

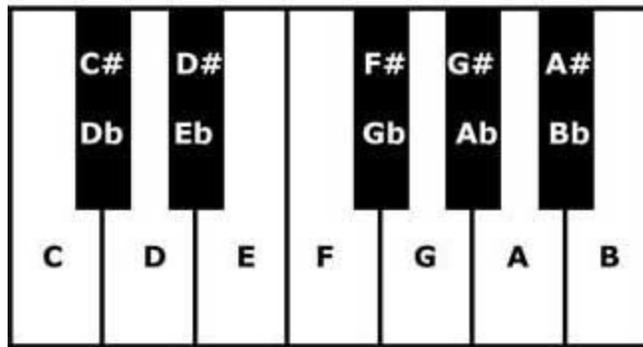
INTRODUCTION TO THEORY
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There are several paths in which music theory can be explained. The following exercises demonstrate how I began to understand theory and how it can be an effective way to pass on to my students.

THE TWELVE NOTES:

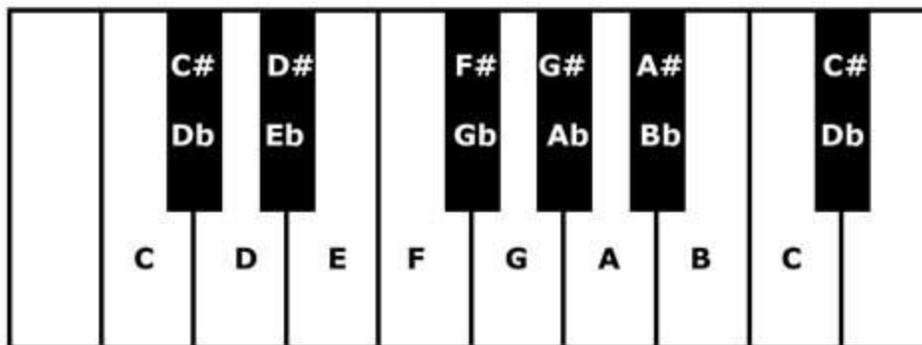
In western music we use twelve notes in which seven of these notes are more familiar than others. The best way to show these twelve tones is by looking at a keyboard instrument (piano, accordion, harpsichord).

PICTURE 1#



If you think that the notes placed in the white keys are the seven most common notes, then your guess is correct. Now as you probably know, the piano contains more than twelve notes and in fact some of these notes will repeat itself. The picture above only shows a representation of the twelve **different** notes that exists in western music. After the last note "B" the cycle of twelve notes will start again and the note that comes after "B" would be "C".

PICTURE 2#



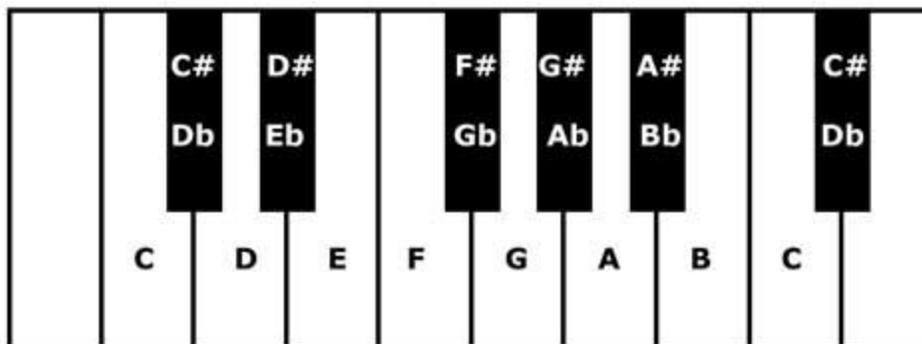
Notice that there are no black keys (notes) between “E” and “F” and between “B” and “C”. In addition, each black key contains two different names. Now in order to grasp the point of this exercise, first we need to form a checklist of important rules:

CHECKLIST:

- 1- The distance from “C” to “C” is the model used to form a major diatonic scale in each key.
- 2- An octave is the distance between two notes of the same quality. Therefore in **PICTURE 2#** the distance between “C” and “C” represents an octave.
- 3- Consider that each of the twelve notes is equivalent to a half step and that if you have two notes together then you’ll form a whole step.
- 4- In order to form a major diatonic scale you will need a sequence of whole and half steps. The sequence used to form one major diatonic scale **never** changes. Think of it as a math formula and that if you have the right sequence of whole and half steps, then you will have a major diatonic scale.

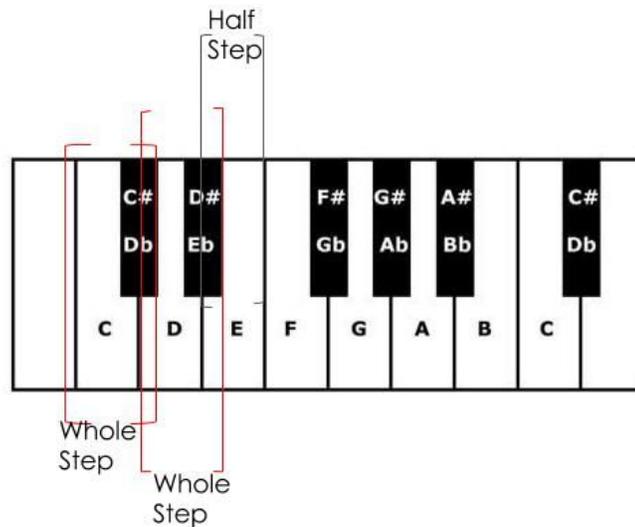
C MAJOR DIATONIC SCALE:

The reason why the models for a major scale revolve around “C” is because the model is always right in front of us. Yes, in the piano if we play all the white keys beginning on “C” all the way to the other “C” (octave) you will have the sound of a major scale.



Keep in mind that even though we do not play the black keys they are still important to the end product of a C major scale. Remember that each of the twelve notes are equivalent to a half step. As a result, between "C" and "D" there is a distance of a whole step and between "E" and "F" there is only a half step difference.

PICTURE 3#



MAJOR SCALE FORMULA:

C **C#** D **D#** E F **F#** G **G#** A **A#** B C **C#** D **D#** etc.
W W H W W W H W W
 C-D-E-F-G-A-B-C = notes in C major scale

In order to have the sound of any major scale, the sequence above of whole and half steps must be followed. The formula above should also match a piano going from "C to "C".

G MAJOR SCALE:

G **G#** A **A#** B C **C#** D **D#** E F **F#** G
W W H W W W H
G-A-B-C-D-E-F#-G = notes in G major scale

Notice that in order to maintain the **major scale formula** in the key of "G" using all white keys is no longer an option. The distance between "E" and "F" will always be of a half step. So to maintain the correct formula, instead of using an "F" natural, we made a substitution to an "F#". Whenever the addition of sharps (#) or flats (b) occurs, we call them accidentals. As result, any major scale besides C major will have accidentals in order to maintain the formula of WWHWWWH. In this case, "F#" needed to be used.

ASSIGNMENT 1:

Based on the reading and the concepts discussed thus far, help me construct other major scales using the **major scale formula**: (WWHWWWH). Add the sharps (#) to following scales:

- 1- D- E- F- G- A- B- C- D.
- 2- A- B- C- D- E- F- G- A.
- 3- E- F- G- A- B- C- D- E.
- 4- B- C- D- E- F- G- A- B.

ASSIGNMENT 2:

Now lets use the major scale formula to construct scales using flats (b):

- 1- F- G- A- B- C- D- E- F
- 2- Bb- C- D- E- F- G- A- Bb
- 3- Eb- F- G- A- Bb- C- D- Eb
- 4- Ab- Bb- C- D- Eb- F- G- Ab.

ASSIGNMENT 3:

Compose three major scales using the the **major scale formula**. Choose at least one scale using sharps (#) and one scale using (b).

1-

2-

3-

ASSIGNMENT 4:

1- When we see a scale using sharps or flats, what do we call them?

2- Does the **major scale formula** ever changes?

3- How many different tones are present in western music?

4- Using the **PICTURE 2#**, can you tell me what notes do not possess a # or a b in between?