Beats: Fundamental pulses at regular intervals

Tempo: The number of beats per minute BPM

Measure: A fundamental building block with a single rhythm element.
• Regular chunks of music that have related number of beats, often 4 or 8 beats
• Called **bars** in blues and pop.

Meter: Beats per measure
Most common: 4 beats per measure, marked 4/4

Notes: In Western European-derived music we have basically 11 notes to work with:
A A# B C C# D# E F F# G G#
Then what? It *starts over* with A,
at double the Hz of the first A. (An octave)

Sharps and Flats are notes that are between the C Scale notes, or the black keys on a piano keyboard. Example: C# is the next note above C.

Scale A set of musical notes that *sound good together*. They are often mathematically and culturally defined. In Western European music:

Harmonic Pitch Intervals (from Pythagoras!)
Key note Hz ***x 1.25*** *= third note is scale*
(in C this would be an E)
Key note Hz ***x 1.33*** *= fourth note in scale*
(in C this would be an F)
Key note Hz ***x 1.5*** *= fifth note in scale*
(in C this would be a G)
Or in Frequency Equivalents…
So ff A = 440Hz, a fifth is 660Hz, fourth is 572Hz

Key
A starting note for a scale. Also a set of notes in a scale based on that starting note. A pop tune is most often done all in one key. The key is usually picked to match a singers range.

The key of C is easy to use for beginning digital editors because it is represented by the white keys on a piano keyboard. Play the white keys!

Notes in the Key of C C D E F G A B

Scale Steps
A **half-step** is going to the very next note on a keyboard, whether black or white, like E to F, or F to F#. A **whole-step** is two half-steps, like C to D or E to F#.

A **Major Scale** is built on the **following** steps (in any key) It is the most common scale, and *generally creates a positive feeling.*
Whole Whole Half Whole Whole Whole Half

A Minor Scale is built on these steps…
Whole Half Whole Whole Half Whole Whole
G*enerally creates a sad or pensive feeling.*

Chords and Harmony
Chords are groups of notes that sound good when played *at the same time* (in "harmony"). They are built using notes from the scale.

Chords are made up using even or odd numbered notes in a scale. So using the C-scale:
C-chord ***C*** D ***E*** F ***G*** A B C D E (1 3 5)
F-chord C D E ***F*** G ***A*** B ***C*** D E (4 6 8)
G-chord C D E F ***G*** A ***B*** C ***D*** E (5 7 9)

Alternately we can make a major chord in *any key* by starting with *any* note by *counting the half-steps*. A ***major chord*** is made up of:
Starting note + *4 half-steps* + 3 half-steps

A ***minor chord*** is made up of:
Starting note + *3 half-steps* + 4 half-steps
Note only the middle note has changed!

Using Chords as a Foundation For a Song
We generally use chords built up from the notes in the scale. So in C-major, the *common* chords are: C major
D minor or major
E minor
F major
G major
A minor

Studio Cats System
Studio musicians (cats) use numbers to identify the chords used in a song. Numbers are based on the common chords based on notes in any key. 1=key, then 2=m, 3=m, 4, 5, 6=m, 7

So "*1 4 5*" means *C-major, F-major, G-major*
An 8-bar blues song is *1 1 4 1 5 4 1 5 in any key*.
YMCA is 1 1 6 6 4 4 5 5 chorus 1 1 6 6 2 2 5 5

Octave: A note at which the scale starts over again. In frequency, a note that is either twice the frequency or half the frequency.

Transpose: Moving pitches up or down, for instance to make a 4 out of a 1 (Studio Cats).