

Notes in the Chromatic Scale

In western music, there are twelve musical notes. These twelve notes are called the **chromatic Scale**. You might also hear these notes referred to as **semitones** or **itches**.

Chromatic Scale (starting with A – 5th string):

A A#/Bb **B** **C** C#/Db **D** D#/Eb **E** **F** F#/Gb **G** G#/Ab

In the example above are the semitones in the order they appear on the fingerboard for the 5th string with the A note sounded when the string is played open. The single letter notes in bold above are called **NATURAL NOTES**. Five notes can have two names, either # sharp or b flat following the natural note name depending on their position in a major or minor scale.

On the guitar fingerboard there is a note or **semitone** associated with each fret on each string. In **Figure 1** below you can see these semitones by string and by fret.

Figure 1 - Notes on the Guitar Neck (from open position to the 12th fret)

	E	A	D	G	B	E		E	A	D	G	B	E
1	F	A#	D#	G#	C	F	1	F	Bb	Eb	Ab	C	F
2	F#	B	E	A	C#	F#	2	Gb	B	E	A	Db	Gb
3	G	C	F	A#	D	G	3	G	C	F	Bb	D	G
4	G#	C#	F#	B	D#	G#	4	Ab	Db	Gb	B	Eb	Ab
5	A	D	G	C	E	A	5	A	D	G	C	E	A
6	A#	D#	G#	C#	F	A#	6	Bb	Eb	Ab	Db	F	Bb
7	B	E	A	D	F#	B	7	B	E	A	D	Gb	B
8	C	F	A#	D#	G	C	8	C	F	Bb	Eb	G	C
9	C#	F#	B	E	G#	C#	9	Db	Gb	B	E	Ab	Db
10	D	G	C	F	A	D	10	D	G	C	F	A	D
11	D#	G#	C#	F#	A#	D#	11	Eb	Ab	Db	Gb	Bb	Eb
12	E	A	D	G	B	E	12	E	A	D	G	B	E

Notes in a Major Scale

There are seven notes in a major scale. These notes are derived from the chromatic scale. To determine the notes in a major scale, first pick a note that will be the first note of the scale. The first note is called the '**root**' note. In the example below we will use '**C**' as our root note.

There is a formula to identify the seven major scale notes from the twelve chromatic semitones. Starting from the root note, you go up the chromatic scale two semitones (two frets) or a "**whole step or whole tone**". In the chart below a whole step is identified by a '**W**'. To find the third note, you go up another whole step (two frets). To find the fourth note you go up just one semitone (one fret) or a "**1/2 step**". The fifth note is another whole step up as are the sixth and seventh notes. To complete the scale and arrive at the root note one octave higher you will go up a half step (one fret) from the seventh note.

Chart 1 – Going from the chromatic to major scale with C as the root note and only showing sharp notes.

E	F	F#	G	G#	A	A#	B	C	C#	D	D#	E	F	F#	G	G#	A	A#	B	C
								W		W		½		W		W		W		½
C major scale								C		D		E	F		G		A		B	C

The C major scale is the only scale that does not include a sharp or flat note. All other scales will have one or more sharps or flats. These will be determined by applying the major scale formula starting with a different root note. In all cases, the major scale will use the seven unique natural note names with some being modified by a sharp or flat.

Recap:

1. There are twelve semitones in the chromatic scale.
2. One semitone = one fret.
3. Two semitones equal a whole tone or whole step.
4. The seven notes of a major scale are derived from the twelve semitones in the chromatic scale using a formula.
5. The formula for a major scale is: whole tone, whole tone, half tone, whole tone, whole tone, whole tone, half tone.
6. The first note in a major scale is called the '**root**' note.
7. The C major scale is the only major scale with no sharps or flats.

Homework Exercise

From the 12 semitone Chromatic scale starting with "**G**", identify the 7 notes in the major scale of (root note) 'G'.

G G#/Ab A A#/Bb B C C#/Db D D#/Eb E F F#/Gb G

Step 1

Write Formula

Step 2

Identify the major scale notes

G

G