Major Scale Formula

W-W-H-W-W-W-H

(Read on to understand this simple formula.)

What's a Scale?

A scale is collection of notes constructed with a series of **half-steps**, **whole-steps**, and other intervals like a minor 3rd. There are thousands of possible scales, but we will only concern ourselves with the most important one for now: **the major scale**.

But first we need to learn what intervals are, and most importantly, the intervals of a half-step and a whole step.

What is an Interval?

An **interval** is simply a unit of measurement between notes. We can use intervals to build musical structures like chords and scales. The most common types of intervals to deal with are called "half steps" and "whole steps".



The Half Step (H)

A half step is the smallest interval on the piano. An example of a half step up would be C to Db (one note to the right on the keyboard). Another half step up (to the right of) the keyboard would be Db to D.



- What would be a half step up (to the right) from
 E? The answer is F.
- What note is a half step up down (to the left) from A? The answer is Ab (A flat).
- What is a half step down from C? The answer is B.
- What about a half step up from F#? The answer is G.

Two half steps in either direction is the equivalent of **one whole step.**



The Whole Step (W)

A whole step is simple. Its the distance of two half steps. So a whole step up (to the right) from C would be D. A whole step down (to the left) from G, for example would be F.

- What would be a whole step up (to the right) from E? The answer is F# (F sharp).
- What note is a whole step down (to the left) from A? The answer is G.
- What is a whole step down from C? The answer is Bb (B flat).
- What about a whole step up from F#? The answer is G# (G sharp).



We can indicate **half steps** and **whole steps** with these letters:

Half Step = **H**Whole Step = **W**



Building A Major Scale

So now, you can understand this formula:

W-W-H-W-W-W-H

"Whole, whole, half, whole, whole, half."
I know, it sounds funny to say, but thats how you build a
major scale!

Lets look at the piano to see how a major scale unfolds starting from any note using this formula.

Remember: intervals are the distance between the notes.

We will start with C first:

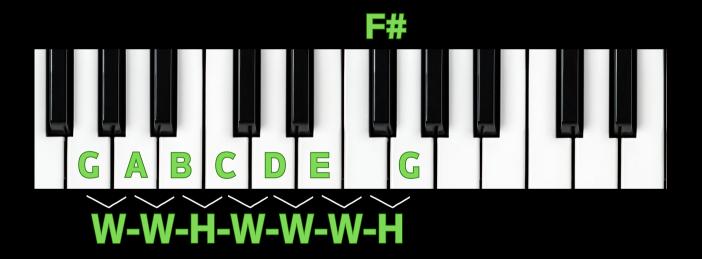


Using our right hand on the piano, we play this scale from C to C with fingers 1-2-3, cross the thumb under the middle finger, then 1-2-3-4-5 with your pinky landing on C. A note about the finger numbers: the thumb is always 1 and the pinky is always 5.)

G Major Scale

The C major scale is an easy example, because it turns out to be only the white notes on the piano, no black notes.

Lets put our knowledge to the test by making a G major scale wilh the major scale formula using the same fingering as before (1-2-3, 1-2-3-4-5).



Scale Degrees

In any scale we can also give a number to each note of the scale. These numbers are called "scale degrees". The scale degrees of a major scale are very straight forward. They are: 1-2-3-4-5-6-7-8.



Why Learn Major Scales?

Learning all 12 major scales takes time, and why should you invest your time in this goal?

There is no end to the musical benefits of learning your major scales. A million melodies have been written using parts or fragments of scales, so knowing your major scales is like prelearning an endless amount of tunes, to some degree.

Improvisers often rely on their knowledge of scales to create new melodies spontaneously.

Many bass lines have been written that outright resemble the major scale.

Major, Minor, and Beyond

Perhaps the most important reason to learn your major scales is to have a basis for understanding how to convert these major scales into any other kind of scale.

Mathmatically speaking, there are thousands of possible scales, but we only need to know a few at first. We will visit this skill in later lessons.



PRACTICE MAKING EACH MAJOR SCALE W-W-H-W-W-W-HG \mathbf{C} E F B \mathbf{C} G B D A F# D A E B F# Db Ab Eb Bb F

