at and to touch music. You could refer to the colour of a given sound (light or dark), to its brightness (glossy or matt) and to its touch (smooth or rough), its weight (heavy or light), its width (wide or narrow), its consistency (soft or tough) and its temperature (warm or cold).