

Len Collins - Guitar Edition



The Music Readers ToolboxTM

Introduction to Scales

My method for teaching guitar is to place all the information necessary to become a first class guitarist at the start of a new students lessons. My students discover, and play, the note names on the fretboard, learn the basics of reading music, what scales are for and how to relate them to the music they intend play. This takes place over the course of a few weeks. After this initial period we settle down to use it all.

My students know the chords they play come from scales and as they progress, from modes. I enable them to build their own chords.



I held the Guinness World Record for the largest guitar lesson from 2004 -c2007

Introduction to Scales (2)

In the fretboard section I explain I don't hand my students a printed sheet full of notes in the hope they can decipher it. They have their guitar. I have pen and paper. Together we work our way through it.

It's the same when I teach scales. Step by step my students begin to understand the structure of a scale. As an understanding of scales starts to take place, they know the purpose of scales and how to use them.

Scales help to make fingers nimble. Nimble fingers are essential for sight reading music.

The Music Readers Toolbox is for guitarists who want to sight read music.

Scales are a vital tool.

Introduction to Scales (3)

Scales are very important to a musician for many reasons

- 1) Scales organise sounds into groups that sound nice together.
- 2) Scales make it easier for musicians to play together.
- 3) Scales make reading music easier.
- 4) Scales create modes. Modes create chords.
- 5) Scales are used when composing. Scales are used when improvising.
- 6) Scales are used in everything musical.

Scales – Main Menu

[Introduction to Scales](#)

[Create the scale of E \(Major\)](#)

[Tones and Semitones](#)

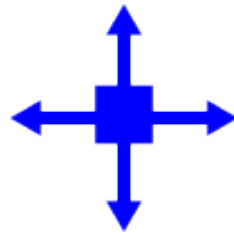
[Play the scale of E on the guitar](#)

[Using a piano keyboard](#)

[Creating scales with flats](#)

[Creating the scale of C \(Major\)](#)

[Other type of scales](#)



Navigate Pages

The Music Readers ToolboxTM

Tones and Semitones

[Introduction to Scales](#)

[Create the scale of E \(Major\)](#)

[Tones and Semitones](#)

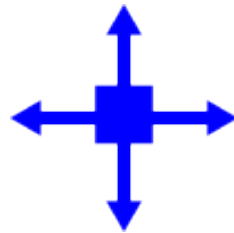
[Play the scale of E on the guitar](#)

[Using a piano keyboard](#)

[Creating scales with flats](#)

[Creating the scale of C \(Major\)](#)

[Other type of scales](#)



Navigate Pages

The Music Readers ToolboxTM

Before we start

I hope you've been through my fretboard section before starting to learn the power of scales. If you have, well done.

If you already know the note names and the sounds they represent that is also good.

If not, you should do it now, although there is still plenty of knowledge in this, the scales section, for you to puzzle through.

If you are an experienced guitarist please don't jump to the pages in this, or any of the four sections, that interest you.

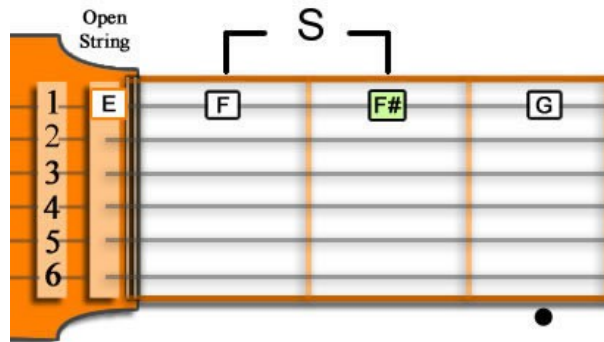
Join the beginners and fill in the gaps in your knowledge.

Tones and Semitones: Scale means ladder

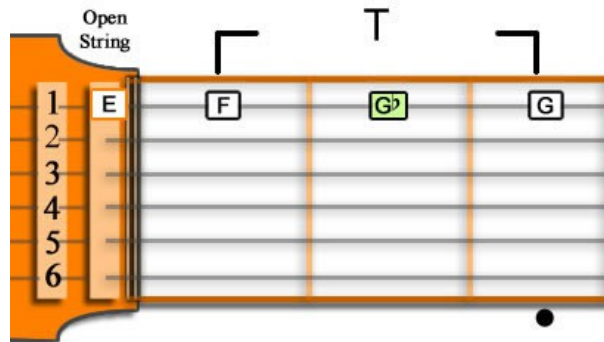
A major scale is a ladder made up of 8 steps.

In this part of the course I will be talking about Tones and Semitones.

A Semitone is one fret up or down on the fretboard.



A whole Tone is two frets up or down on the fretboard.



Sharps and Flats

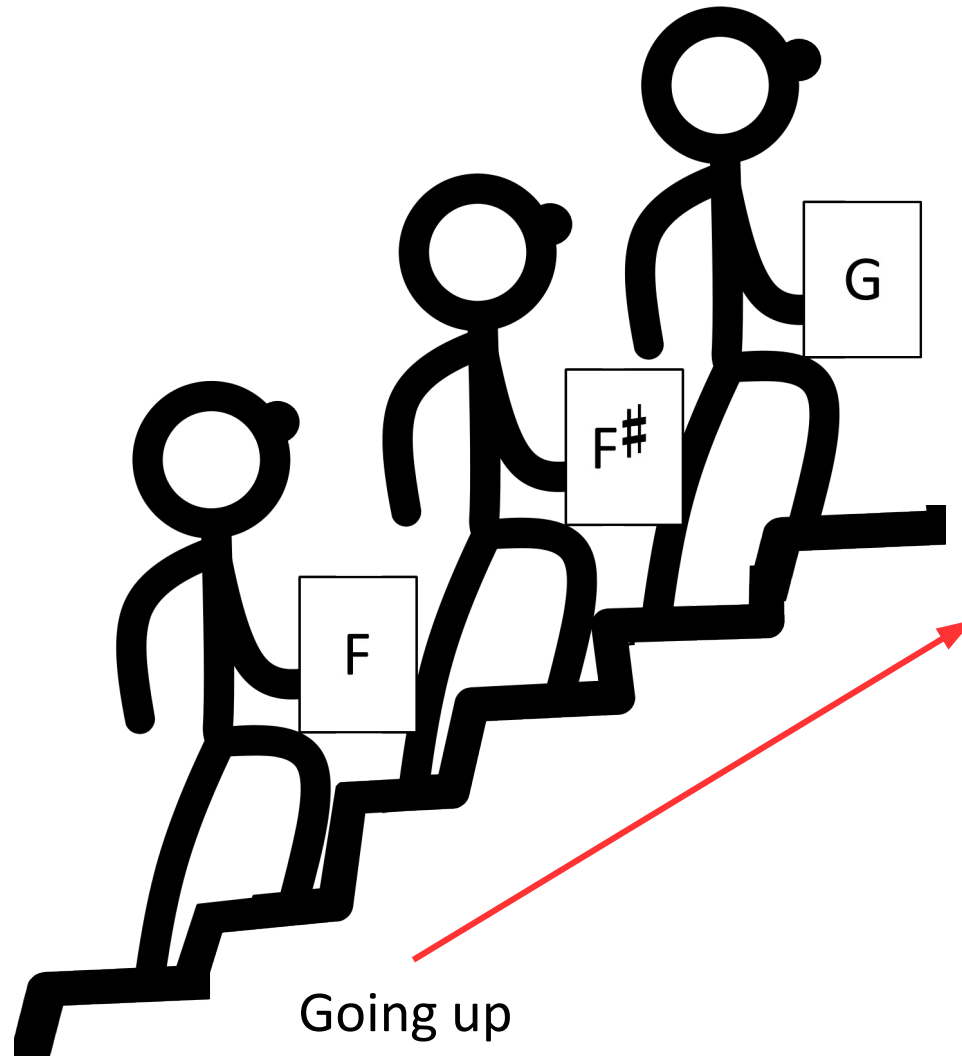
Providing you have been following this course from the fretboard stage you will be familiar with sharps and flats.

Here is a brief explanation just in case you jumped straight here.

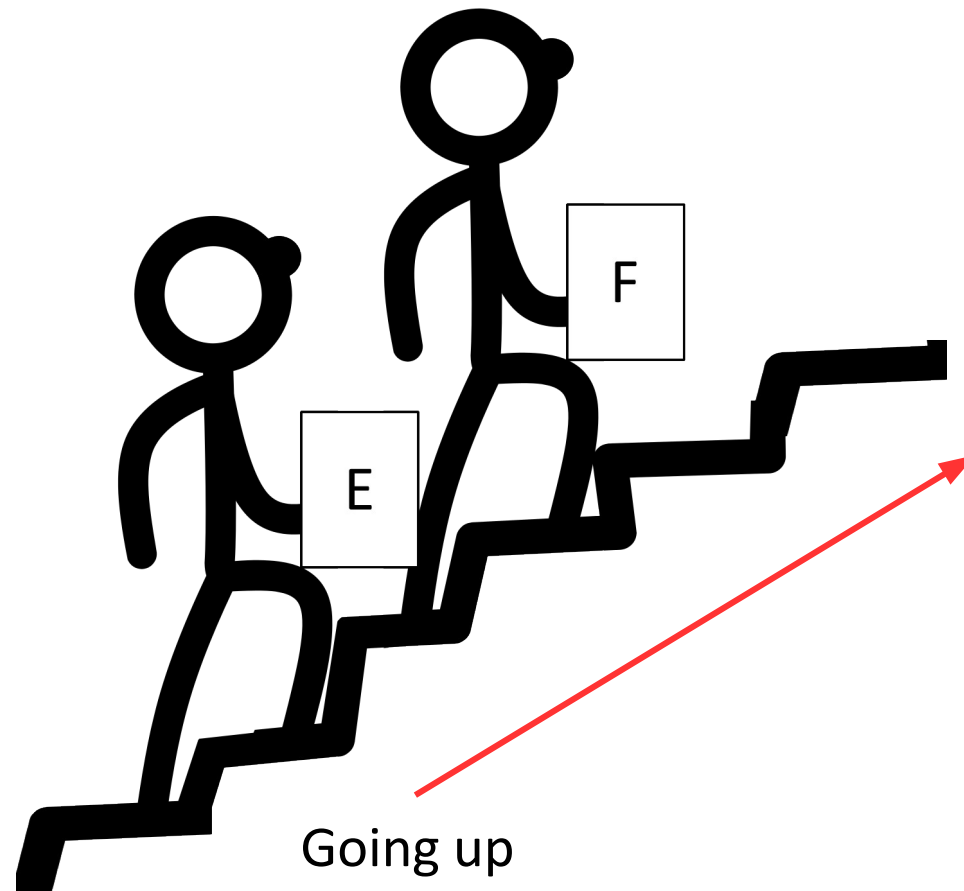
All notes, **except two** – E and B, when going **up** a semitone are accompanied by a sharp sign **#** indicating a higher sound.

All notes, **except two** – F and C, when going **down** a semitone are accompanied by a flat sign **b** indicating a lower sound. This, of course, happens on every string.

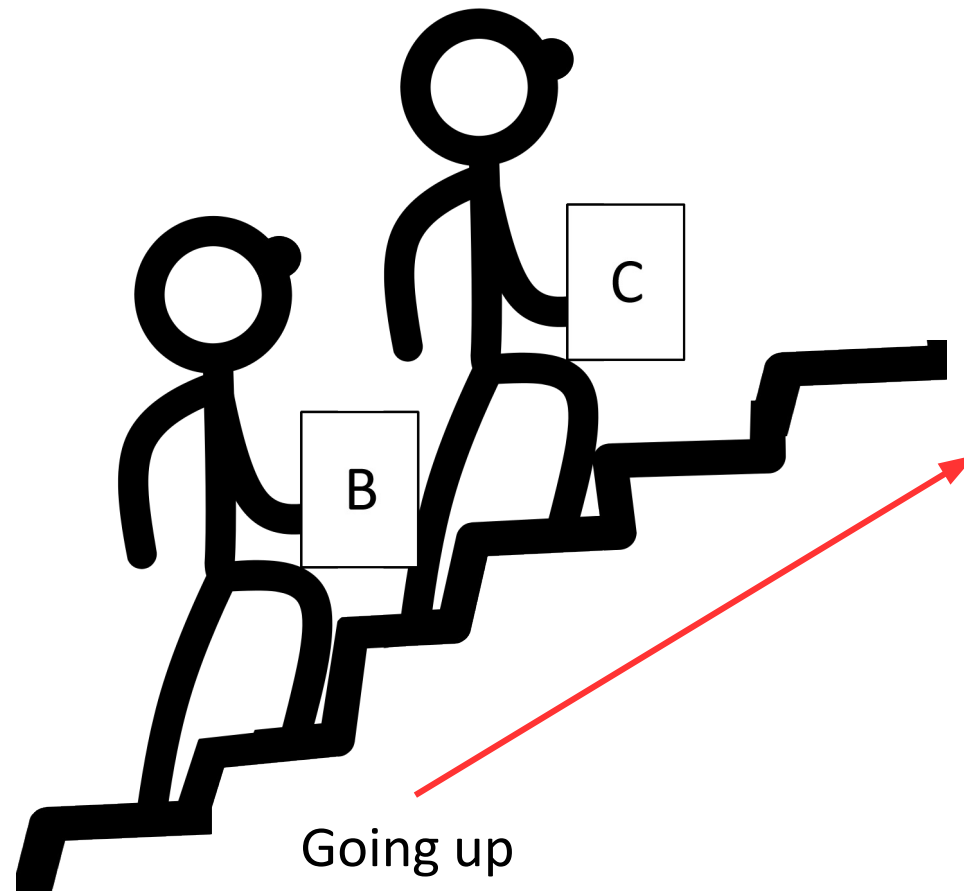
Sharps going higher



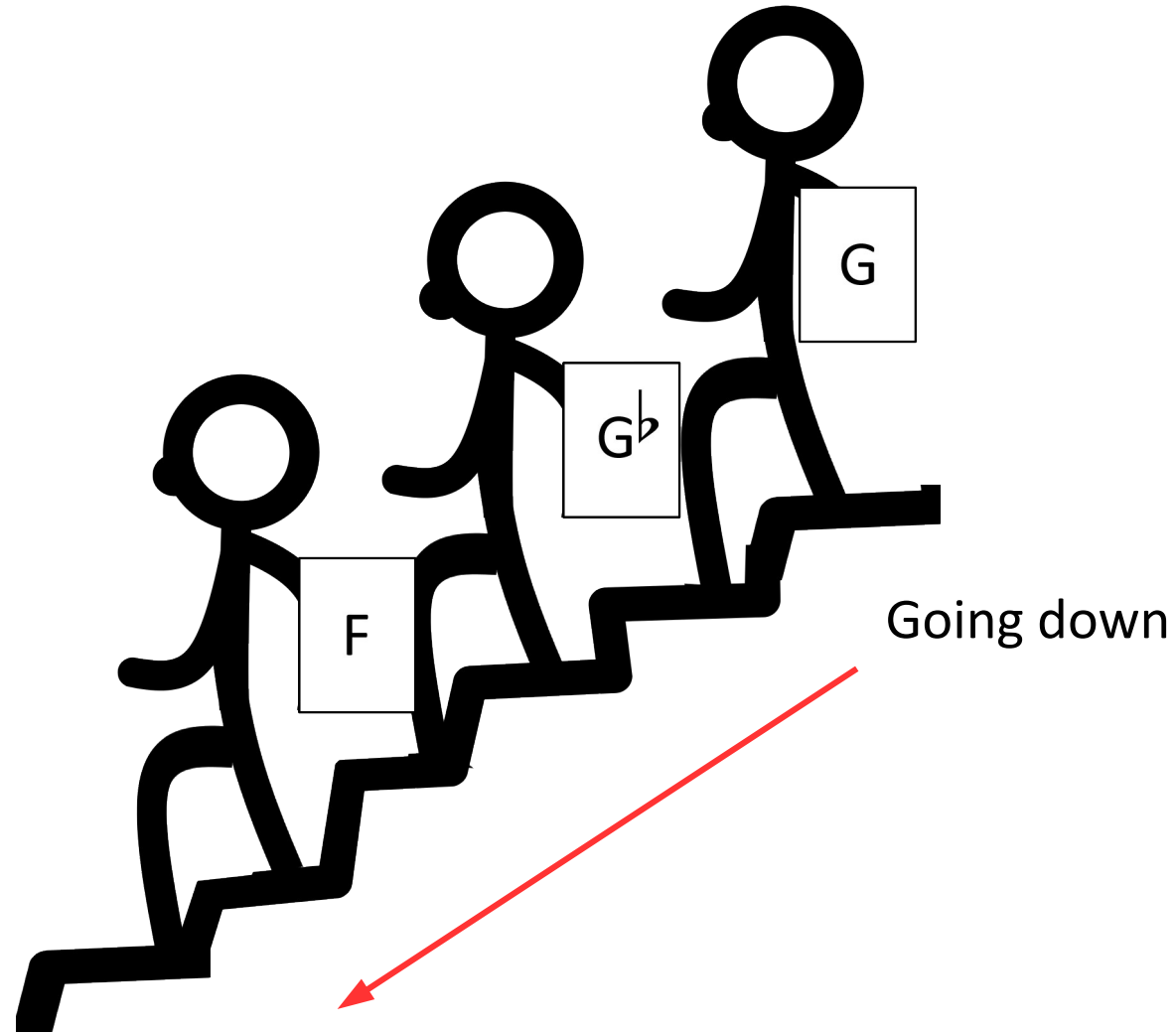
No room for a semitone between E – F



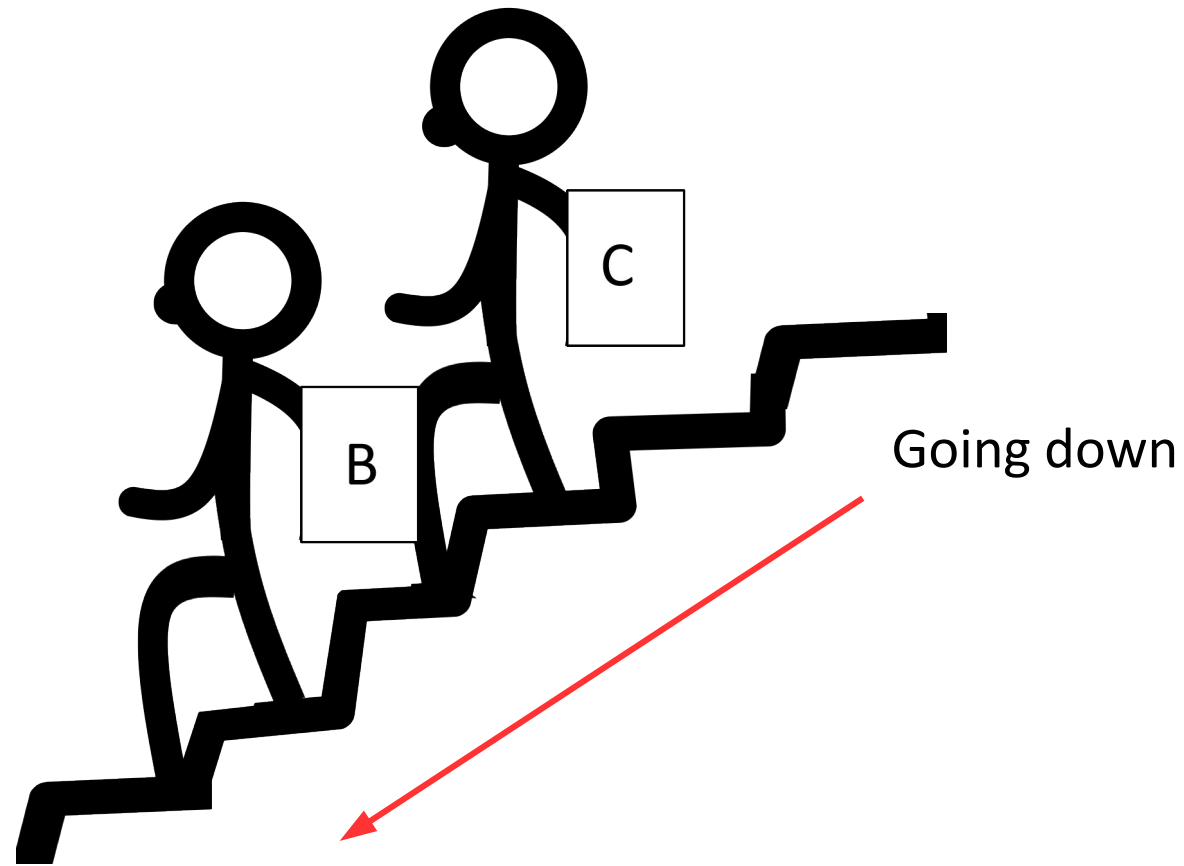
No room for a semitone between B – C



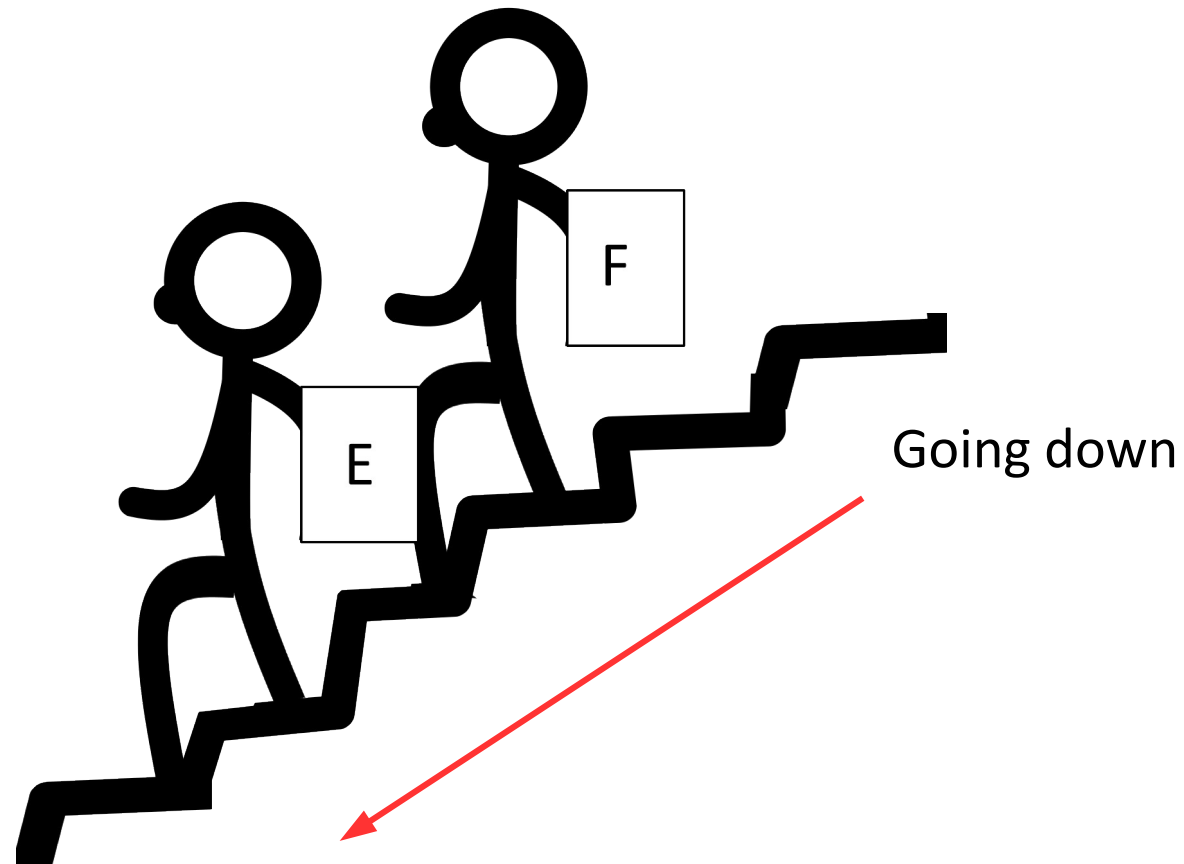
Flats going lower



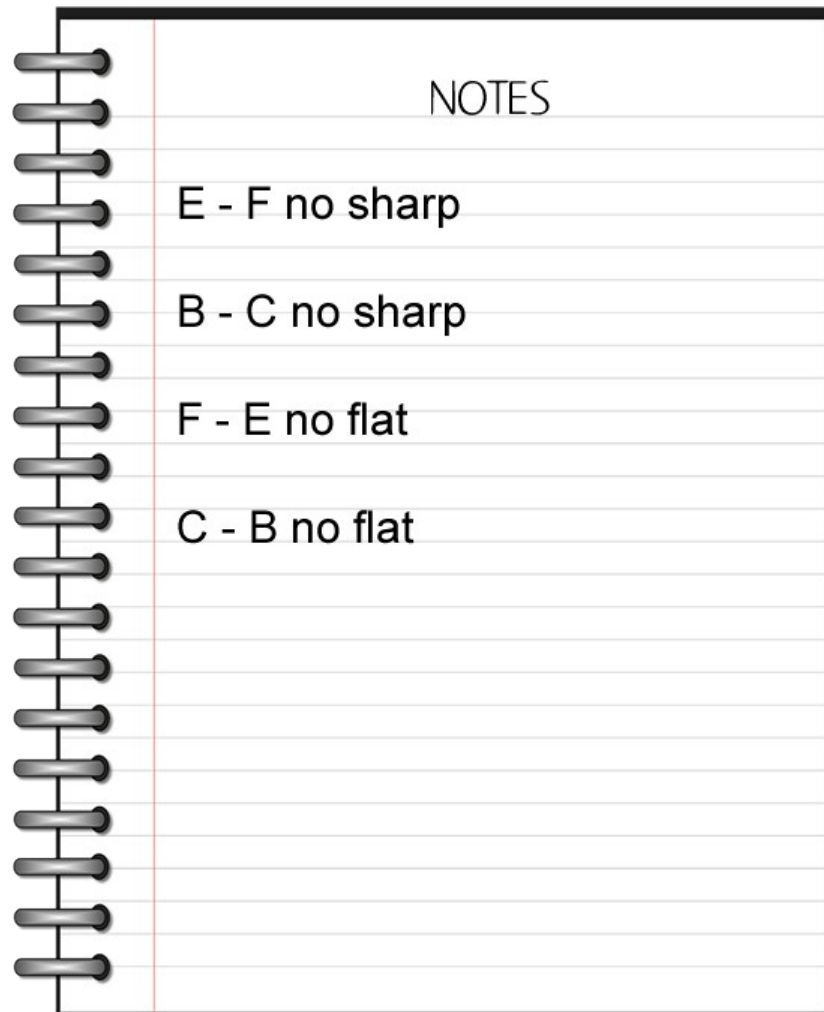
No room for a semitone between C – B



No room for a semitone between F – E



Write it in your notebook



Brain – Fingers – Ears

In the fretboard section I introduced you to a combination of three very, very important aspects of guitar playing. You must practice to develop them with each passing week.

Brain (to organise)

Fingers (to play)

Ears (to listen)

All three **must** develop at the same time for your progress to be well balanced.

The brain has to learn where the fingers need to be playing and what your ears are supposed to be listening to when each sound is played.

Scales are for all instruments and singers

Your progress as a guitar player depends on your knowledge of scales.

Scales provide a link to all the different aspects of music, whatever style of music you want to play: From Blues to Beethoven.

Scales are involved in:

Writing music, Recording music and Performing music.

Wherever music is played, or sung, scales are being used.

Remember it isn't luck that makes things happen it's hard work it's

Practice, Patience and Performance.

Listen as you play

In this, our first example of building a scale, please listen carefully to each sound when you play them on the guitar.

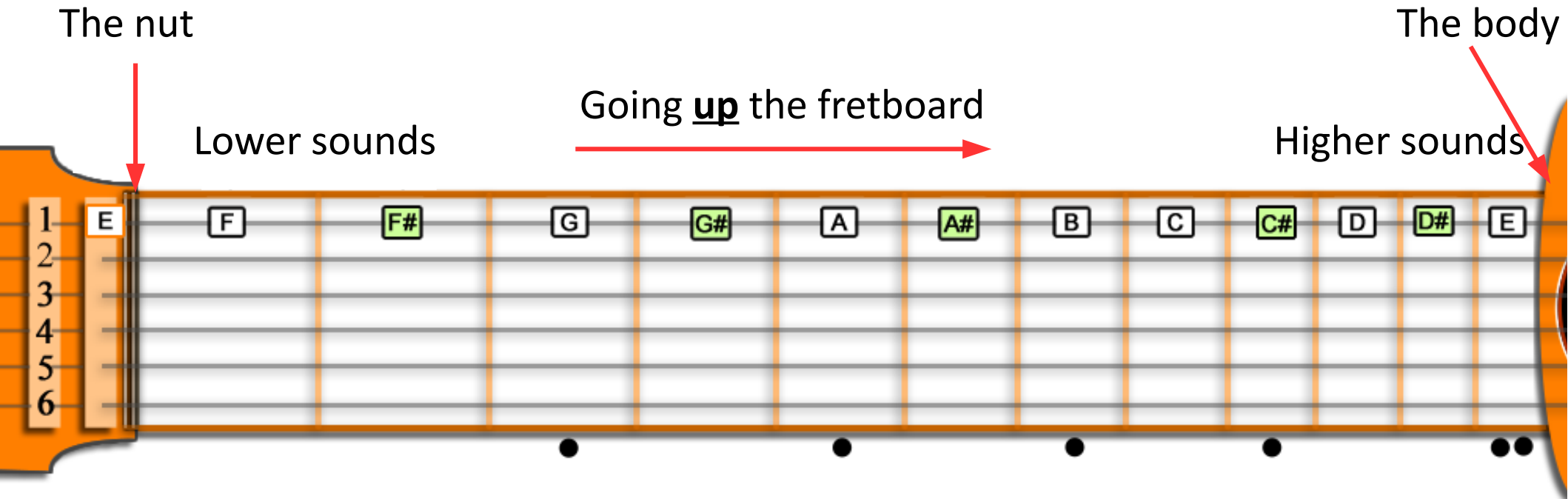
Sometimes it takes time for your ear to recognise the difference between sounds. If this is the case don't worry, eventually you will.

Your brain have a vast capacity to learn new things.

Semitones going up the fretboard

From the nut to the body of the guitar each sound goes higher, so we say the sounds are going up the fretboard.

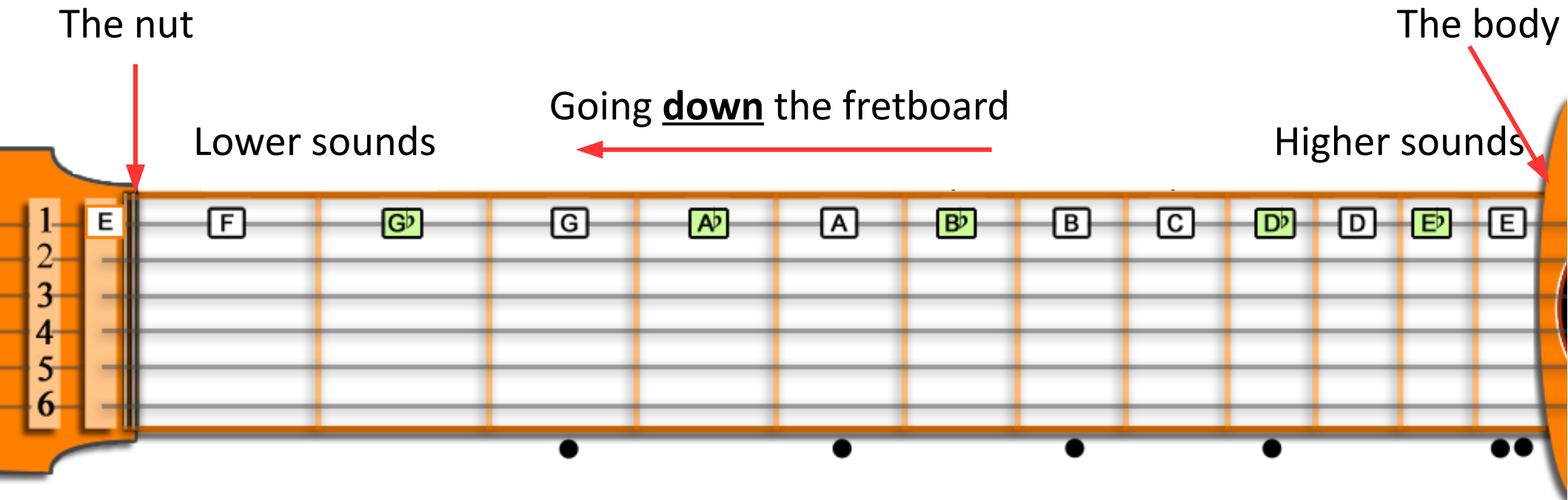
In the diagram below I have highlighted the sharps # in the green boxes.



Semitones going down the fretboard

From the body to the nut of the guitar each sound goes lower, so we say the sounds are going down the fretboard.

Please note. I have highlighted the flats \flat in the green boxes below.

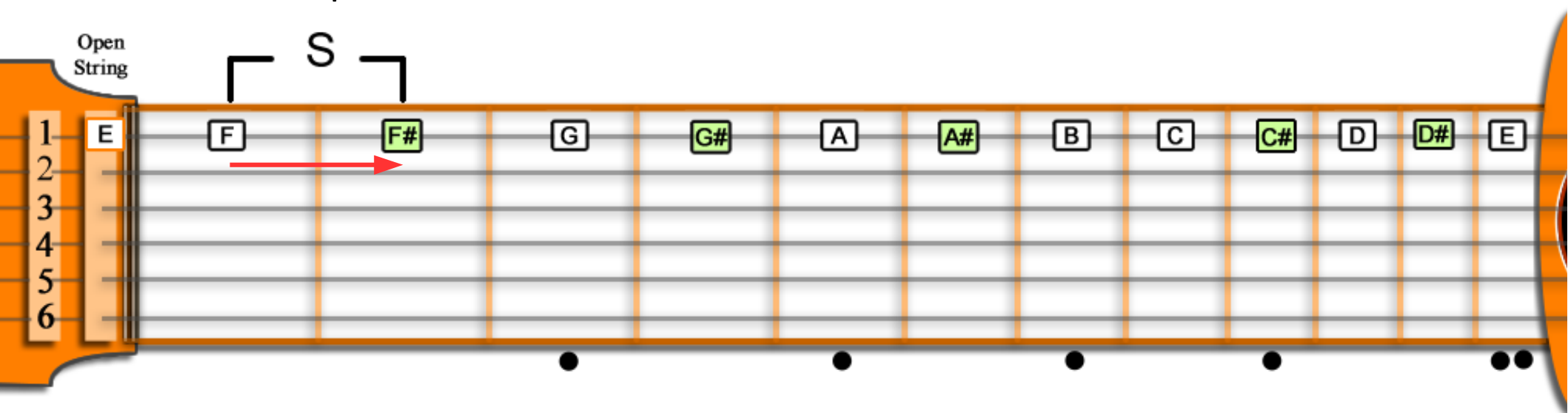


Semitone (S) Example: 1

As always, please listen carefully to the sounds as you play.

A note being played a semitone higher is going one fret up the fretboard.

For example F - F#

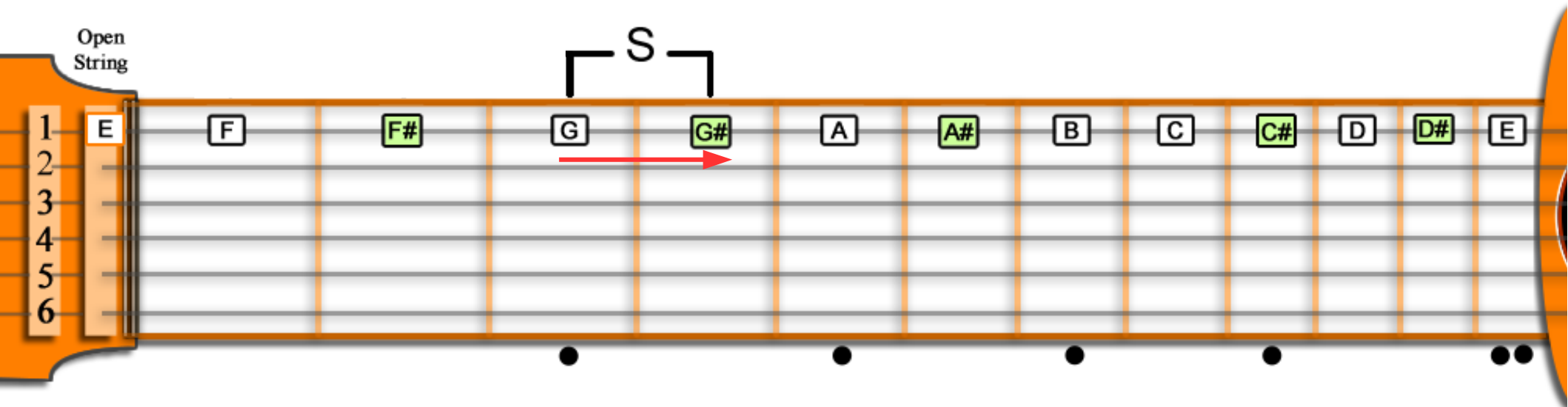


Semitone (S) Example: 2

Here is another example of a note (G) going up a semitone.

The G note being played a **semitone** higher to G#. It is going **one fret up** the fretboard. This will be the same on all strings.

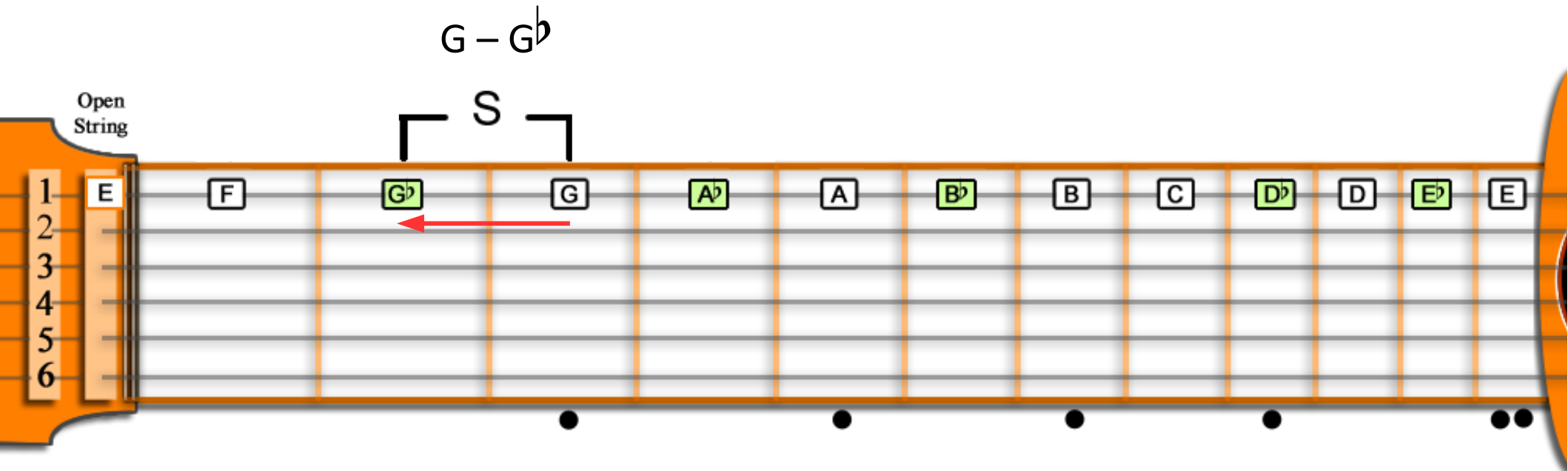
For example G – G#



Semitones going down the fretboard

Here, the G note is going down a semitone.

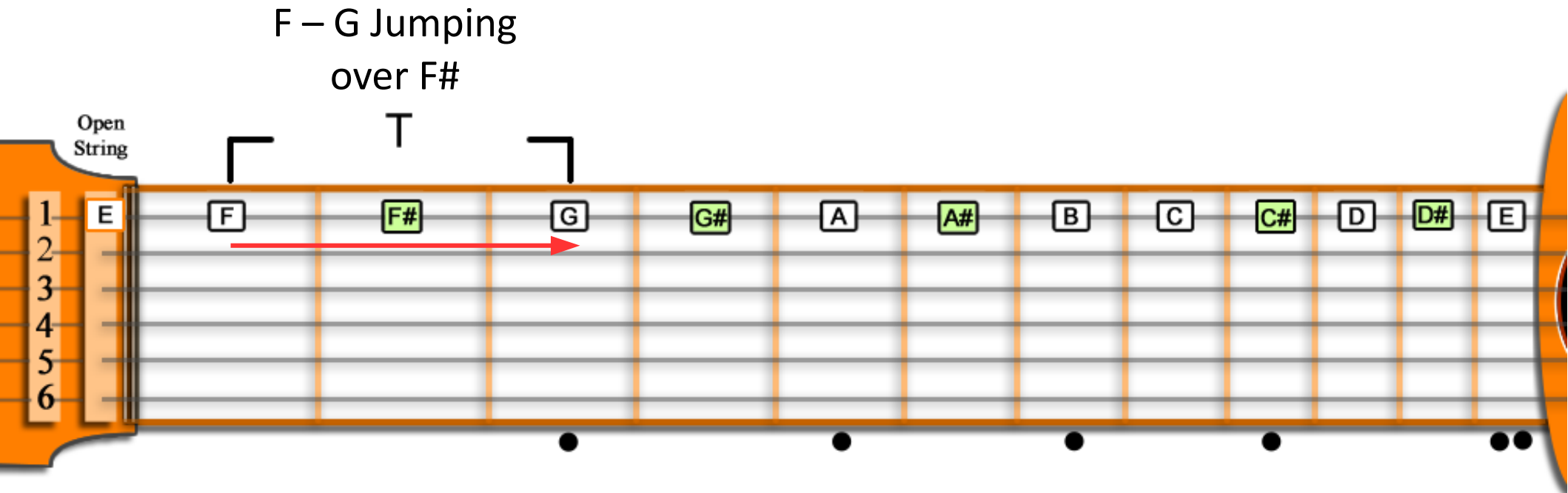
The G note shown below is being played one fret down the fretboard. A semitone lower than G is G \flat



Whole Tone (T) = Two semitones

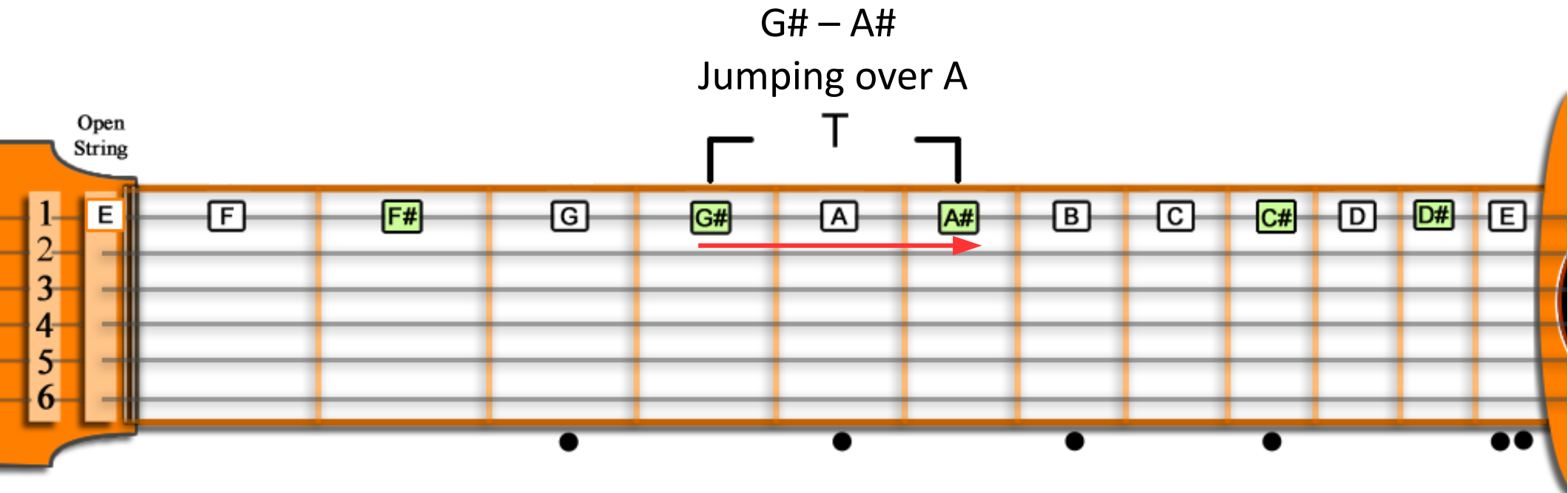
Here, a whole tone is going up the fretboard from F - G.

A **Whole tone** higher is **two frets up** the fretboard.



Another Whole Tone (T) example 2

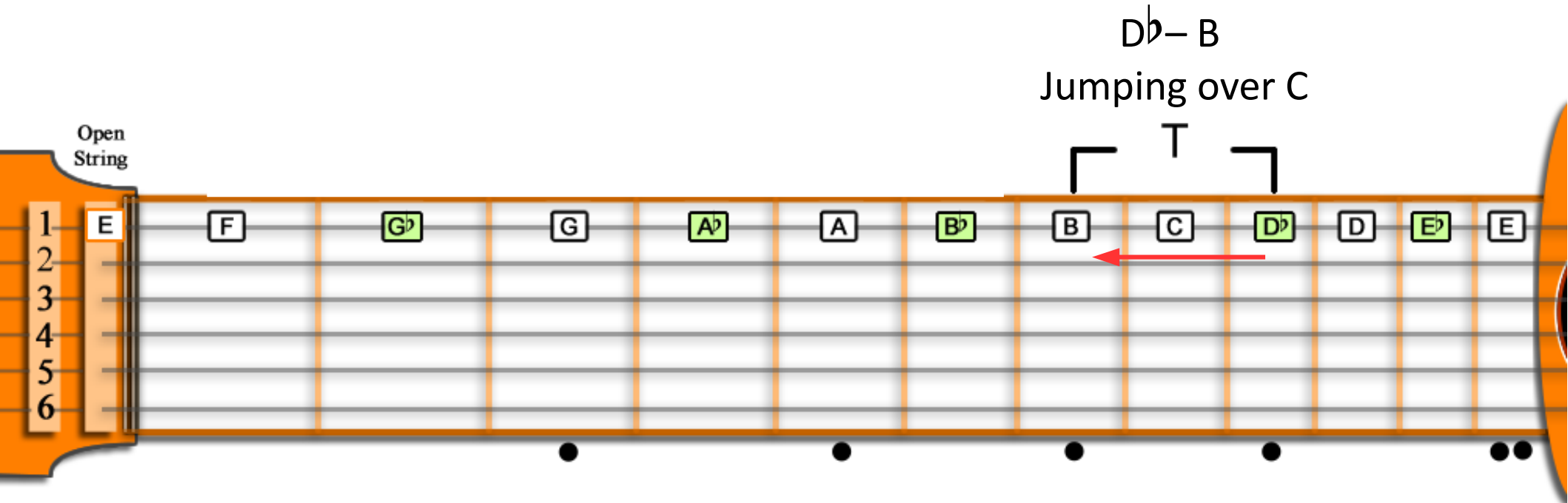
A note played a **Whole tone** higher is going **two frets up** the fretboard.



Whole tones going down the fretboard

A note played a **Whole tone** lower is going **two frets down** the fretboard.

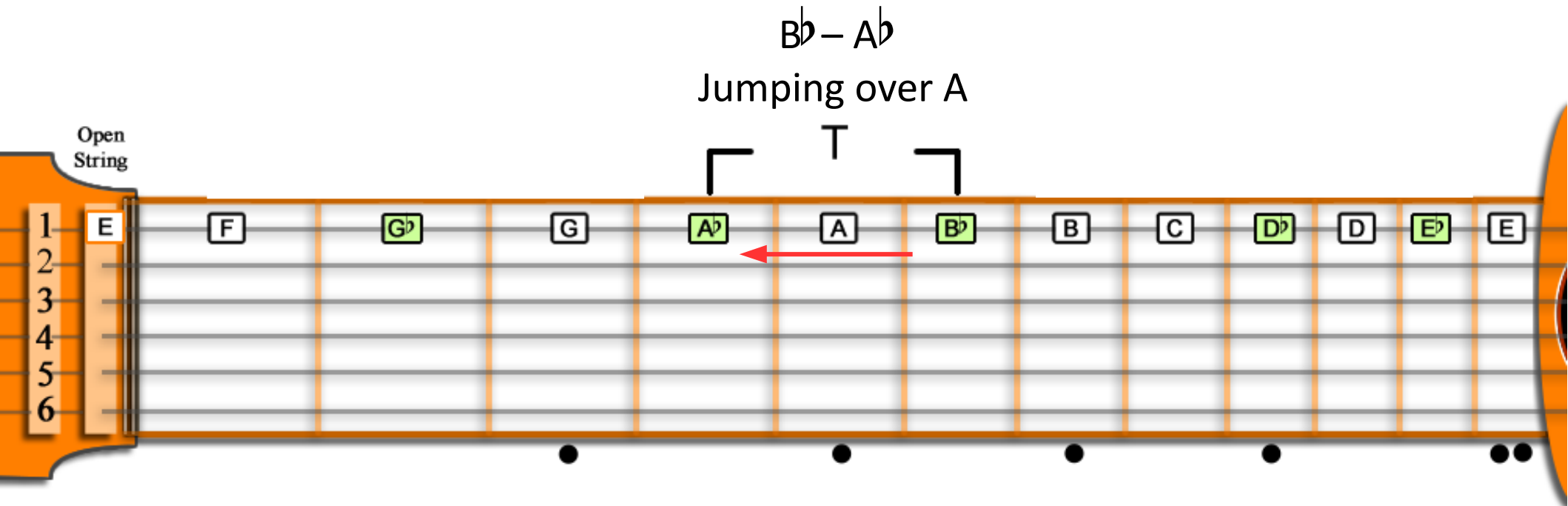
For example $D\flat - B$ (jumping over the C)



Whole tones going lower. Another example

A Whole tone lower is two frets down the fretboard.

In the example:



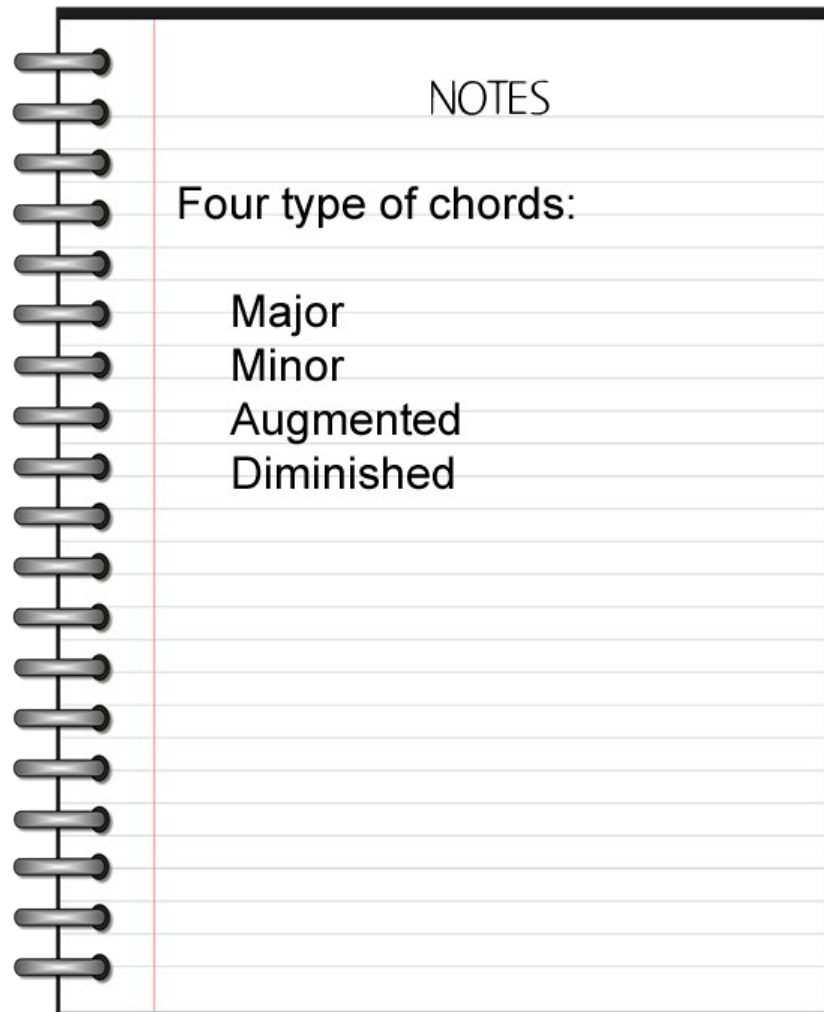
How many different types of scale?

There are four type of scales.

Major
Minor
Augmented
Diminished

We will begin by concentrating on creating a Major scale.

Write it in your notebook



Using a Piano Keyboard

[Introduction to Scales](#)

[Create the scale of E \(Major\)](#)

[Tones and Semitones](#)

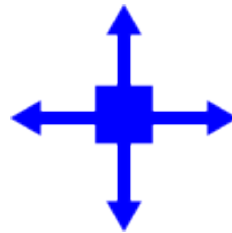
[Play the scale of E on the guitar](#)

[Using a piano keyboard](#)

[Creating scales with flats](#)

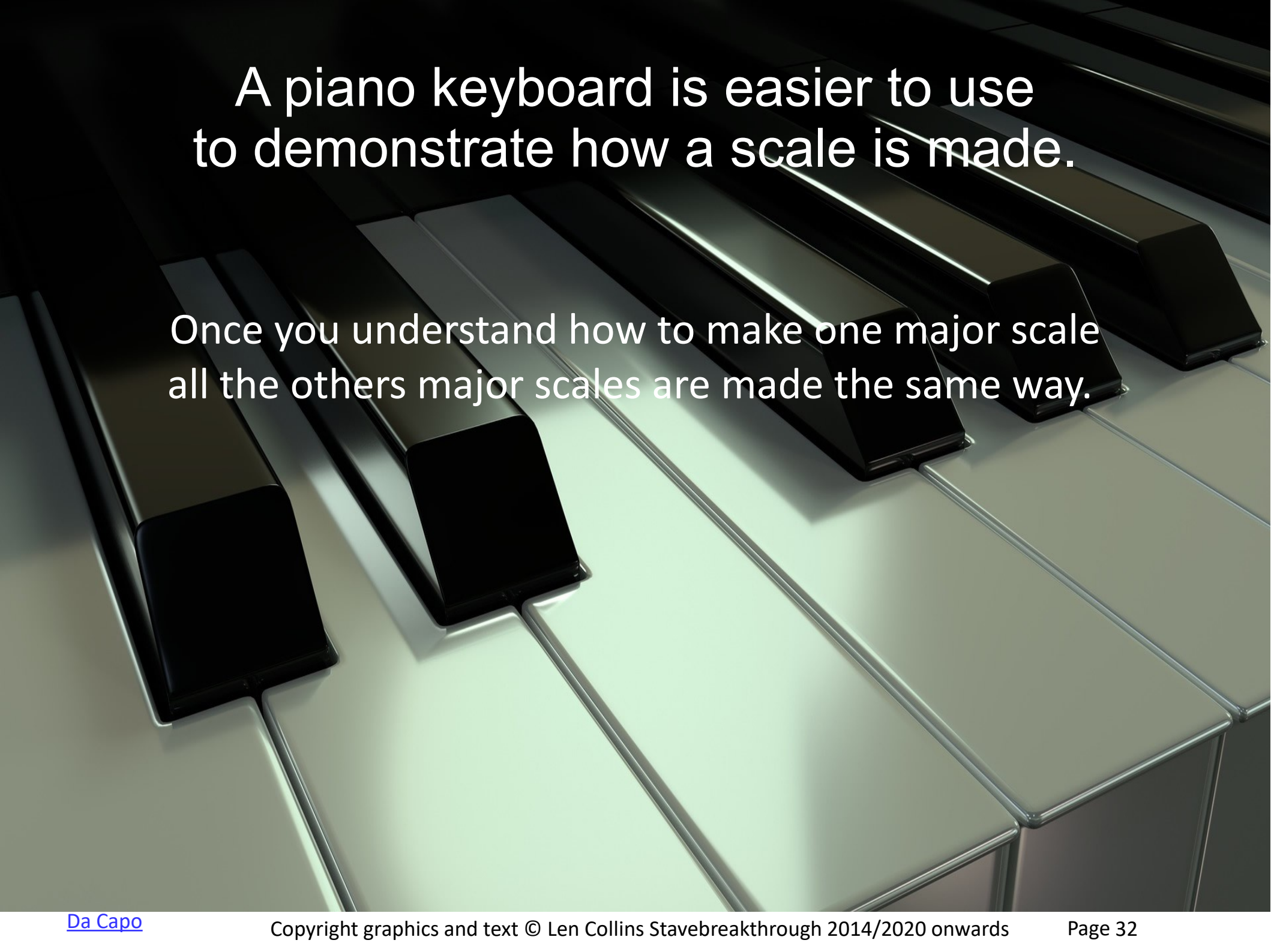
[Creating the scale of C \(Major\)](#)

[Other type of scales](#)



Navigate Pages

The Music Readers ToolboxTM



A piano keyboard is easier to use
to demonstrate how a scale is made.

Once you understand how to make one major scale
all the others major scales are made the same way.

Piano Keys

It was suggested I use piano keys to show how scales and intervals take shape. Alan was right.

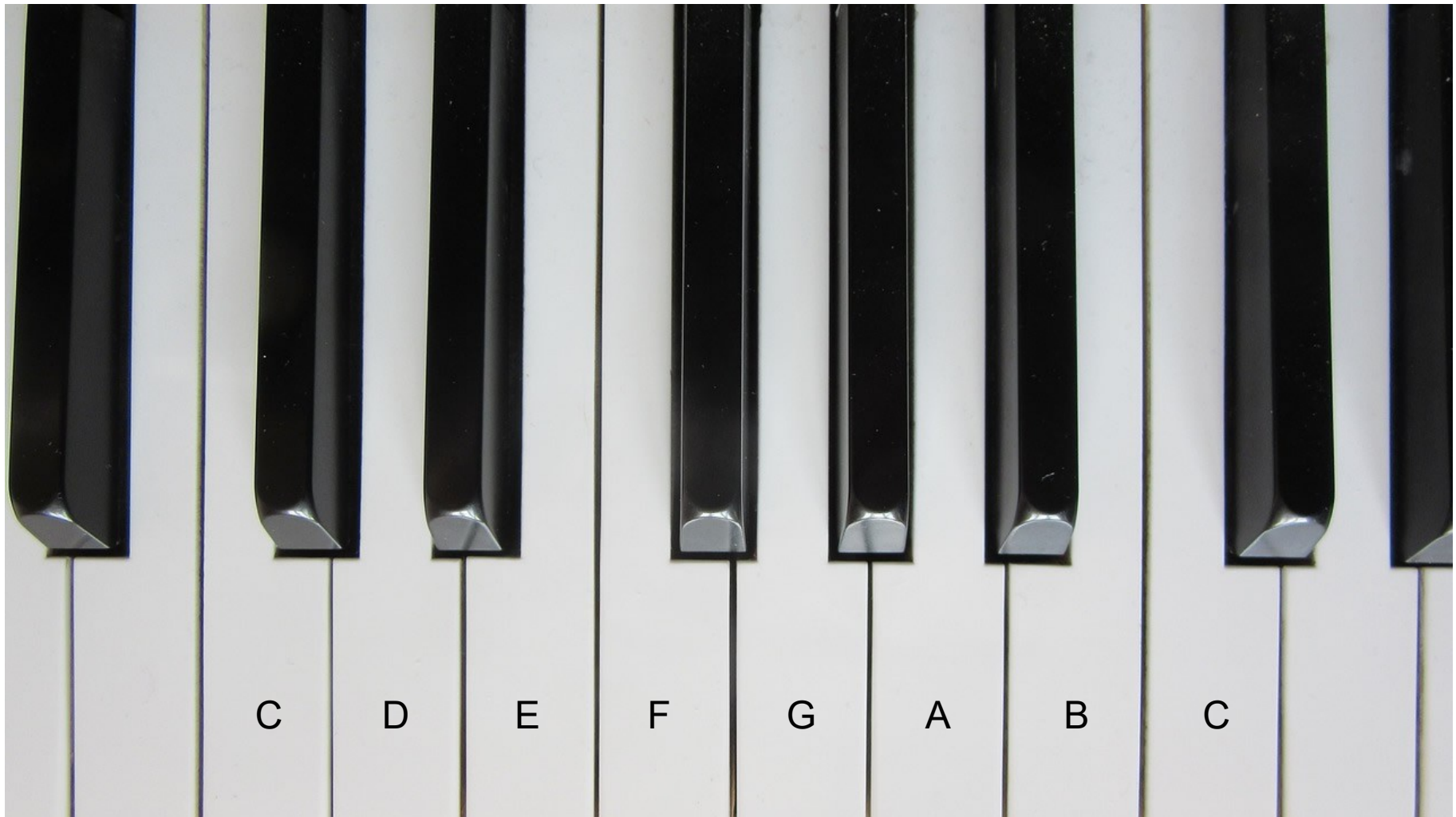
Read each page several times and work with a music teacher that can explain the many benefits a playing scales, not just for passing music exams but for composing, improvisation and building a platform your confidence can stand on.

Scales are for all instruments and all voices. They link everything together.

Take your time trying to understand this knowledge. You will soon be able to use it all in every aspect to your guitar playing.

These are the names of the white keys

Using a piano keyboard makes it easier to understand a scale.



About the black keys

On the next page we will be looking at the names of the notes played on the black keys of a piano.

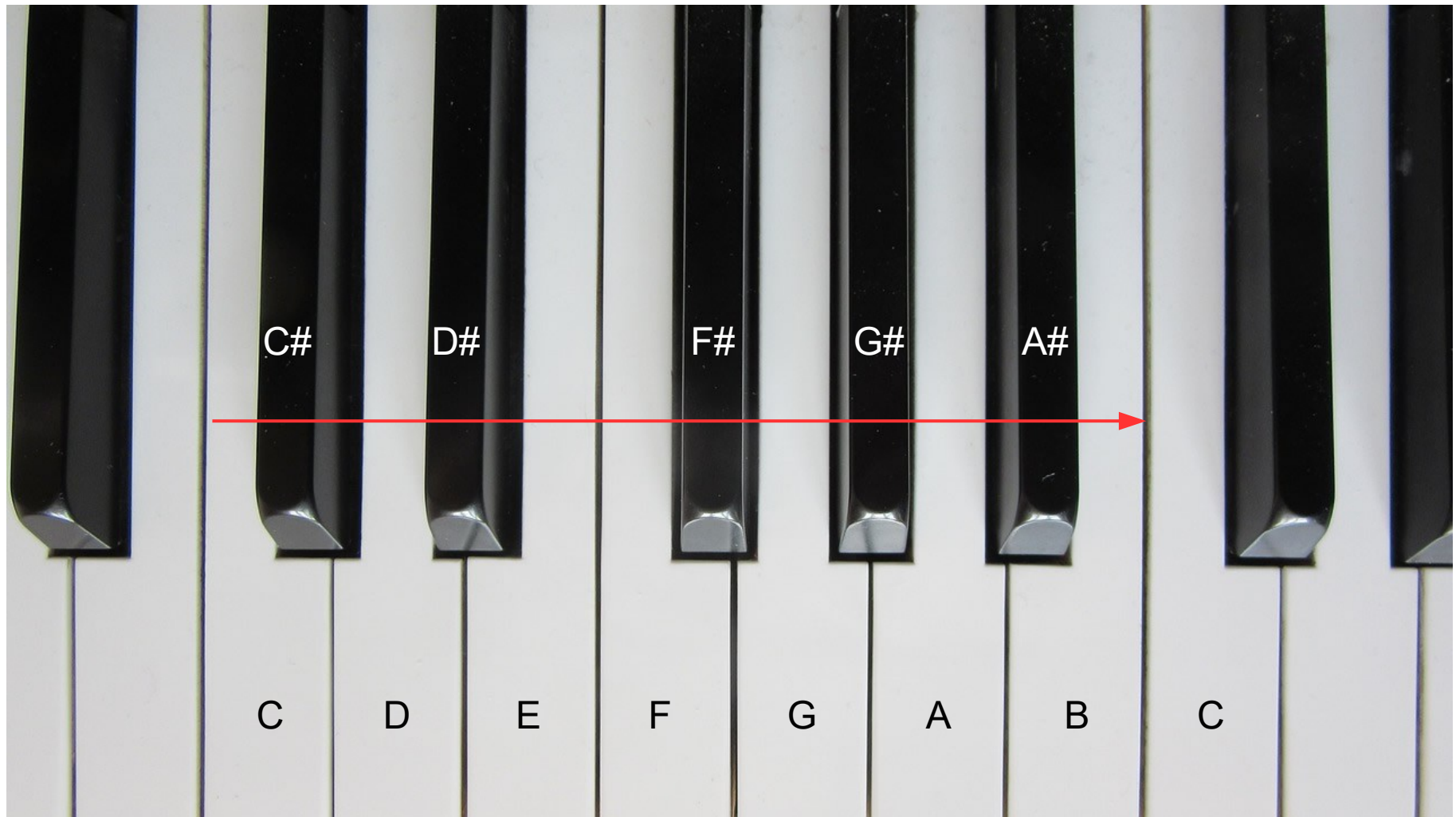
When calling out the names of the black keys **Never** say C# or D^b
It's either one or the other, not both.

When the sounds are going higher the semitones are called sharps.
When the sounds are going lower the semitones are called flats.

If you say C# or D^b it loses the meaning of the symbols.

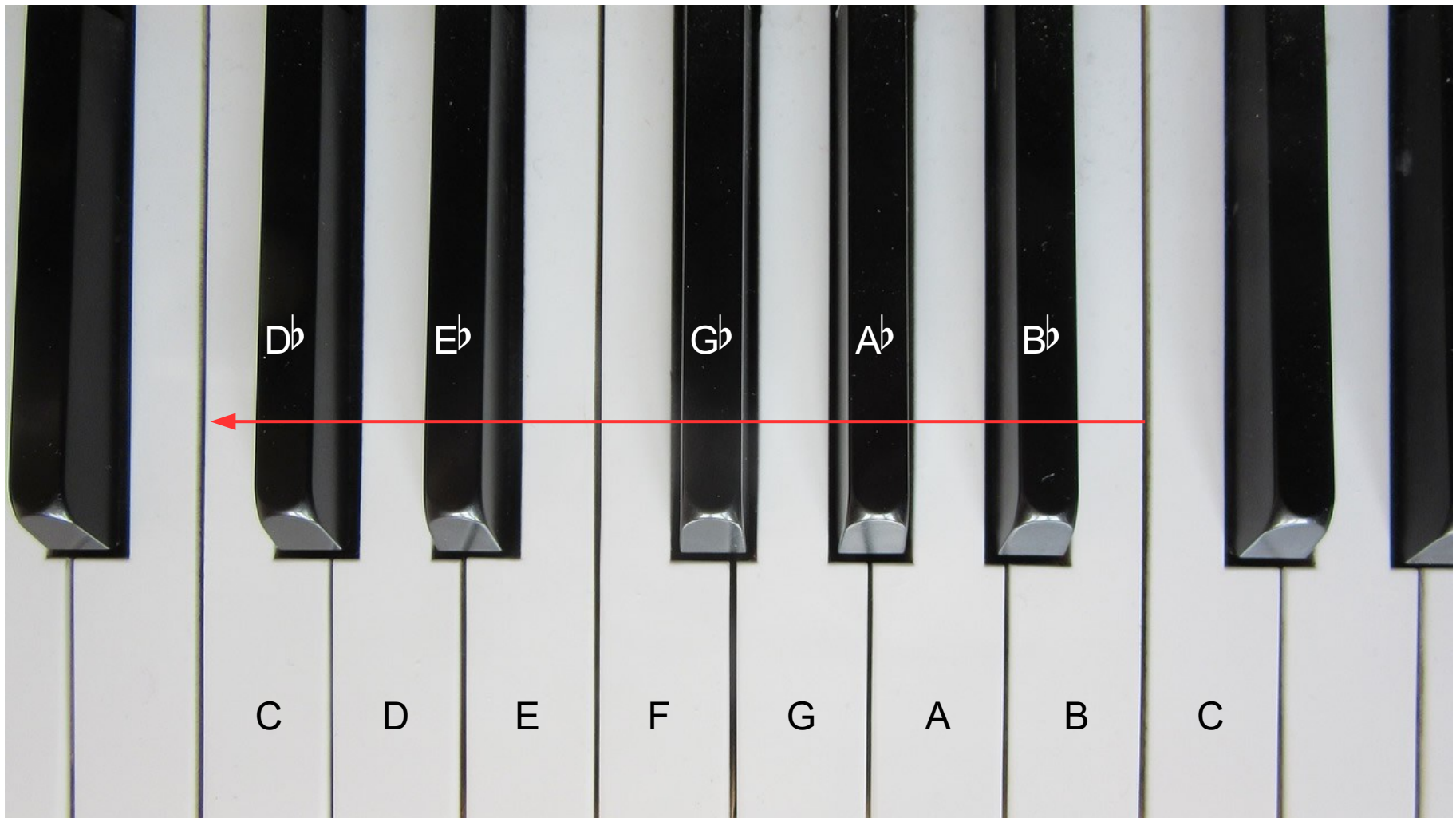
The names of the black keys - sharps

The name of the semitones going higher

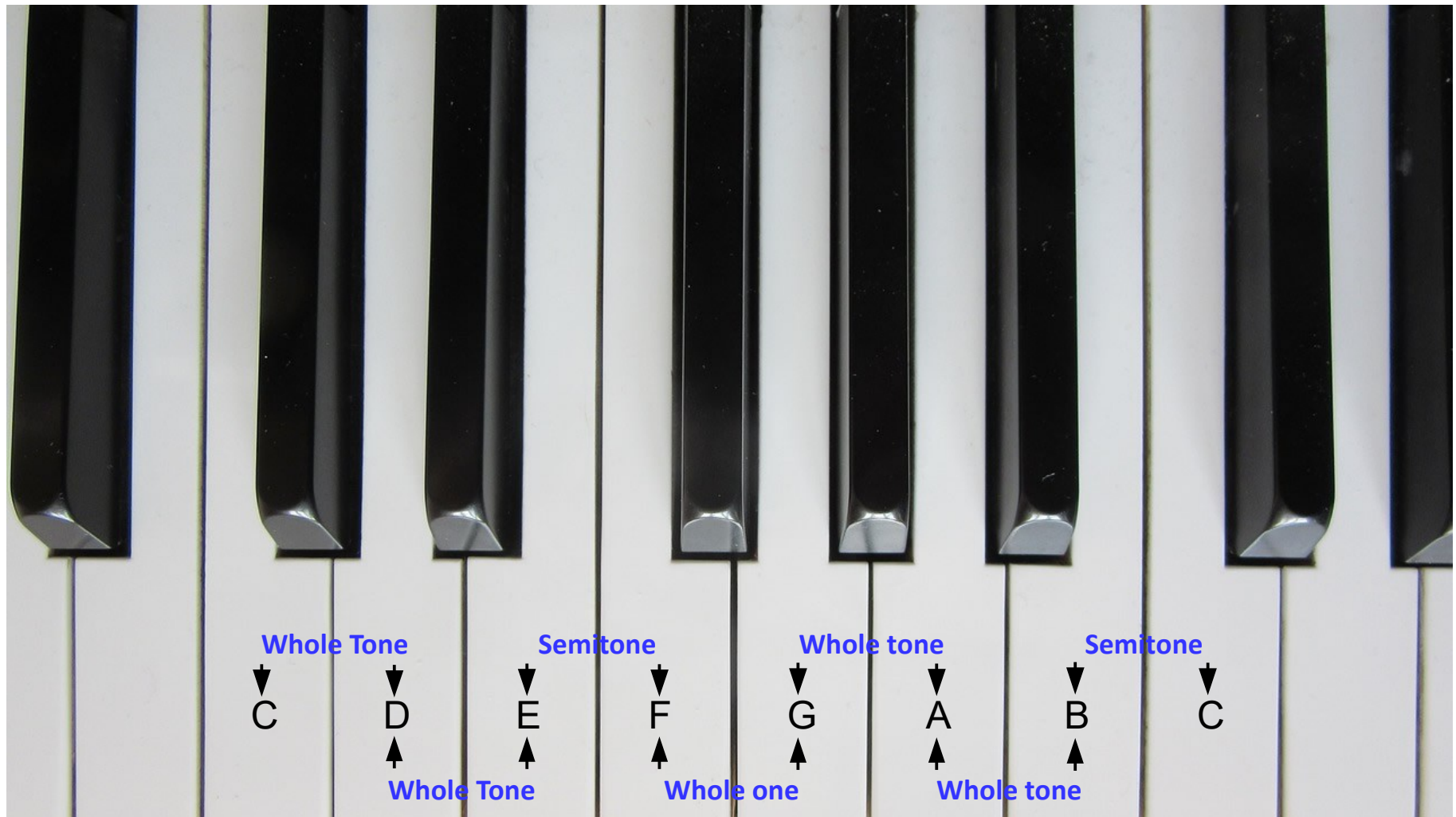


The names of the black keys - flats

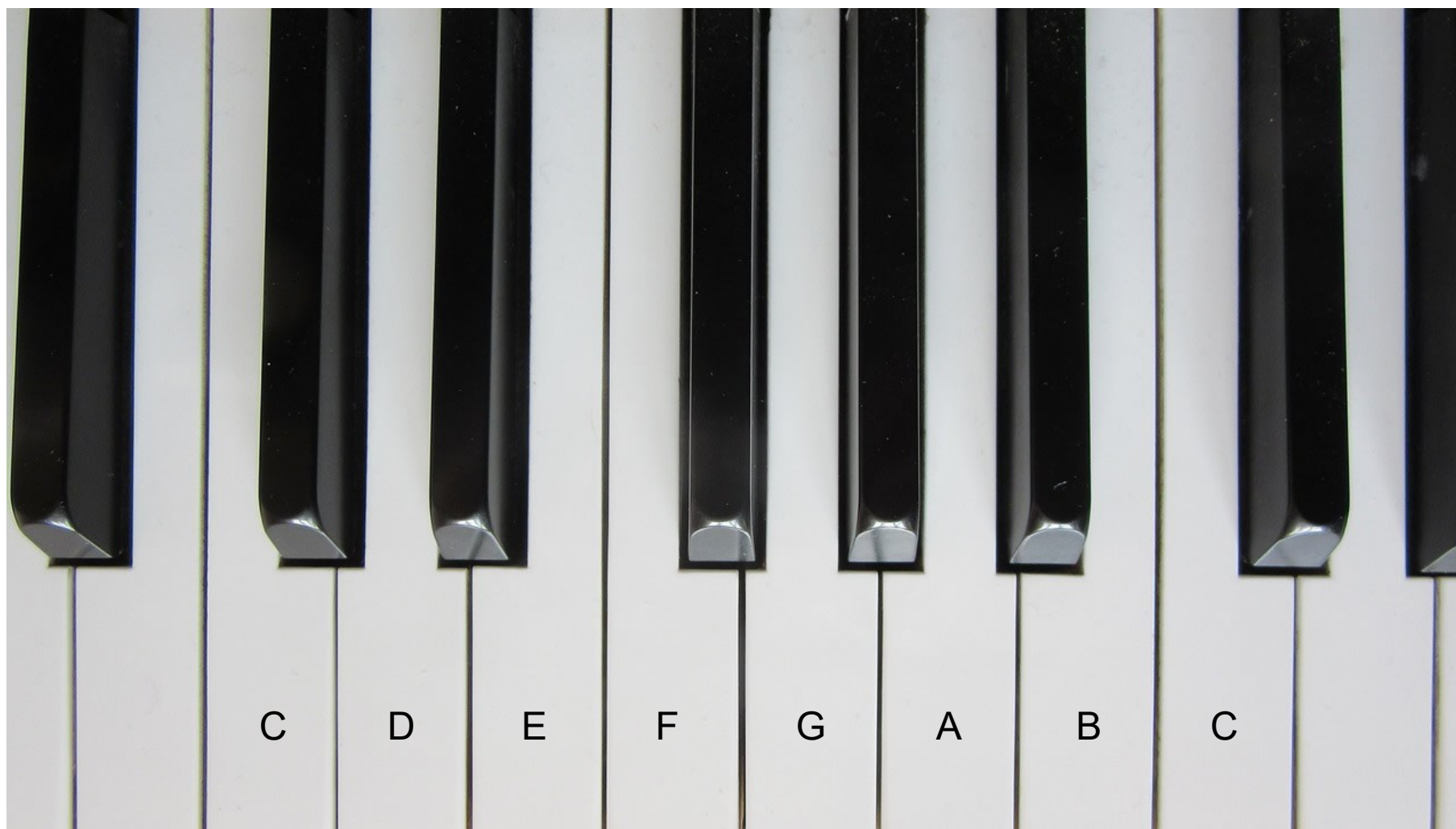
The name of the semitones going lower



Intervals between each white key

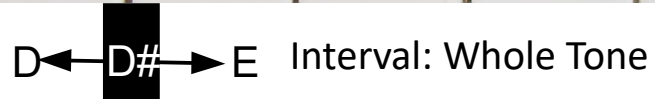
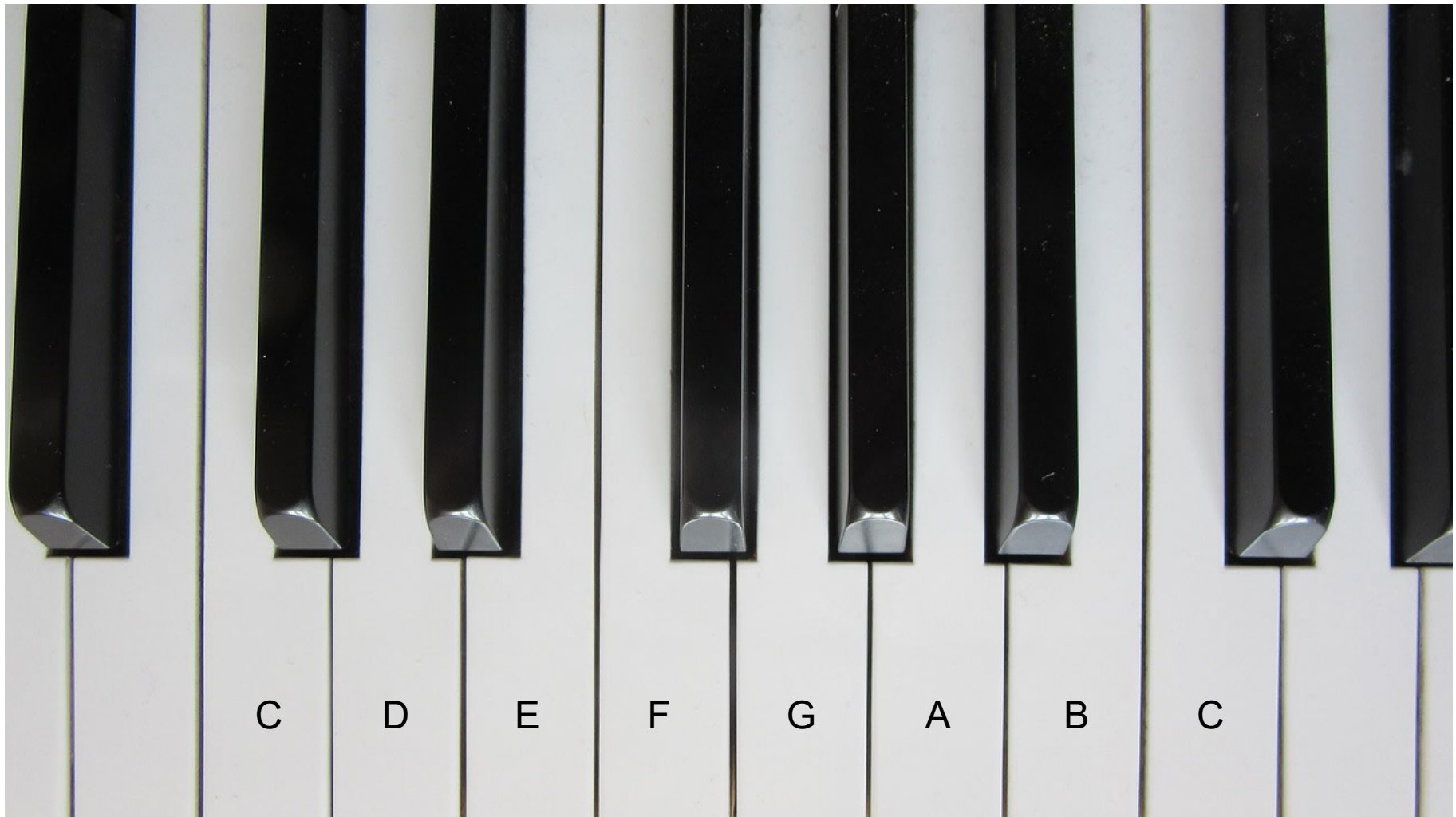


C – D: 2 semitones = 1 whole tone

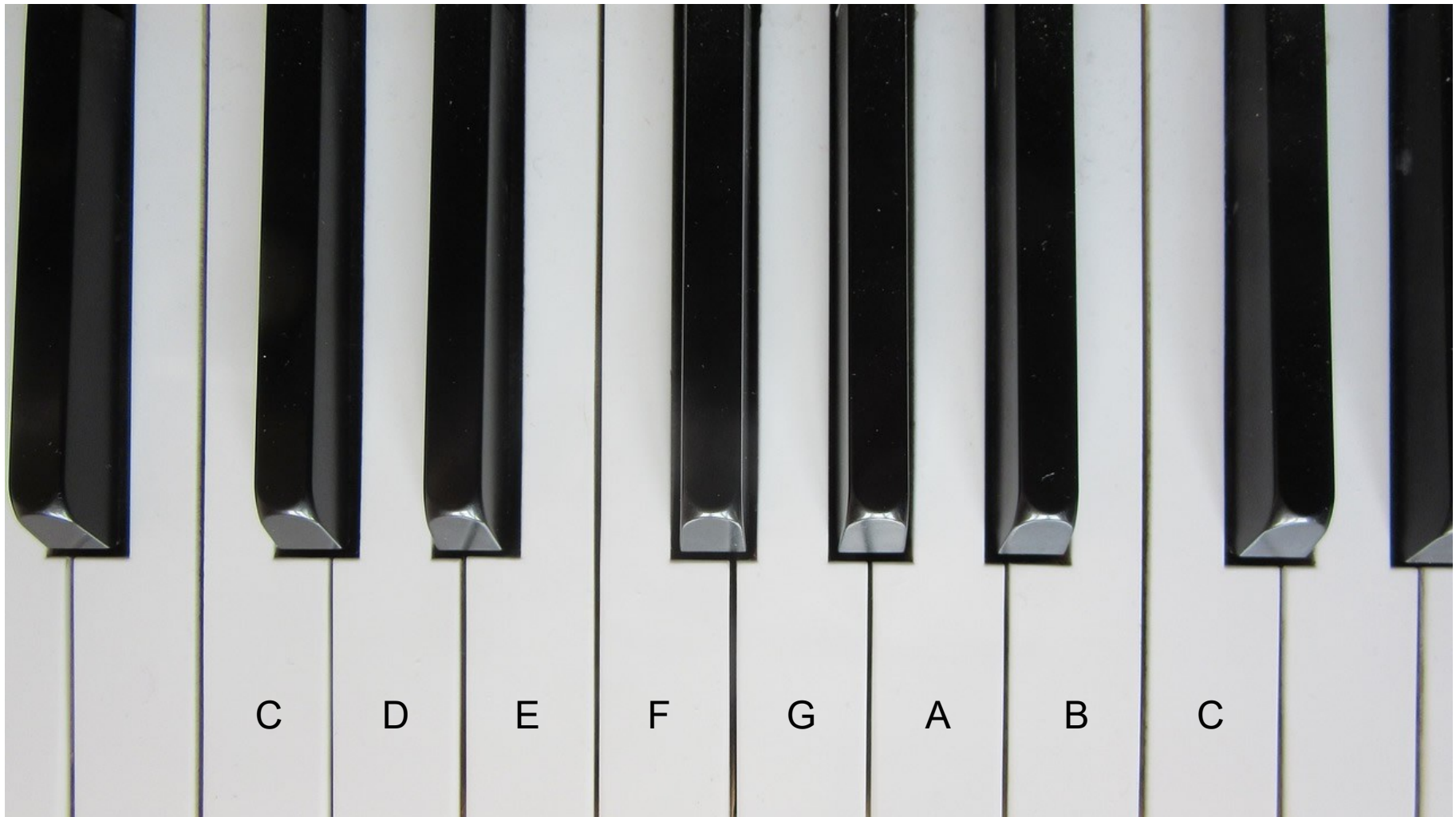


C ← C# → D Interval: Whole Tone

D – E: 2 semitones = 1 whole tone

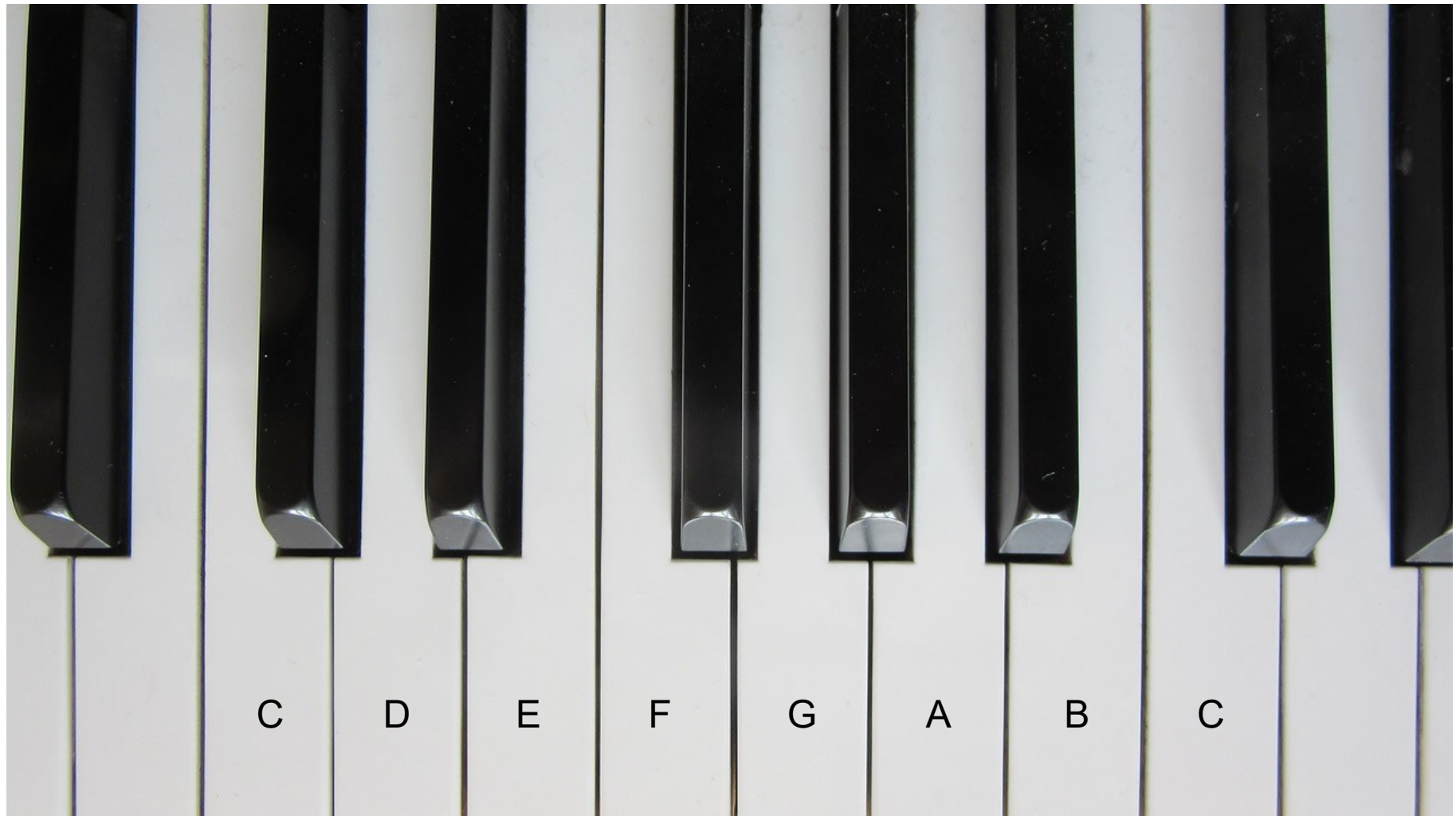


E – F: 1 Semitone



E ← → F Interval: Semitone

F – G: 2 semitones = 1 whole tone

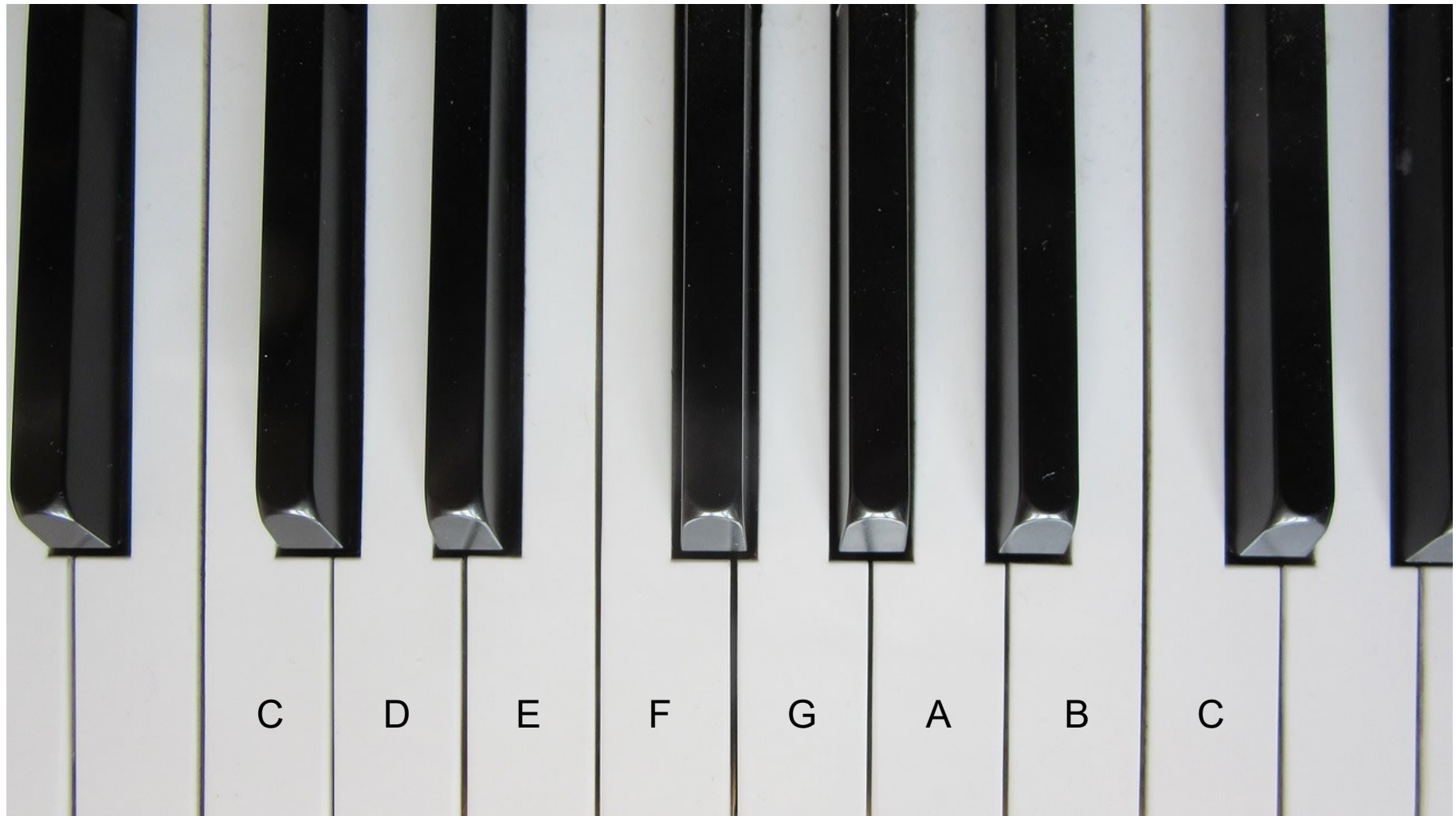


F ← F# → G Interval: Whole Tone

Back

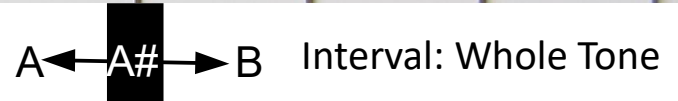
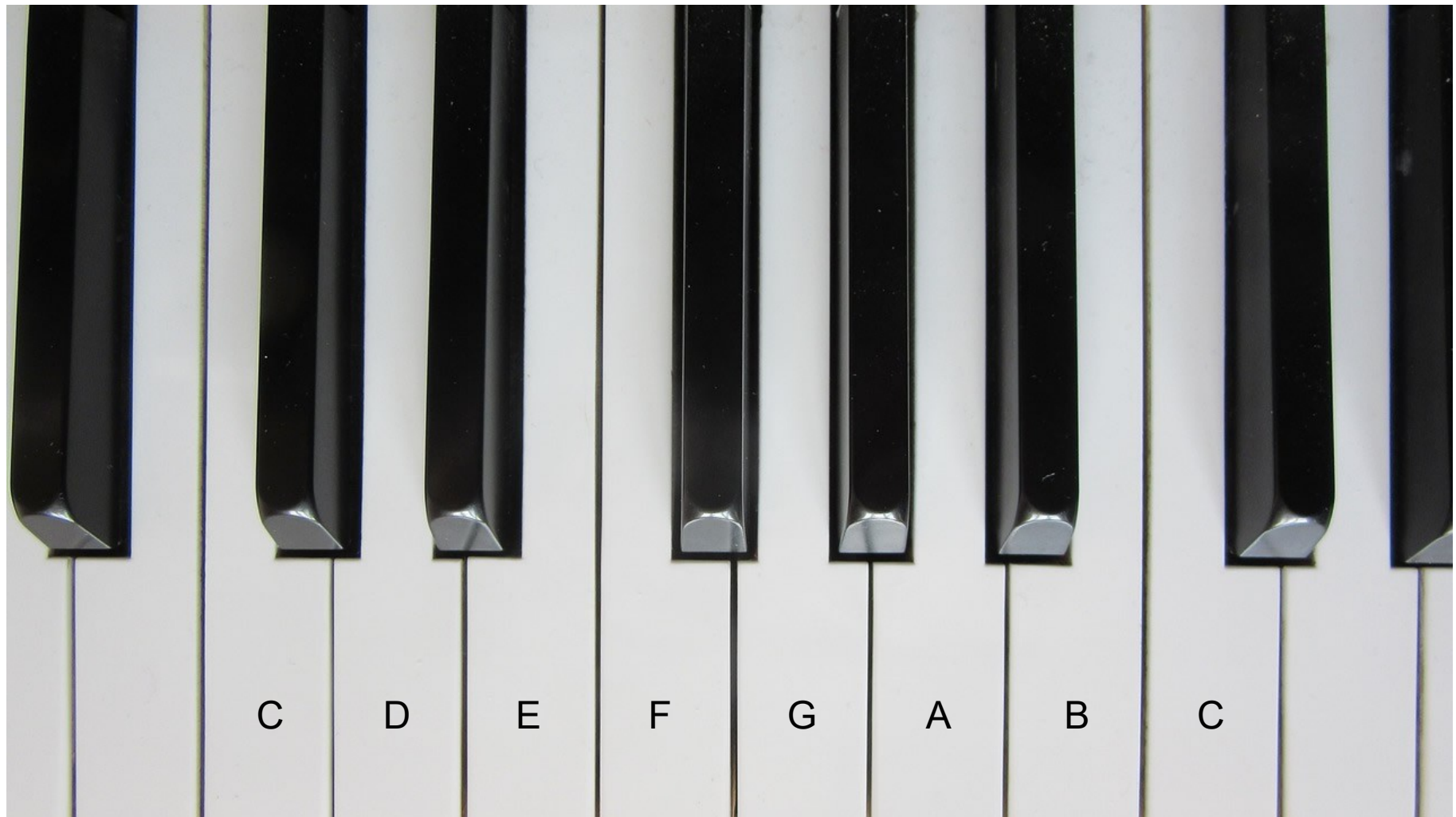
[Da Capo](#)

G – A: 2 semitones = 1 whole tone

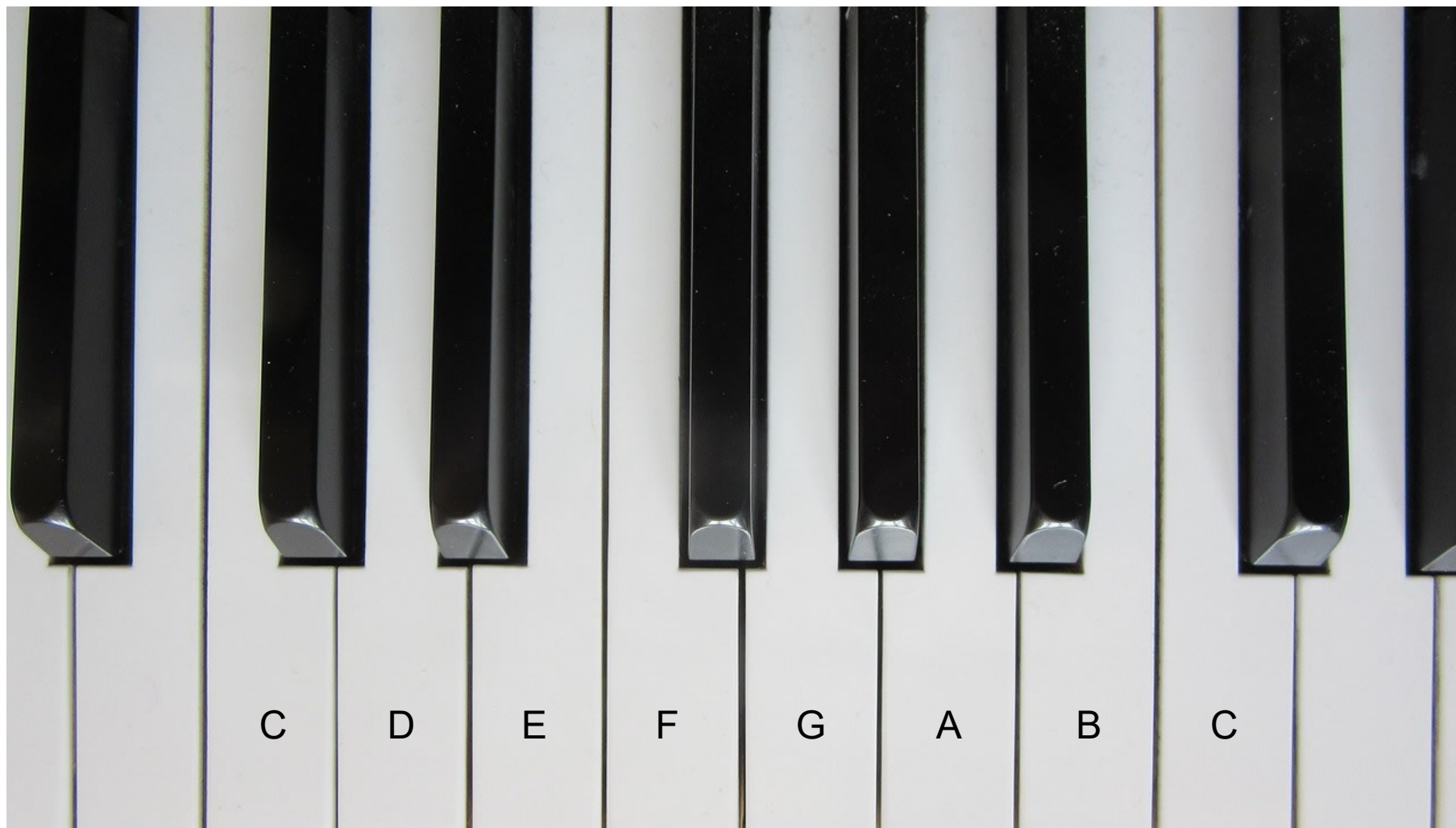


G ← G# → A Interval: Whole Tone

A – B: 2 semitones = 1 whole tone



B – C: 1 Semitone



B ←→ C Interval: Semitone

Intervals

Scales are worked out by the distance between notes.

The distance between two notes is called an **interval**.

With this knowledge we can create a scale.

We will now create the scale of C.

As I take you through the various stages of making scales look at the smaller picture to focus on the present and the bigger picture to look towards the future.

Creating the Scale of C (major)

[Introduction to Scales](#)

[Create the scale of E \(Major\)](#)

[Tones and Semitones](#)

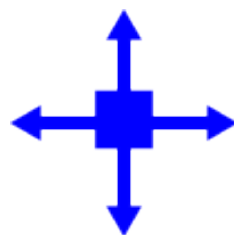
[Play the scale of E on the guitar](#)

[Using a piano keyboard](#)

[Creating scales with flats](#)

[Creating the scale of C \(Major\)](#)

[Other type of scales](#)

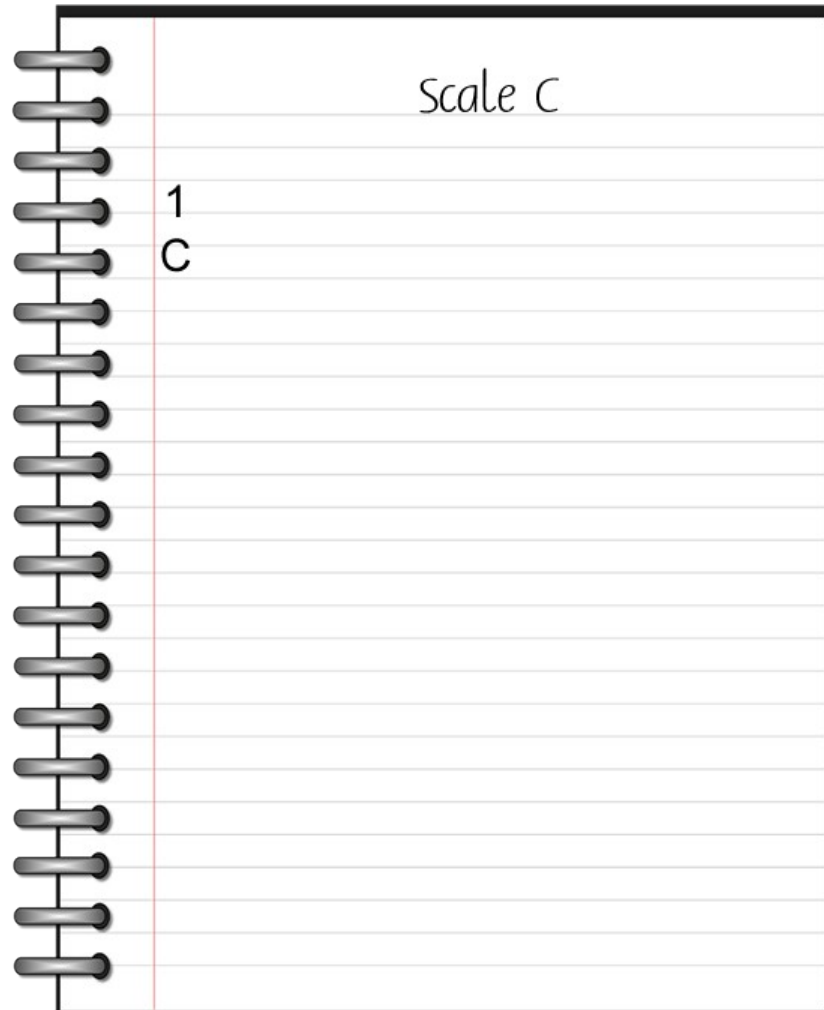


Navigate Pages

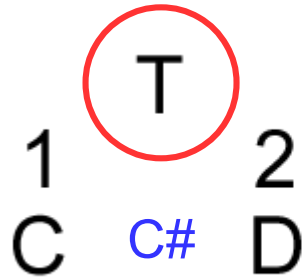
The Music Readers ToolboxTM

Working out the scale of C (Major)

Write C and place number 1 above it.



Up the ladder from the 1st to the 2nd note



All major scales - the step between 1 and 2 is a whole tone higher.

In the scale of C the next note is D

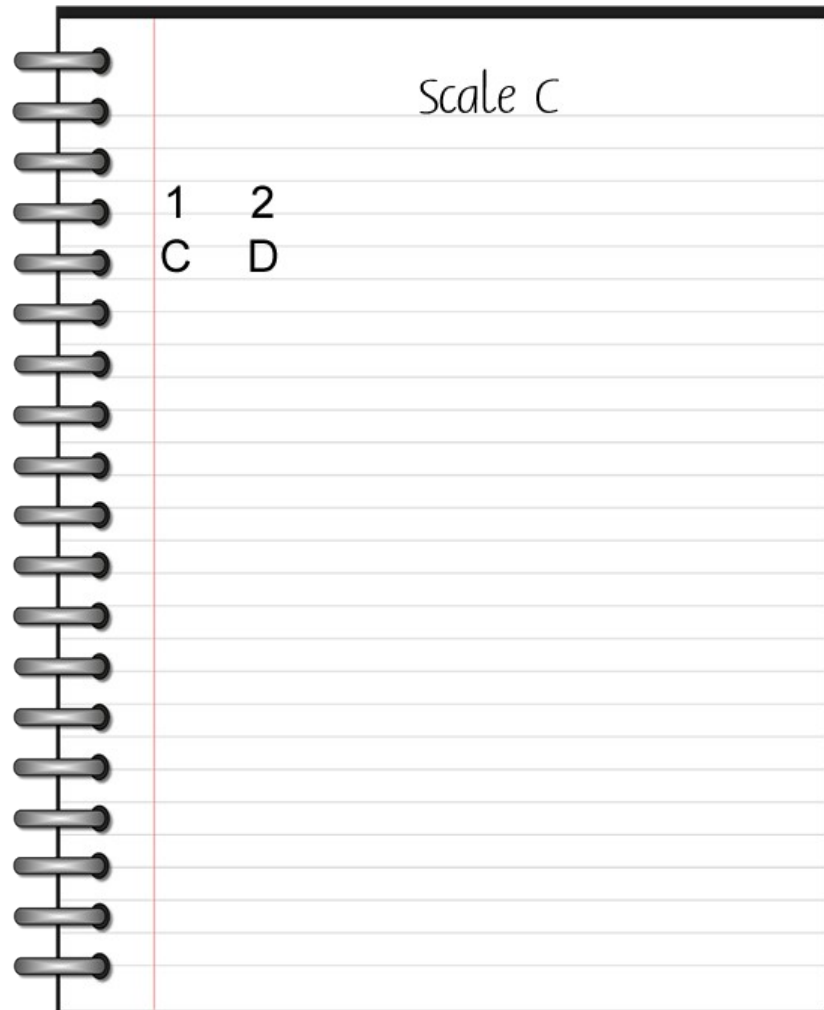
C to C# is a semitone

C# to D is a semitone

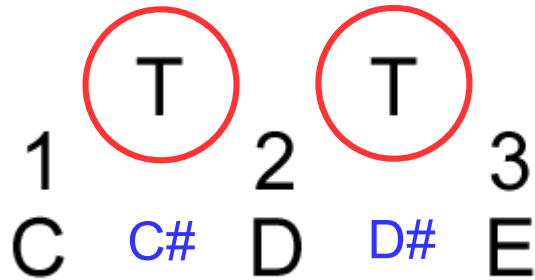
Between C – D the interval is a whole tone (T)

Working out the scale of C (Major) - 2nd Note

Write D and place number 2 above it.



Up the ladder from the 2nd to the 3rd note



All major scales - the step between 2 and 3 is a whole tone higher.

In the scale of C the next note is E.

D to D# is a semitone

D# to E is a semitone

Between D – E the interval is a whole tone (T)

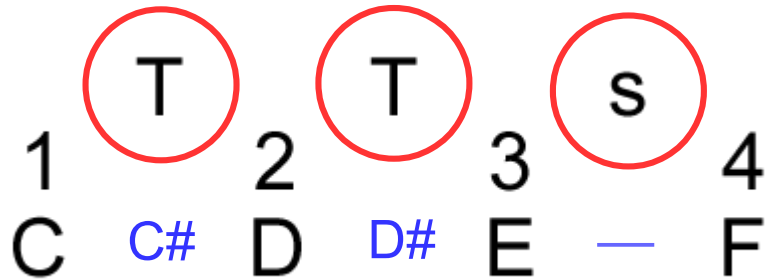
Working out the scale of C (Major) - 3rd Note

Write E and place number 3 above it.

Scale C

1	2	3
C	D	E

Up the ladder from the 3rd to the 4th note



All major scales - the step between 3 and 4 is a semitone higher.

In the scale of C the next note is F.

E to F is a semitone

Between E – F the interval is a semitone (S)

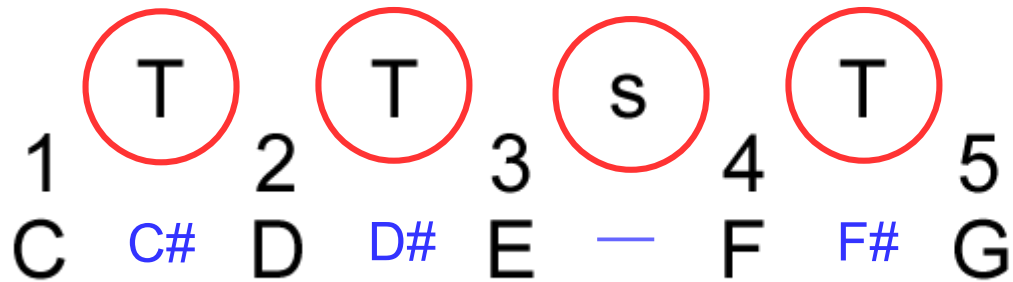
Working out the scale of C (Major) - 4th Note

Write F and place number 4 above it.

Scale C

1	2	3	4
C	D	E	F

Up the ladder from the 4th to the 5th note



All major scales - the step between 4 and 5 is a whole tone higher.

In the scale of C the next note is G.

F to F# is a semitone

F# to G is a semitone

Between F – G the interval is a whole tone (T)

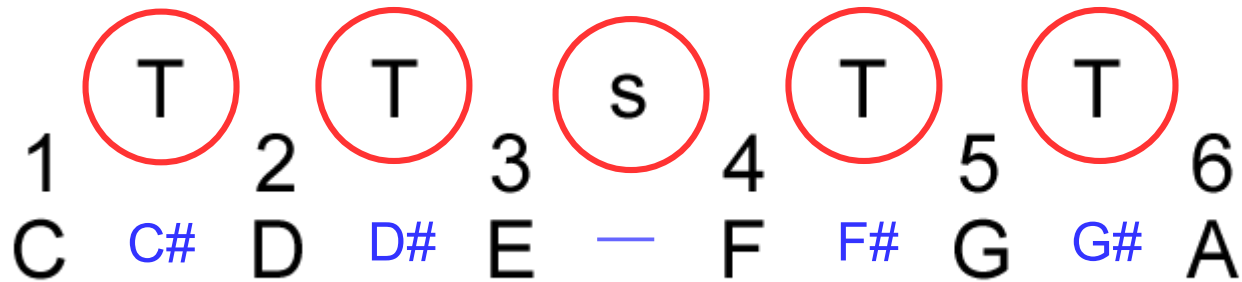
Working out the scale of C (Major) - 5th Note

Write G and place number 5 above it.

Scale C

1	2	3	4	5
C	D	E	F	G

Up the ladder from the 5th to the 6th note



All major scales - the step between 5 and 6 is a whole tone higher.

In the scale of C the next note is A.

G to G# is a semitone

G# to A is a semitone

Between G – A the interval is a whole tone (T)

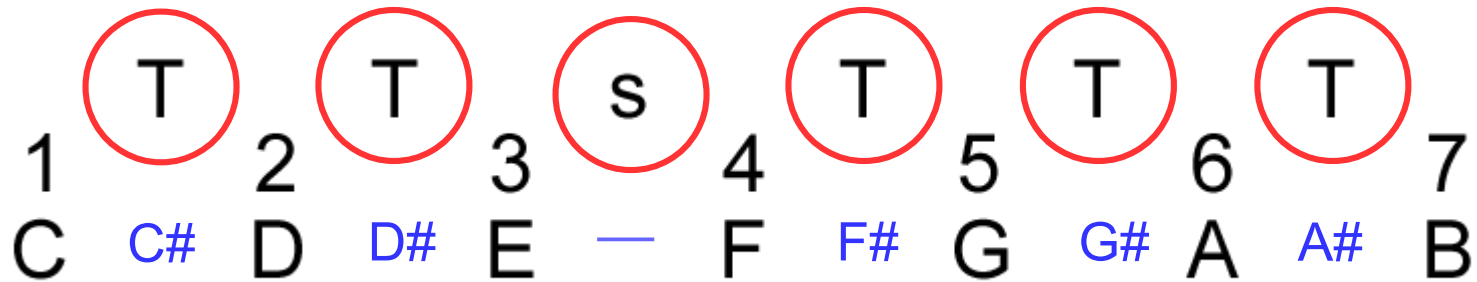
Working out the scale of C (Major) - 6th Note

Write A and place number 6 above it.

Scale C

1	2	3	4	5	6
C	D	E	F	G	A

Up the ladder from the 6th to the 7th note



All major scales - the step between 6 and 7 is a whole tone higher.

In the scale of C the next note is B.

A to A# is a semitone

A# to B is a semitone

Between A – B the interval is a whole tone (T)

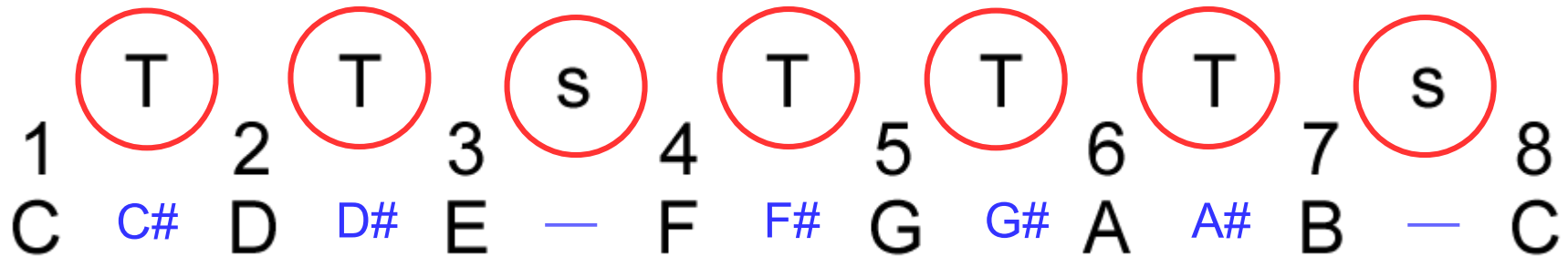
Working out the scale of C (Major) - 7th Note

Write B and place number 7 above it.

Scale C

1	2	3	4	5	6	7
C	D	E	F	G	A	B

Up the ladder from the 7th to the 8th note



All major scales - the step between 7 and 8 is a semitone higher.

In the scale of C the last note is C.

B to C is a semitone

Between B – C the interval is a semitone (S)

Working out the scale of C (Major) - 8th Note

Write C and place number 8 above it.

Scale C

1	2	3	4	5	6	7	8
C	D	E	F	G	A	B	C

Creating the Scale of E (major)

[Introduction to Scales](#)

[Create the scale of E \(Major\)](#)

[Tones and Semitones](#)

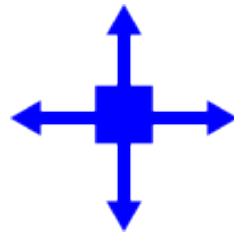
[Play the scale of E on the guitar](#)

[Using a piano keyboard](#)

[Creating scales with flats](#)

[Creating the scale of C \(Major\)](#)

[Other type of scales](#)



Navigate Pages

The Music Readers ToolboxTM

Create a scale to play

It's time to put away the piano keyboard and play a scale on the guitar fretboard.

To do this I want to create the scale of E. This scale is easy to find on the first string of the guitar. This is the reason why you had to learn the names of the notes on the fretboard. All the stages in my method for teaching guitar are all linked. They all link to the fretboard.

The tones and semitones we used to build the C scale are used again for the scale of E.

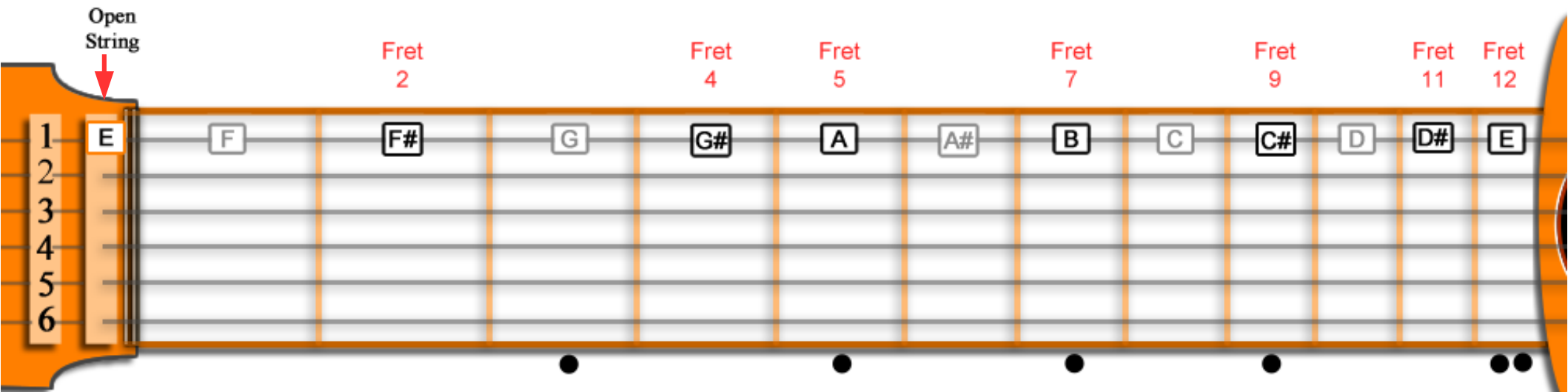
Play each note cleanly with your plectrum. Remember there isn't any hurry – take your time.

Building the scale of E (Major) – step 1

Play the E open on the first string.

1 T 2 T 3 S 4 T 5 T 6 T 7 S 8

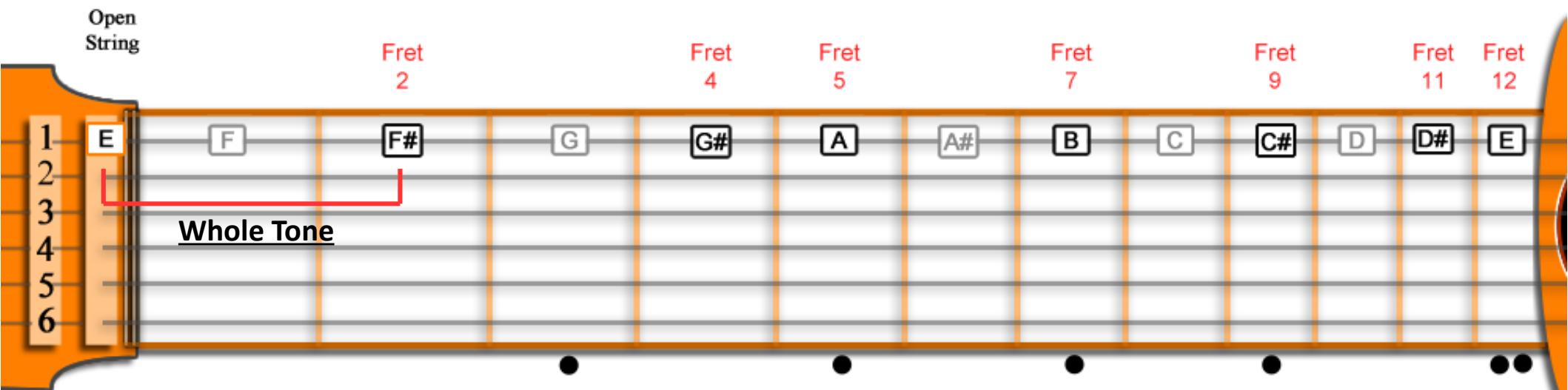
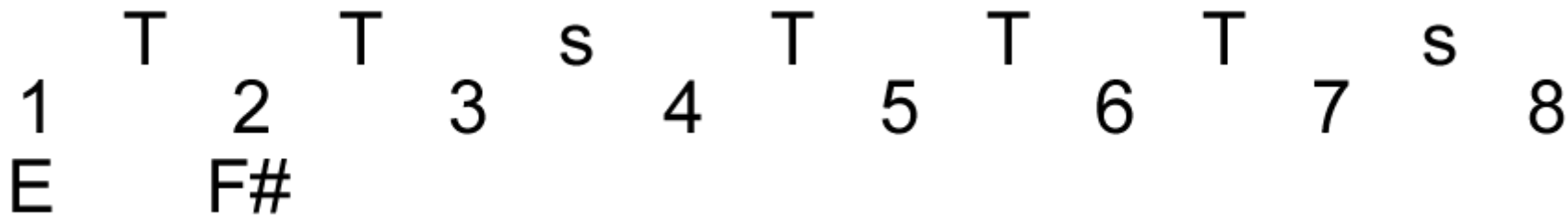
E



Building the scale of E (Major) – step 2

The interval between 1 and 2 of a major scale is a Whole Tone.

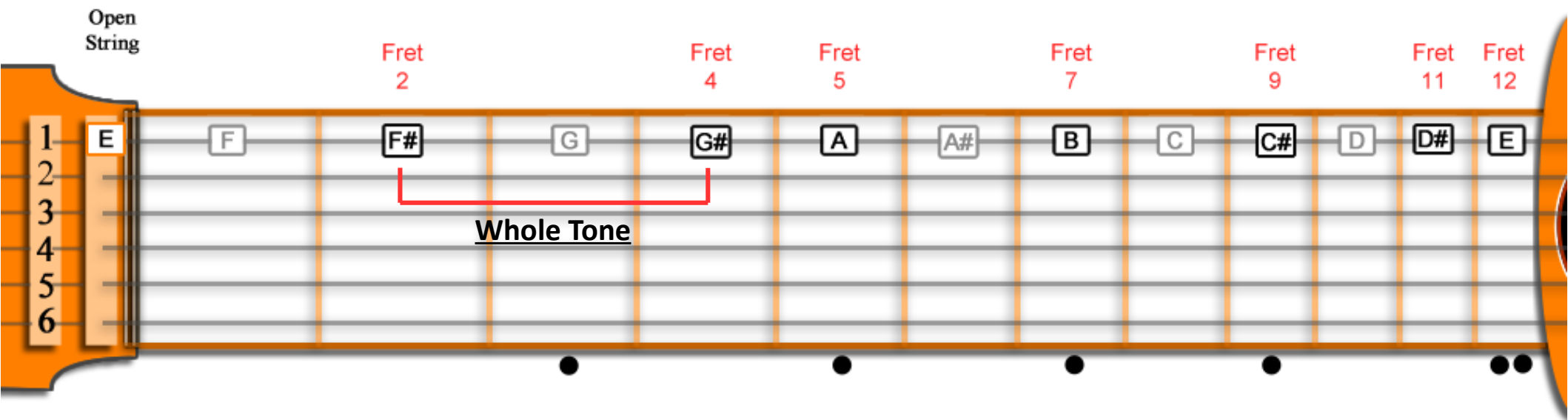
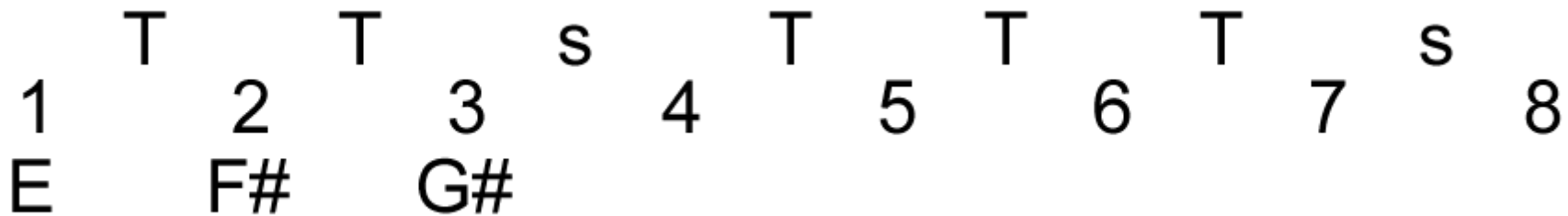
Play the F# on the 2nd fret of the first string.



Building the scale of E (Major) – step 3

The interval between 2 and 3 of a major scale is a Whole Tone.

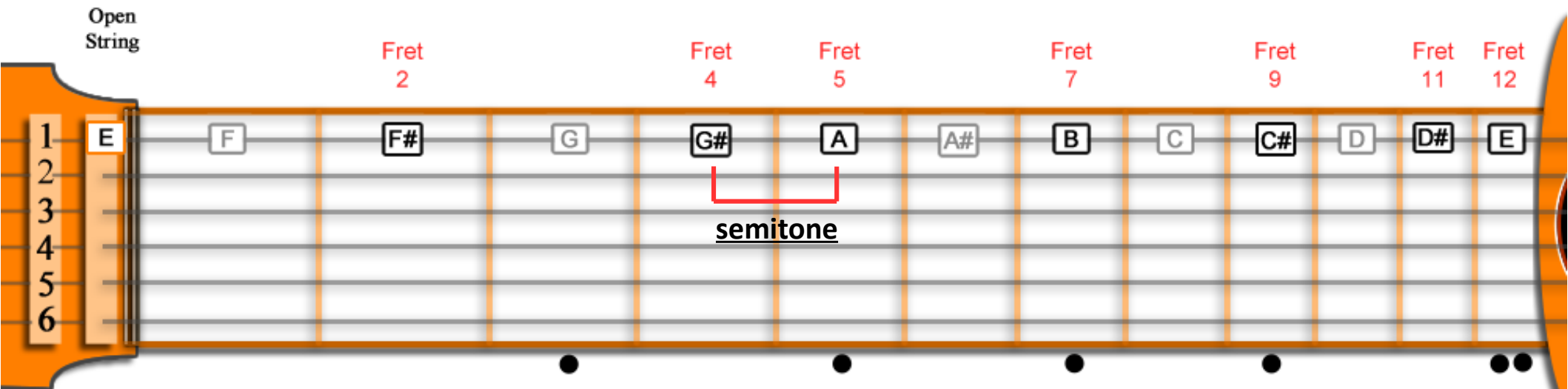
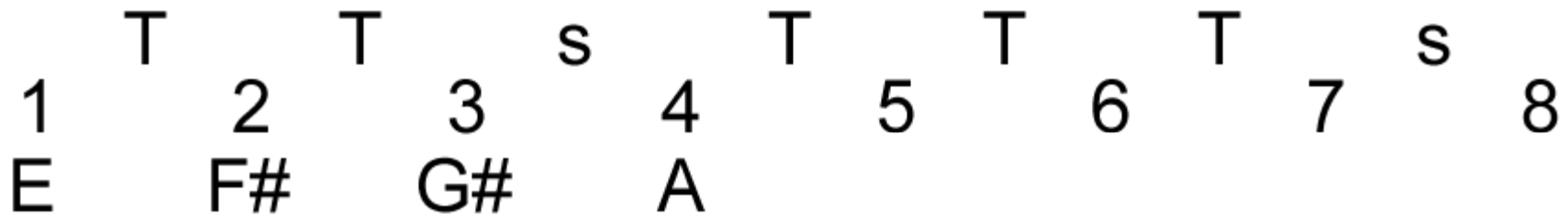
Play the G# on the 3rd fret of the first string.



Building the scale of E (Major) – step 4

The interval between 3 and 4 of a major scale is a semitone.

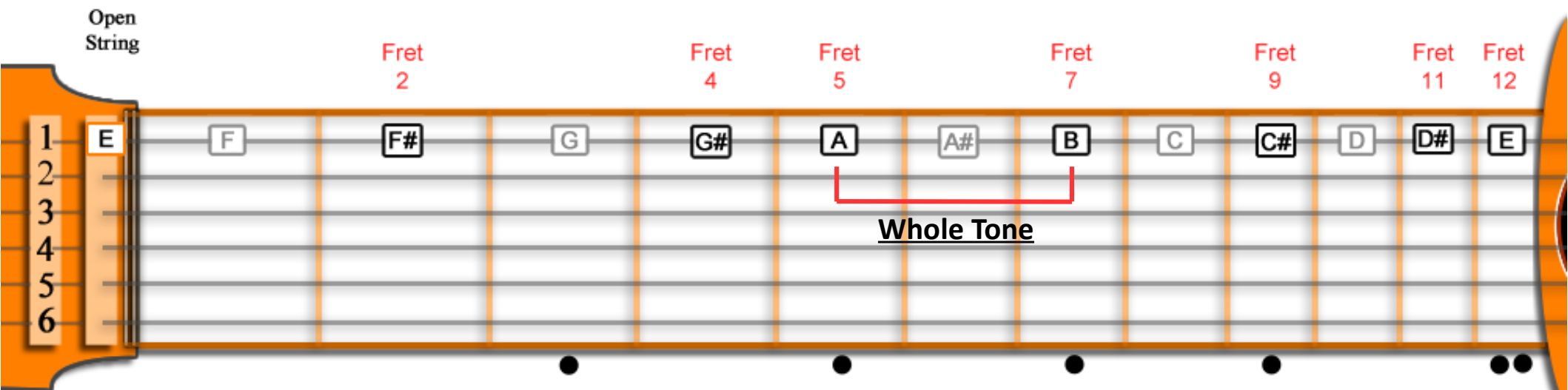
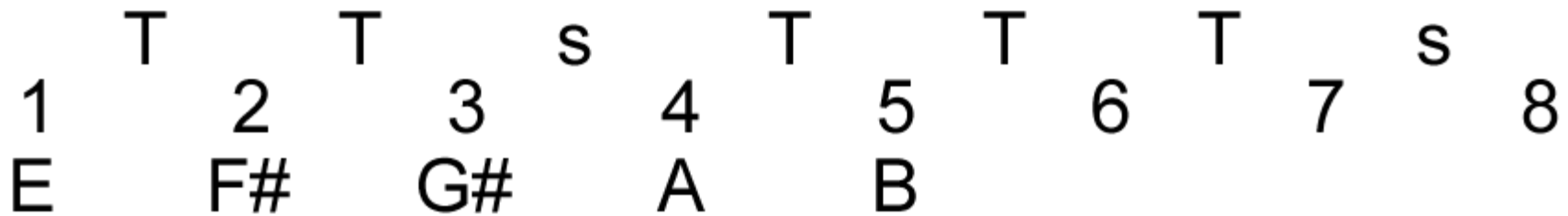
Play the A on the 5th fret of the first string.



Building the scale of E (Major) – step 5

The interval between 4 and 5 of a major scale is a Whole Tone.

Play the B note on the 7th Fret of the first string.

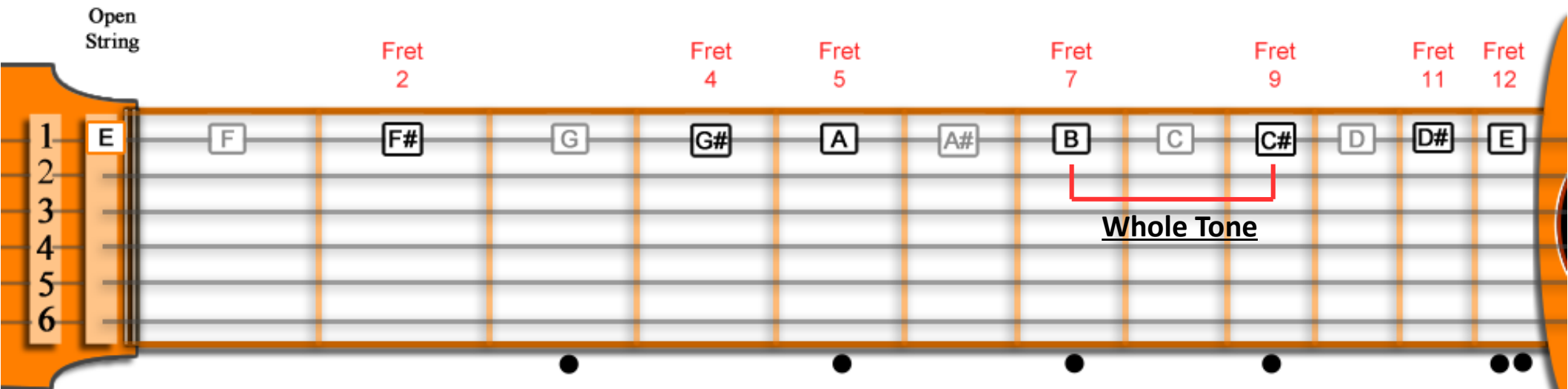


Building the scale of E (Major) – step 6

The interval between 5 and 6 of a major scale is a Whole Tone.

Play the C# note on the 9th fret of the first string.

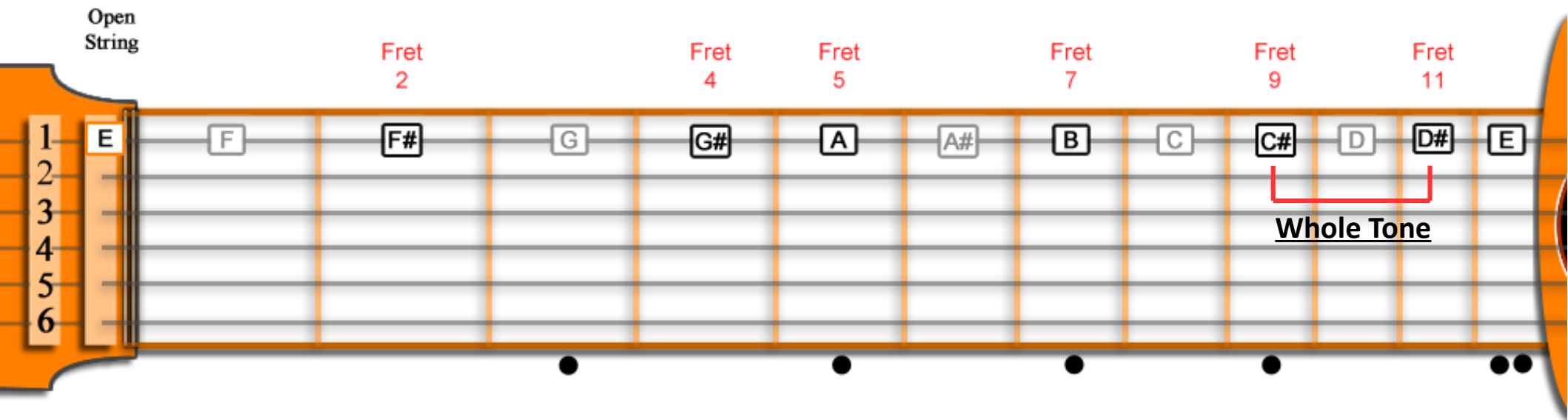
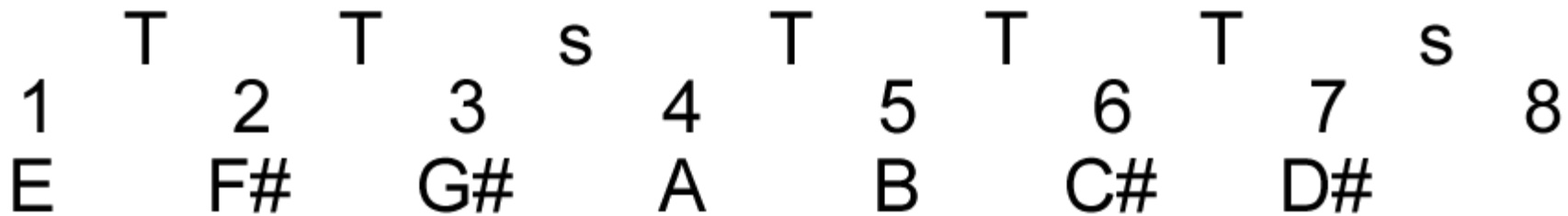
	T	T	S		T	T	T	S	
1	2	3	4	5	6	7	8		
E	F#	G#	A	B	C#				



Building the scale of E (Major) – step 7

The interval between 6 and 7 of a major scale is a Whole Tone.

Play the D# note on the 11th Fret of the first string.

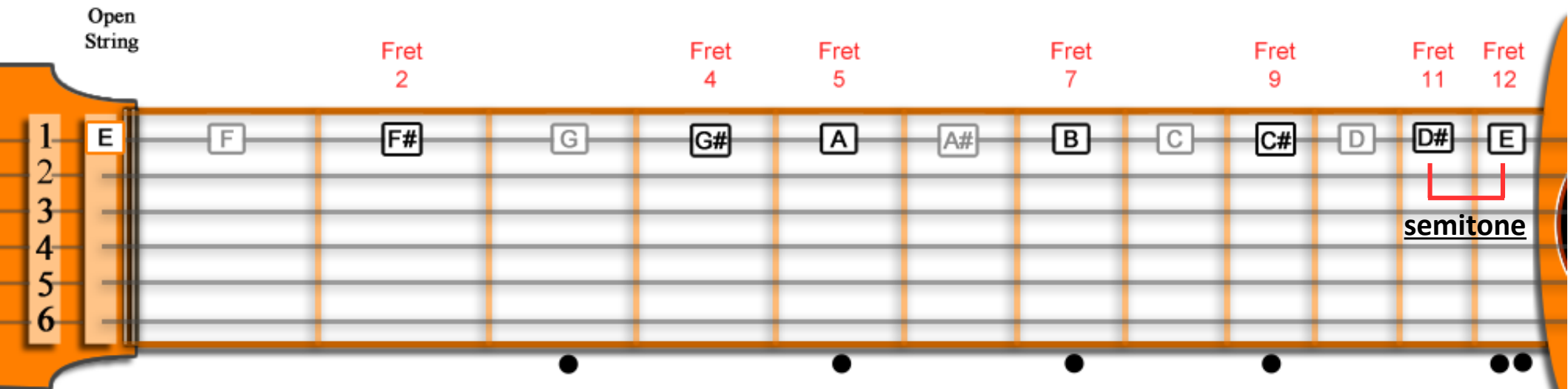


Building the scale of E (Major) – step 8

The interval between 7 and 8 of a major scale is a Whole Tone.

Play the E note on the 12th Fret of the first string.

	T	T	S		T	T	T	S	
1	2	3	4	5	6	7	8		
E	F#	G#	A	B	C#	D#	E		



Play the Scale of E (major)

[Introduction to Scales](#)

[Create the scale of E \(Major\)](#)

[Tones and Semitones](#)

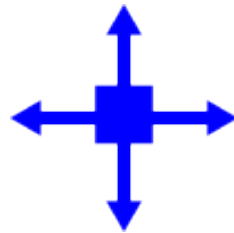
[Play the scale of E on the guitar](#)

[Using a piano keyboard](#)

[Creating scales with flats](#)

[Creating the scale of C \(Major\)](#)

[Other type of scales](#)

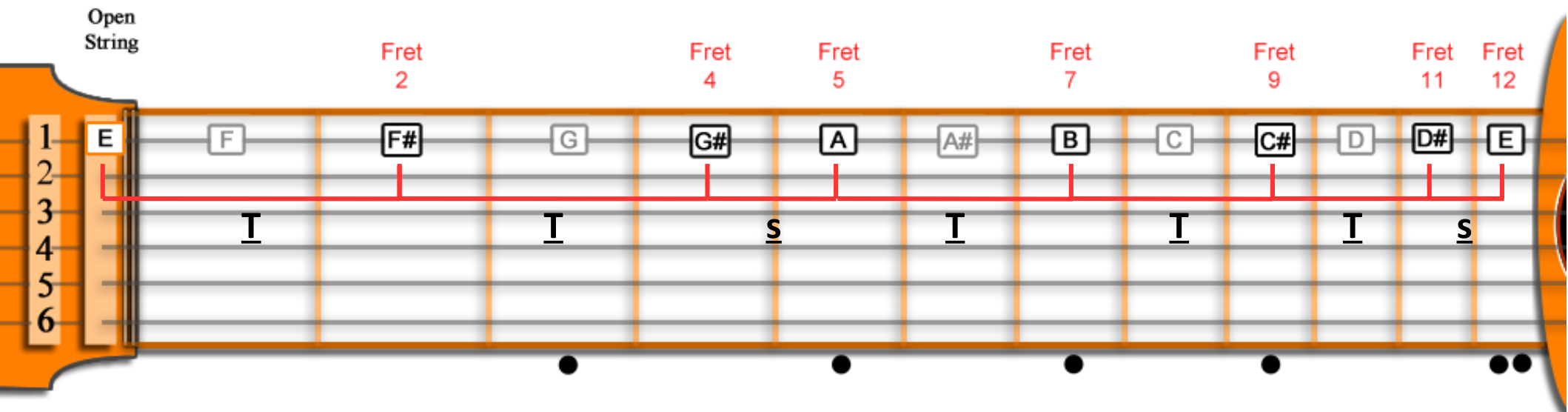


Navigate Pages

The Music Readers ToolboxTM

Play the scale of E (major)

	T	T	S	T	T	T	S	
1	2	3	4	5	6	7	8	
E	F#	G#	A	B	C#	D#	E	



Congratulations you have played your first scale

You have done more than simply played your first scale, you worked out how and where to play the notes on the fretboard.

You have used your

Brain (to organise)

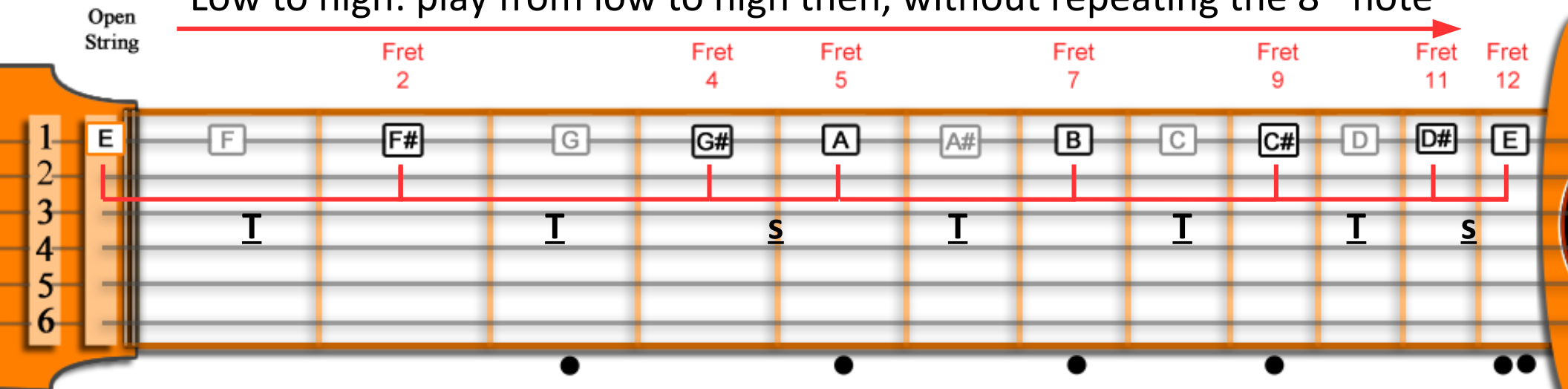
Fingers (to play)

Ears (to listen)

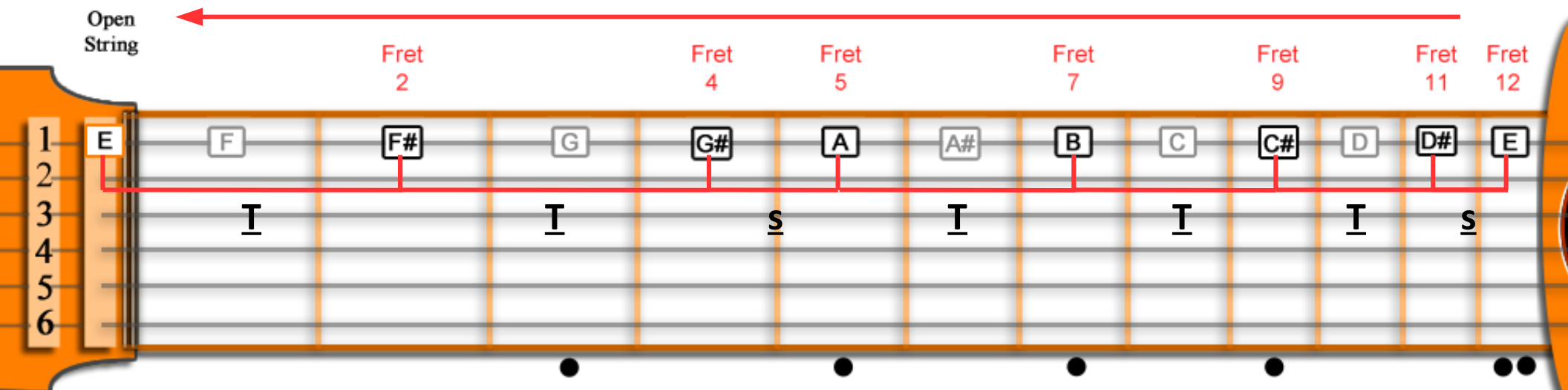
Not bad for a beginner. If you are not a beginner you should be happy some of the holes in your knowledge have been permanently filled in.

Playing scales

Low to high: play from low to high then, without repeating the 8th note



Play from high to low. Don't play the high E again.



Patterns in Music

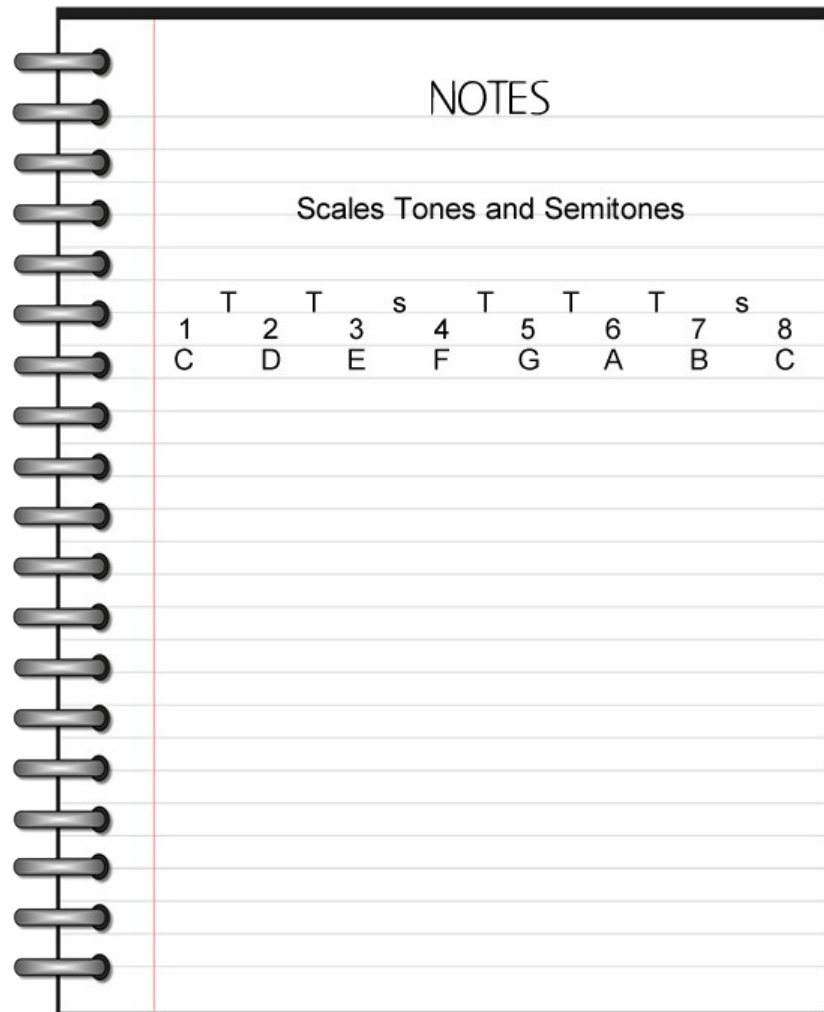
Patterns are very helpful in music, they make it easier for you to remember some very complicated ideas. As we start to build more scales, patterns will start to emerge to save you time and energy.

I'm only going to show you a few scales, after that you will be able to work them out yourself.

Here is the scale of C, created using a pattern of **T**ones and **S**emitones.

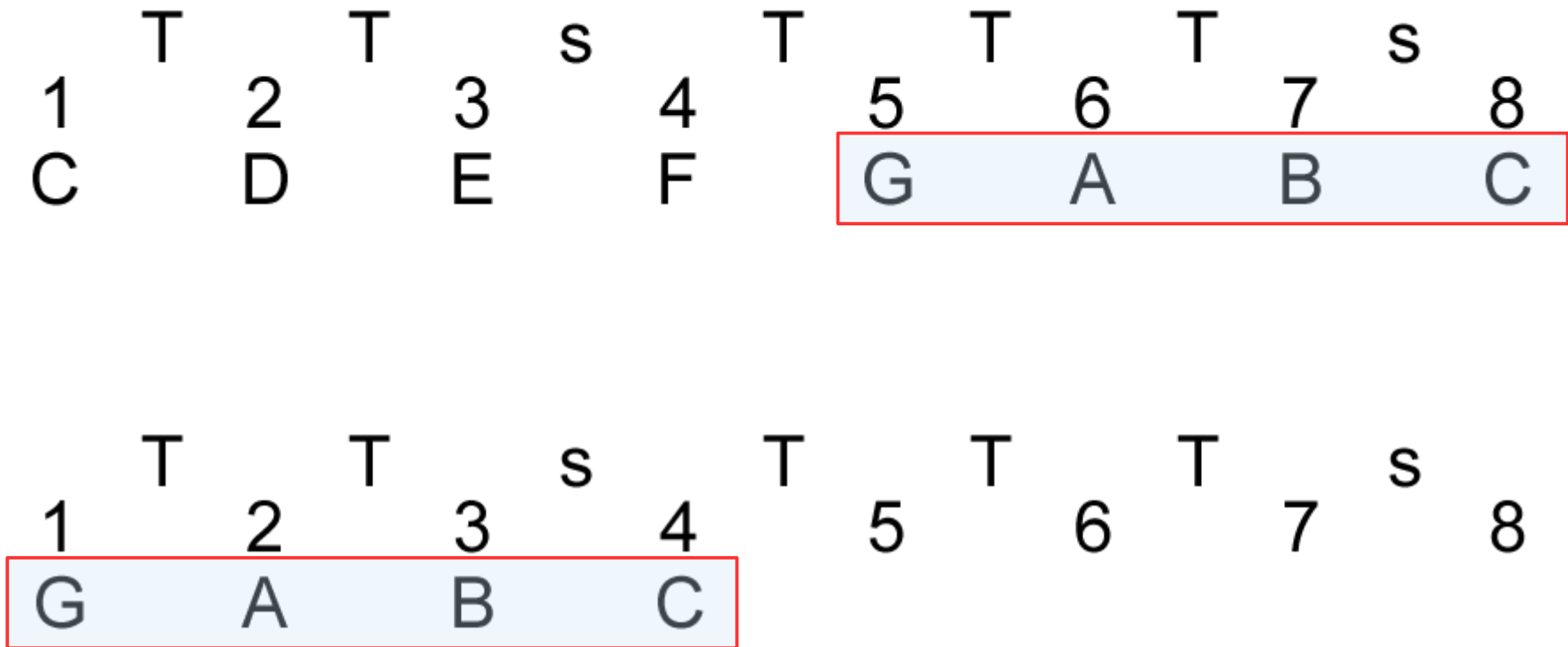
	T		T		S		T		T		T		S	
1		2		3		4		5		6		7		8
C		D		E		F		G		A		B		C

Write it in your notebook



Creating all the scales

The scale of C has no sharps. To create a scale with 1 sharp move the last 4 notes in the scale of C to become the first four notes of the G scale.

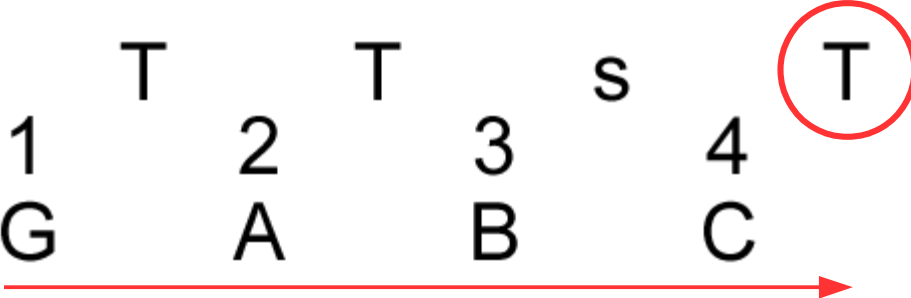


Adding the 5th note to the scale of G

Add the 5th note to the scale of G using the tones and semitones as a guide.

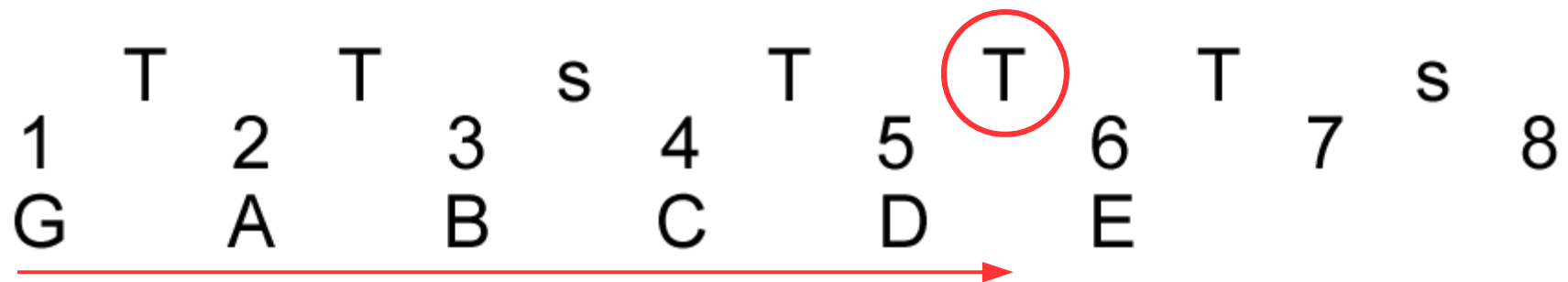
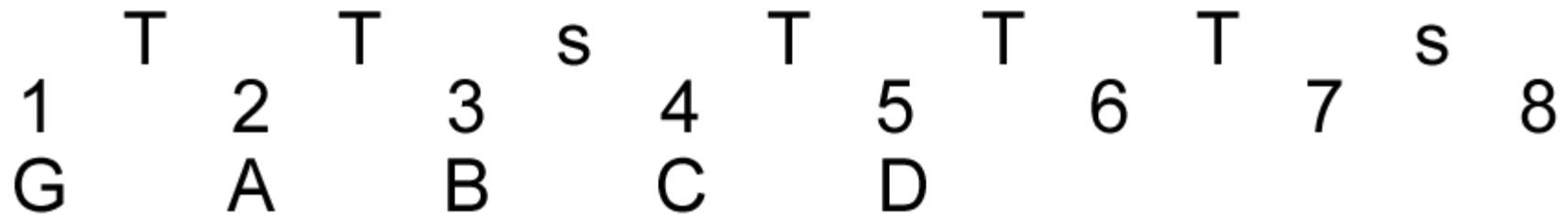
	T		T		S		T		T		T		S	
1		2		3		4		5		6		7		8
G		A		B		C								

	T		T		S		T		T		T		S	
1		2		3		4		5		6		7		8
G		A		B		C		D						



Adding the 6th note to the scale of G

Add the 6th note to the scale of G using the tones and semitones as a guide.

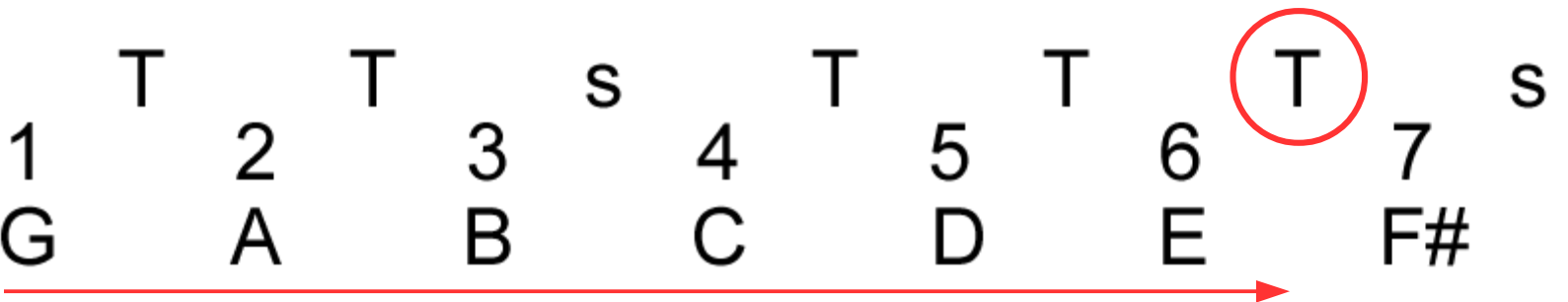


Adding the 7th note to the scale of G

Add the 7th note to the scale of G using the tones and semitones as a guide.

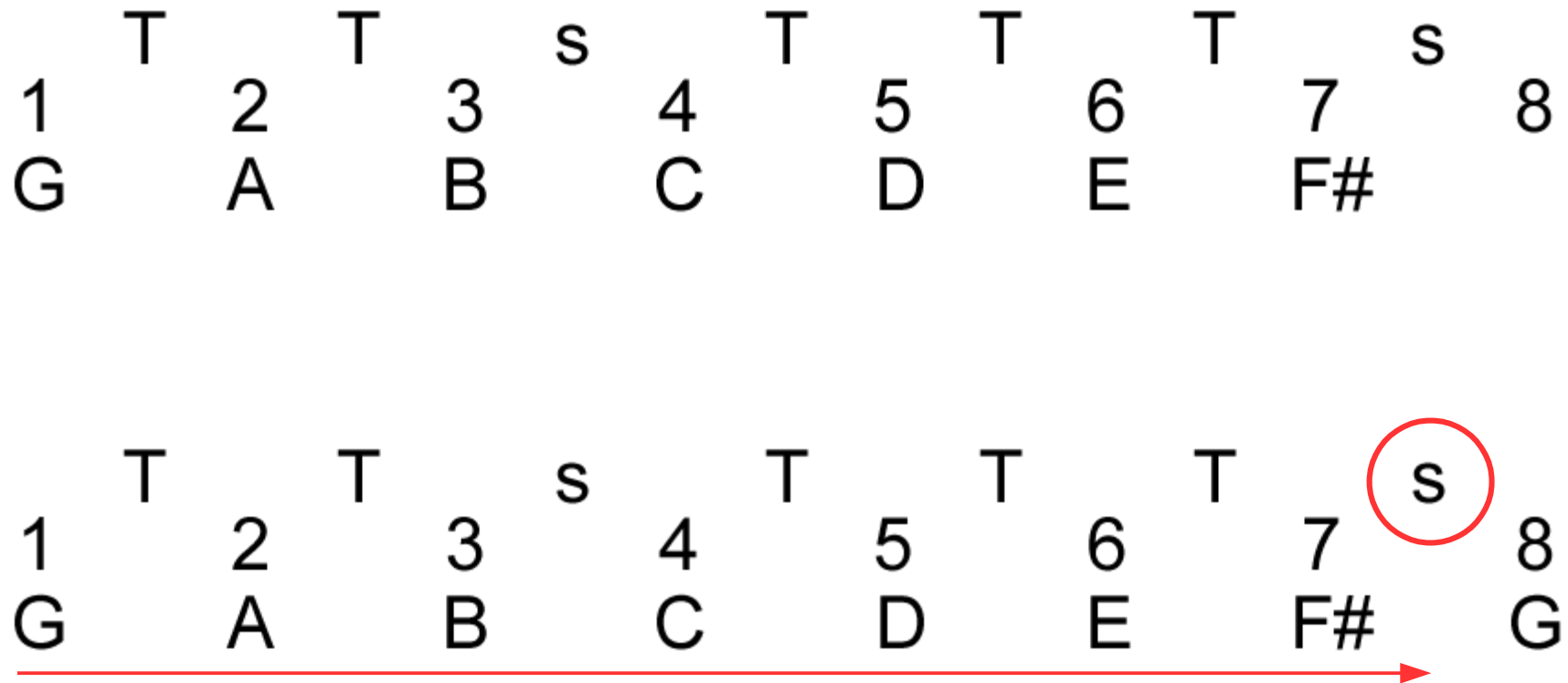
	T		T		S		T		T		T		S		
1		2		3		4		5		6		7		8	
G		A		B		C		D		E					

	T		T		S		T		T		T		S		
1		2		3		4		5		6		7		8	
G		A		B		C		D		E		F#			



Adding the 8th note to the scale of G

Add the 8th note to the scale of G using the tones and semitones as a guide.



The scale of D

When working out the scale of G we used the **last 4 notes** in the scale of C to become the **first 4 notes** of the scale of G. The same happens here to create the scale of D.

	T		T		S		T		T		T		S	
1		2		3		4		5		6		7		8
G		A		B		C		D		E		F#		G

	T		T		S	
1		2		3		4
D		E		F#		G

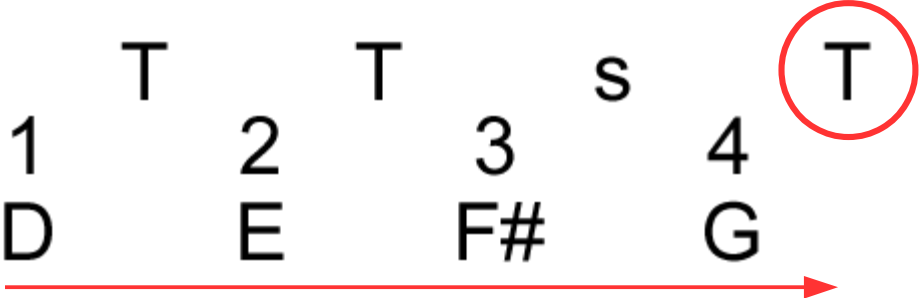


Adding the 5th note to the scale of D

Following the tones and semitones, create the scale of D.

	T		T		S	
1		2		3		4
D		E		F#		G

	T		T		S		T
1		2		3		4	5
D		E		F#		G	A

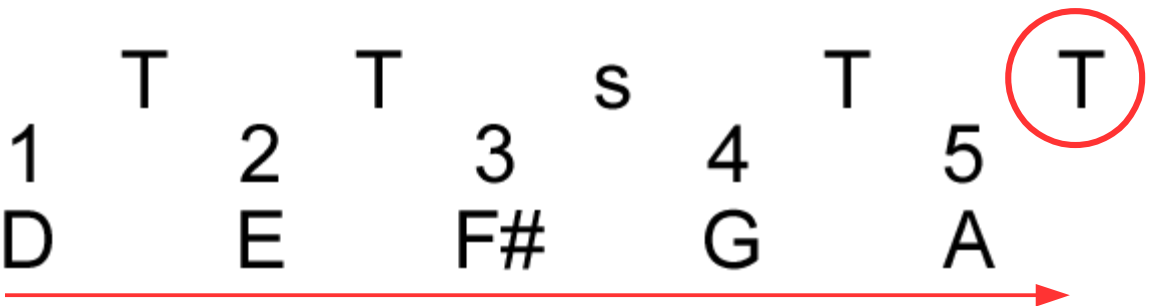


Adding the 6th note to the scale of D

Following the tones and semitones, create the scale of D.

	T		T		S		T	
1		2		3		4		5
D		E		F#		G		A

	T		T		S		T		T	
1		2		3		4		5		6
D		E		F#		G		A		B




Adding the 7th note to the scale of D

Following the tones and semitones, create the scale of D.

	T		T		S		T		T	
1		2		3		4		5		6
D		E		F#		G		A		B

	T		T		S		T		T		T	
1		2		3		4		5		6		7
D		E		F#		G		A		B		C#




Adding the 8th note to the scale of D

Following the tones and semitones, create the scale of D.

	T		T		S		T		T		T	
1		2		3		4		5		6		7
D		E		F#		G		A		B		C#

	T		T		S		T		T		T		S	
1		2		3		4		5		6		7		8
D		E		F#		G		A		B		C#		D



Counting the sharps

We started with the scale of C (no sharps)

	T		T		S		T		T		T		S	
1		2		3		4		5		6		7		8
C		D		E		F		G		A		B		C

Then the scale of G (1 sharp)

	T		T		S		T		T		T		S	
1		2		3		4		5		6		7		8
G		A		B		C		D		E		F#		G

Then the scale of D (2 sharps)

	T		T		S		T		T		T		S	
1		2		3		4		5		6		7		8
D		E		F#		G		A		B		C#		D

Next: A list of scales

On the next page you will see a list of scales. Each scale contains one more sharp than the previous scale.

All the information within these files are intended to be learnt over quite a long period of time through practice and performance.

My idea is that you should be aware of, in this instance, the scales, to know where they come from and how to use them long before they are needed.

Some we will use almost straight away, others when your fingers get faster and your reactions quicker.

Scales containing Sharps

C D E F G A B C	0 sharps
G A B C D E F# G	1 sharp
D E F# G A B C# D	2 sharps
A B C# D E F# G# A	3 sharps
E F# G# A B C# D# E	4 sharps
B C# D# E F# G# A# B	5 sharps
F# G# A# B C# D# E# F#	6 sharps *
C# D# E# F# G# A# B# C#	7 sharps *

*See next slide

More information about the scales F# and C#

When counting the number of sharps in a scale don't include the 8th interval.

F# G# A# B C# D# E# **F#** ← Don't count this sharp

C# D# E# F# G# A# B# **C#** ← Don't count this sharp

The scale of F# has 6 sharps.

The scale of C# has 7 sharps.

Two problems with the scale of F#

Problem 1.

In the example below, this version of the F# scale has 5 sharps, the same as B.

No two scales can have the same number of sharps. So what is wrong here?

	T		T		S		T		T		T		S	
1	2	3	4	5	6	7	8							
F#	G#	A#	B	C#	D#	F	F#							
↑	↑	↑		↑	↑		↑						↑	
1	2	3		4	5									

Don't count this sharp

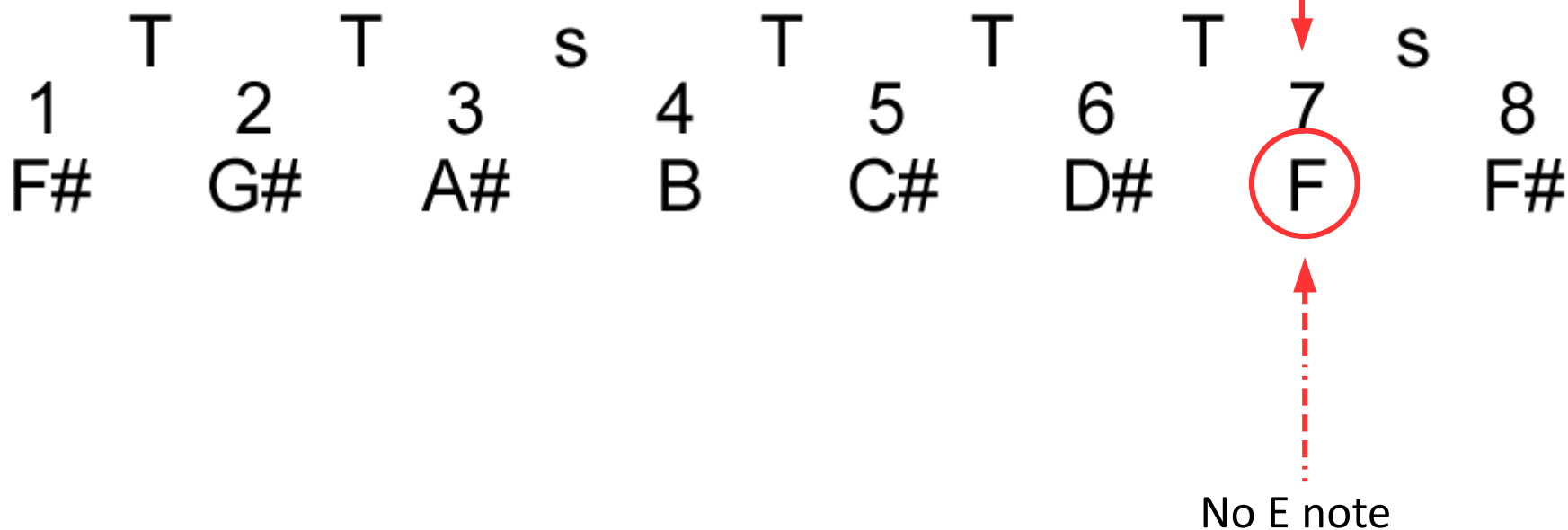
No two scales can have the same number of sharps.



Is this the key of B or F#?
It can't be both.

The second problem with the F# scale

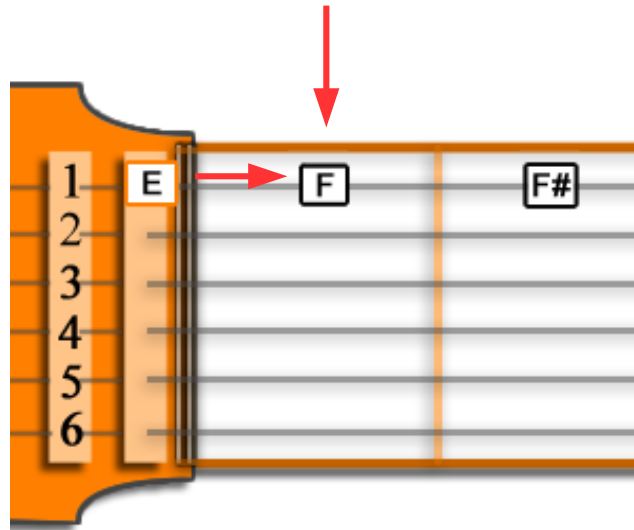
All scales use the first seven letters of the alphabet. A – B – C – D – E – F – G
This version of the scale of F# doesn't have an E note.



Two big problems to solve

The version of F# on the previous page is a scale with 5 sharps and no E. It should have 6 sharps and include an E.

This note name is causing the problem.

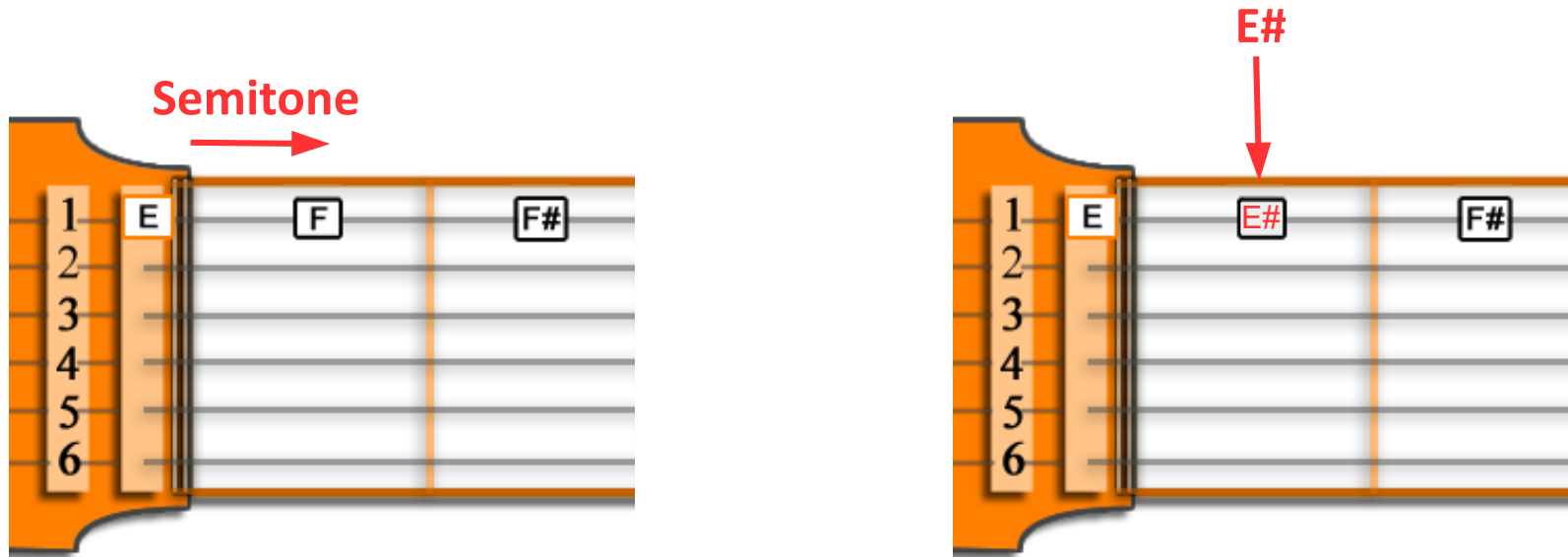


Problem Solved!!

From E it's a **semitone** up to F, so we could rename F and call it **E#**, even though the note name E# doesn't officially exist.

This is exactly what we do!!

Time to cheat!!



Now we have 6 sharps and an E note.

Two problems solved

6 sharps and an E note.

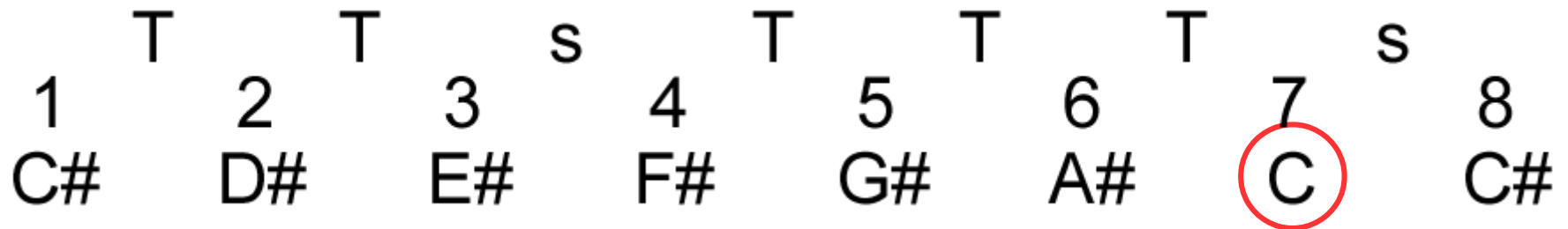
	T		T		S		T		T		T		S		8
1		2		3		4		5		6		7			
F#		G#		A#		B		C#		D#		E#			F#



This the key signature for F#

It's the same with the scale of C#

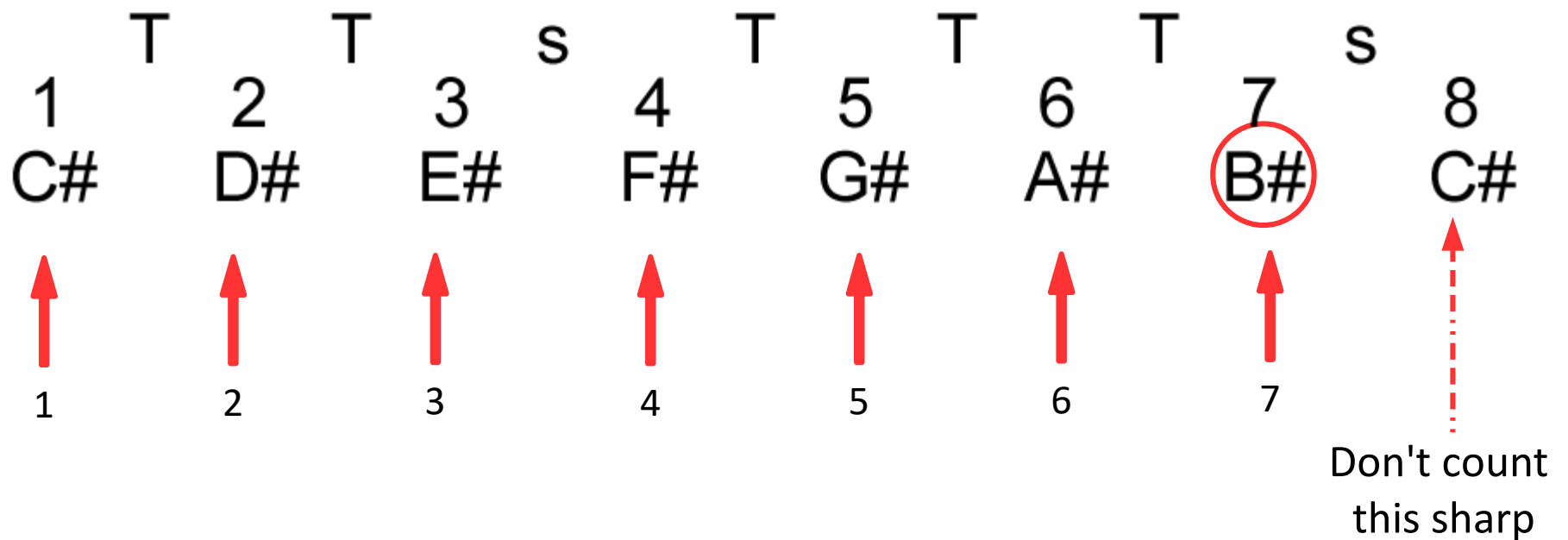
We can't have a C and a C# in the same scale and we're missing a B note.



We use the same trick

Instead of having a C and a C# in the same scale - change the C to a B#.

7 sharps and B note.



Scales are also called keys - 1

A scale is a collection of notes that sound good together.

You would practice a scale to make your fingers move fast up and down the strings or along the fretboard.

You would play a scale to help a singer get their voice focused properly.

Playing a scale helps accuracy in finding note names and coordination between both hands. Playing scales is the best 'warm up' a musician can have.

The name changes from scale to key when it relates to a piece of music to play.

Scales are also called keys - 2

A scale becomes the key to a song when it stops being just a self contained series of notes and holds within it more information about the music to be played.

This information includes which chords you are likely to play for the rhythm of a song and the modes which are the secret to great improvisation.

There will be a detailed explanation of Modes and Chords after the scales section.

We practice scales. We use keys to make music.

When playing with other musicians

When musicians play together one will say, for example:

"Let's play '**Fly me to the Moon**', in E." (E refers to the key of E)

If you know the key of E, it's the only scale with 4 sharps, you will know all the notes the other musicians will be playing or singing. You will also be able to recognise all the chords on the song sheet because you will be able to play them and relate them to the key of E.

This takes all the guesswork out of rehearsing and performing.

The singer, the bass player, the rhythm guitarist, the keyboard player, all the musicians will be using the notes in the key of E to produce their music.

Key Signatures: Counting the sharps

Written at the beginning of a piece of music is a collection of sharps or flats signs indicating the key (scale). If no sharps or flats can be seen it is in the key of C (major).

The collection of sharp or flat signs is called a **KEY SIGNATURE**.



KEY SIGNATURE:
Key of E (major)
4 sharps



KEY SIGNATURE:
Key of A (major)
3 sharps

This will become clearer when I teach you how to read music.

Call the name of the key signatures out loud

To learn the key signatures in preparation for using them don't say, for example, the scale of G has one sharp, call it a **1 sharp G**.

It's quicker and easier to remember.

Say the names out loud, for example call the scale of D a **2 sharp D**.

Call the scale of A a **3 sharp A**.

On the next page is a list of all the scales and the key signatures.

Start using my method for quickly learning and using the key signatures now.

No sharp C

key signature



- C D E F G A B C
- G A B C D E F# G
- D E F# G A B C# D
- A B C# D E F# G# A
- E F# G# A B C# D# E
- B C# D# E F# G# A# B
- F# G# A# B C# D# E# F#
- C# D# E# F# G# A# B# C#

1 sharp G

C D E F G A B C

● G A B C D E F# G

D E F# G A B C# D

A B C# D E F# G# A

E F# G# A B C# D# E

B C# D# E F# G# A# B

F# G# A# B C# D# E# F#

C# D# E# F# G# A# B# C#

key signature



2 sharp D

C D E F G A B C

G A B C D E F# G

● D E F# G A B C# D

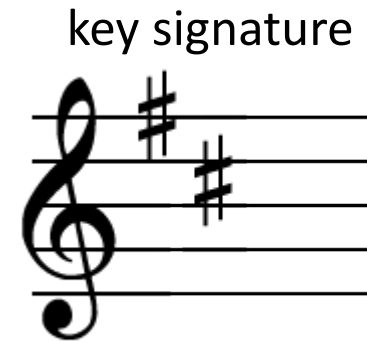
A B C# D E F# G# A

E F# G# A B C# D# E

B C# D# E F# G# A# B

F# G# A# B C# D# E# F#

C# D# E# F# G# A# B# C#



3 sharp A

C D E F G A B C

G A B C D E F# G

D E F# G A B C# D

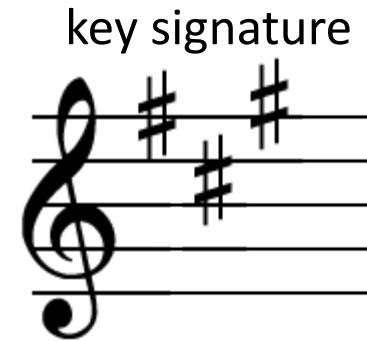
● A B C# D E F# G# A

E F# G# A B C# D# E

B C# D# E F# G# A# B

F# G# A# B C# D# E# F#

C# D# E# F# G# A# B# C#



4 sharp E

C D E F G A B C

G A B C D E F# G

D E F# G A B C# D

A B C# D E F# G# A

● E F# G# A B C# D# E

B C# D# E F# G# A# B

F# G# A# B C# D# E# F#

C# D# E# F# G# A# B# C#



5 sharp B

C D E F G A B C

G A B C D E F# G

D E F# G A B C# D

A B C# D E F# G# A

E F# G# A B C# D# E

● B C# D# E F# G# A# B

F# G# A# B C# D# E# F#

C# D# E# F# G# A# B# C#



key signature



6 sharp F#

C D E F G A B C

G A B C D E F# G

D E F# G A B C# D

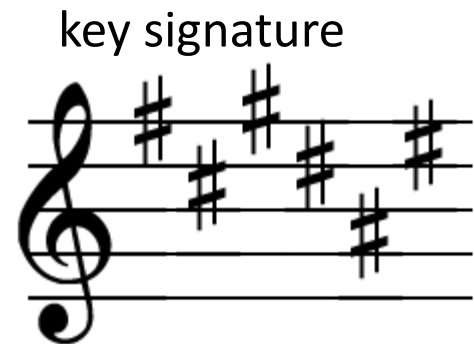
A B C# D E F# G# A

E F# G# A B C# D# E

B C# D# E F# G# A# B

● F# G# A# B C# D# E# F#*

C# D# E# F# G# A# B# C#



* When counting the number of sharps
don't count the 8th note

7 sharp C#

C D E F G A B C

G A B C D E F# G

D E F# G A B C# D

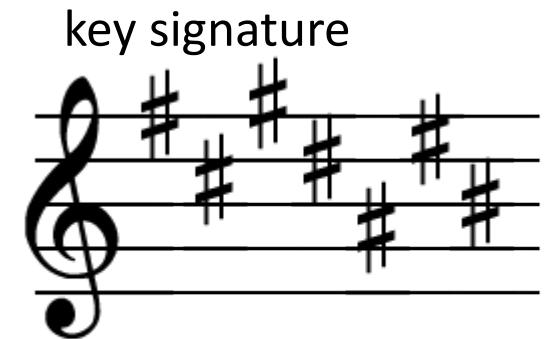
A B C# D E F# G# A

E F# G# A B C# D# E

B C# D# E F# G# A# B

F# G# A# B C# D# E# F#*

● C# D# E# F# G# A# B# C#*



* When counting the number of sharps
don't count the 8th note

8 Scales

Each of the scales contain a different number of sharps and all use

A – B – C – D – E – F – G.

This is a very useful thing to know.

Here's another problem

Each string from open to the 12th fret contains 12 different notes.

Each note must have it's own scale, so far we have discovered 8.

We need 4 more scales

Creating Scales with Flats

[Introduction to Scales](#)

[Create the scale of E \(Major\)](#)

[Tones and Semitones](#)

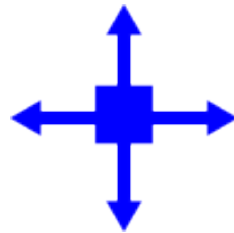
[Play the scale of E on the guitar](#)

[Using a piano keyboard](#)

[Creating scales with flats](#)

[Creating the scale of C \(Major\)](#)

[Other type of scales](#)



Navigate Pages

The Music Readers ToolboxTM

Four more Scales

Remember when we started naming the sounds on the fretboard?
signs were used to show the sounds were getting higher.

For example: A – A# – B

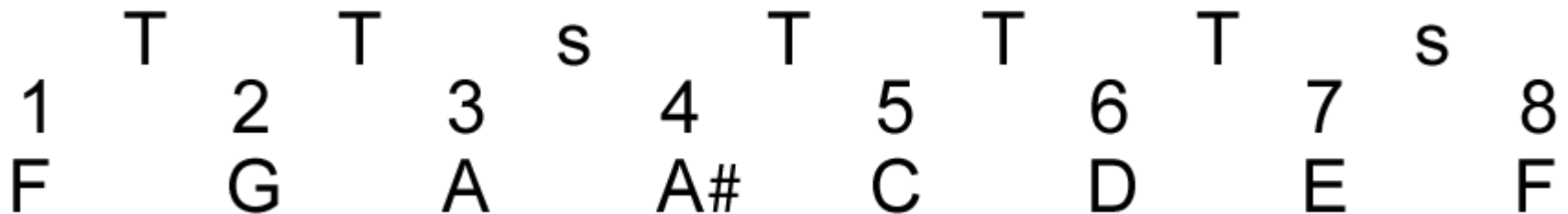
When we played the sounds starting from the body of the guitar the sharp signs were replaced with ♭ signs.

For example: B – B♭ – A

Now we find another use for the flats.

Problems with the scale of F (Major)

You must have wondered why or when the \flat names would be used. Look at the example of the scale of F. The tones and semitones are in their correct places, but, there are three problems in this version of the key.



Three Problems in one scale

Problem 1. You can't have an A and an A# in the same scale - Too confusing.

Problem 2. Oops, this scale has one sharp, but so does the scale of G, so that can't be right, even if it's a different note.

Problem 3. There isn't a B note in the scale.

	T		T		S		T		T		T		S	
1		2		3		4		5		6		7		8
F		G		A		A#		C		D		E		F

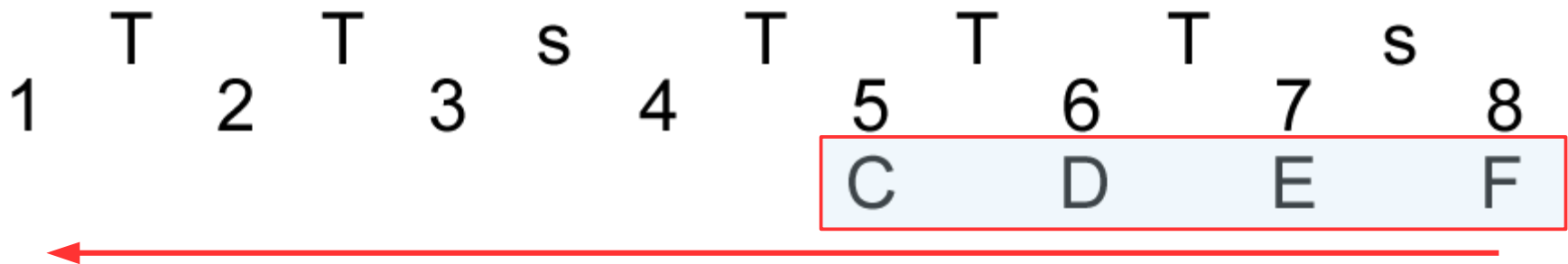
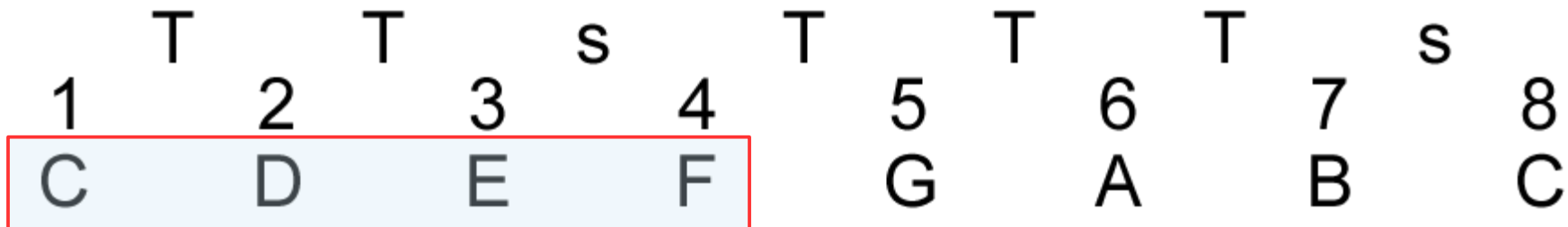
Creating the scale of F

To solve the all the problems the scale of F is created using a different method from the scales containing sharps.

The **first four notes** in the scale of C become the **last four notes** of the scale of F.

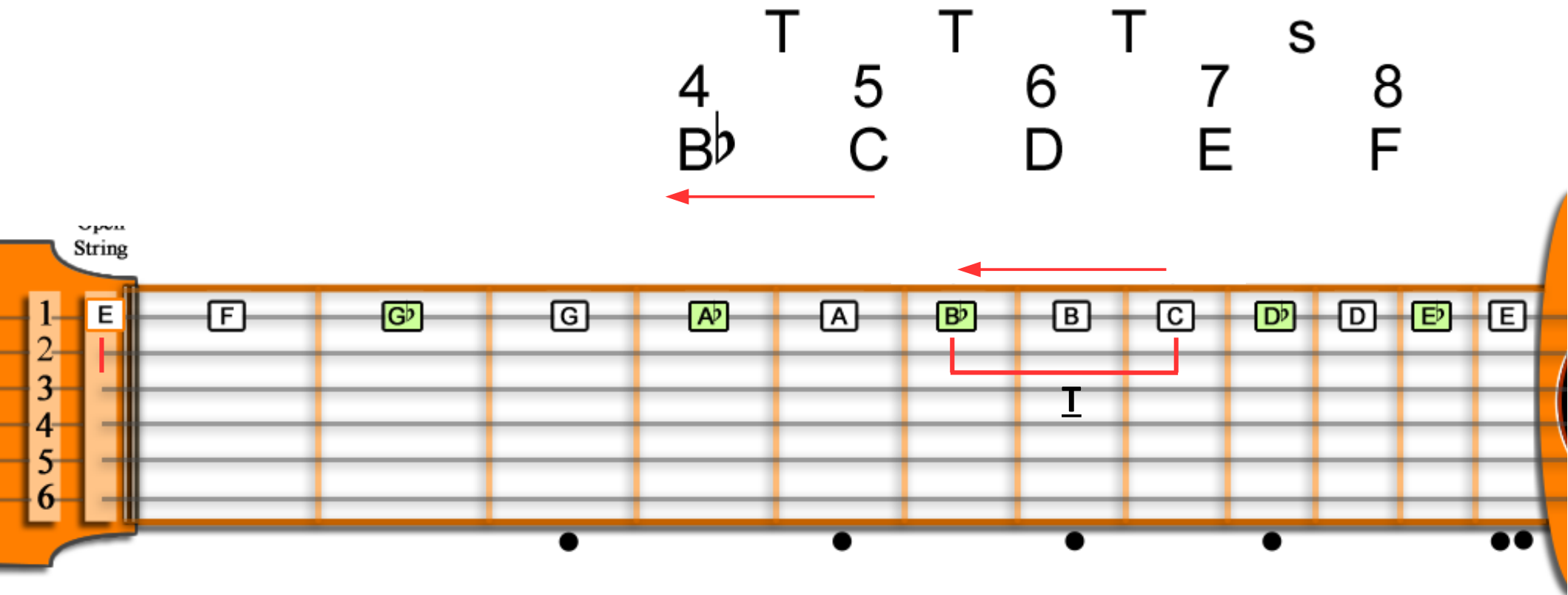
Creating the scale of F

The **first four notes** in the scale of C become the **last four notes** of the scale of F.



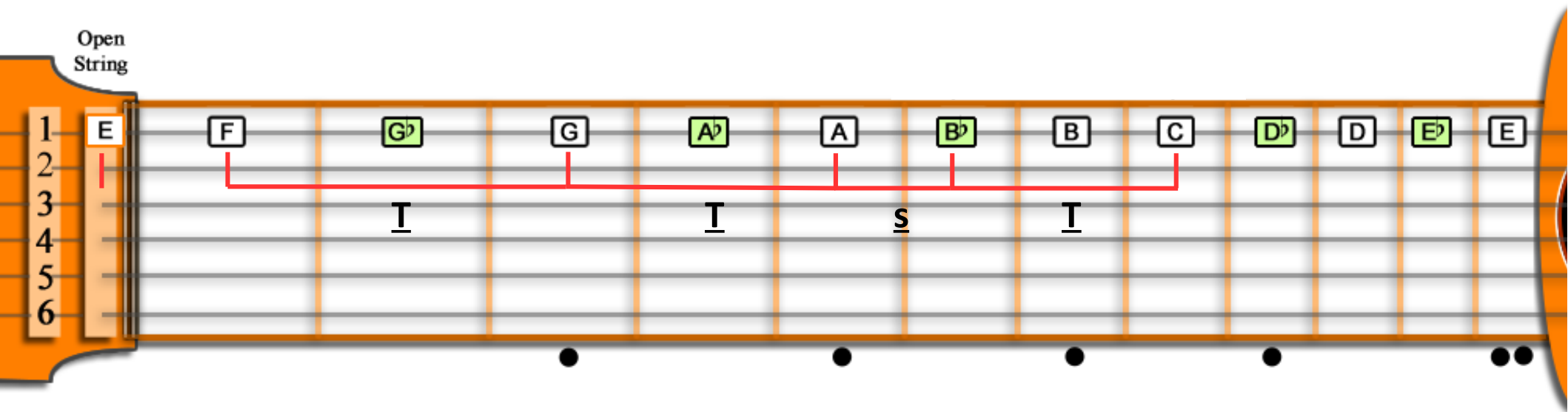
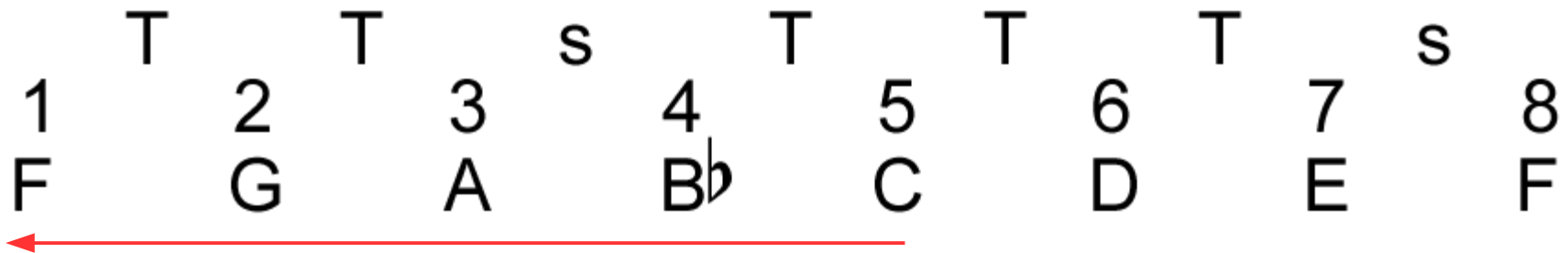
The scale of F – fixing the problems

Between the 5th and the 4th step (going lower) is a whole tone down this changes the A# into a B \flat they sound exactly the same. All three problems have now gone away.



The scale of F

The completed scale of F (major)



Adding more Flat scales

Flat scales are created by moving the first 4 notes to the back.

The diagram illustrates the construction of a flat scale by moving the first four notes of a natural scale to the back. It consists of two rows of notes, each with interval labels above them.

Top Row (Natural Scale):

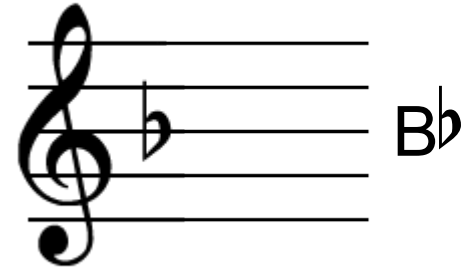
- Notes: 1 (F), 2 (G), 3 (A), 4 (B \flat), 5 (C), 6 (D), 7 (E), 8 (F)
- Intervals: T (1-2), T (2-3), S (3-4), T (4-5), T (5-6), T (6-7), S (7-8)
- The first four notes (F, G, A, B \flat) are highlighted with a red box.

Bottom Row (Flat Scale):

- Notes: 1 (B \flat), 2 (C), 3 (D), 4 (E \flat), 5 (F), 6 (G), 7 (A), 8 (B \flat)
- Intervals: T (1-2), T (2-3), S (3-4), T (4-5), T (5-6), T (6-7), S (7-8)
- The last four notes (F, G, A, B \flat) are highlighted with a red box.
- A red arrow points from the right side of the bottom row back to the left side, indicating the movement of the first four notes.

1 Flat F

key signature



● F G A B \flat C D E F →

B \flat C D E \flat F G A B \flat

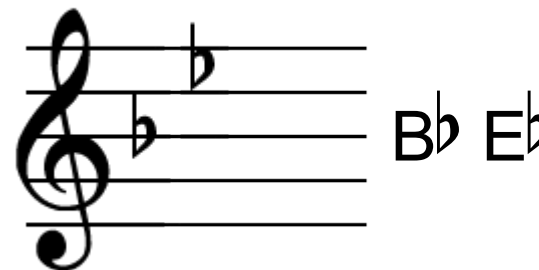
E \flat F G A \flat B \flat C D E \flat

A \flat B \flat C D \flat E \flat F G A \flat

2 flat B^b

F G A B^b C D E F

key signature



● B^b C D E^b F G A B^b →

E^b F G A^b B^b C D E^b

* When counting the number of flats don't count the 8th note

A^b B^b C D^b E^b F G A^b

3 flat E^b

F G A B^b C D E F

B^b C D E^b F G A B^b

● E^b F G A^b B^b C D E^b →

key signature



B^b E^b A^b

A^b B^b C D^b E^b F G A^b

* When counting the number of flats don't count the 8th note

4 flat A^b

F G A B^b C D E F

B^b C D E^b F G A B^b

E^b F G A^b B^b C D E^b

● A^b B^b C D^b E^b F G A^b →

key signature



B^b E^b A^b D^b

* When counting the number of flats
don't count the 8th note

Avoiding Confusion - maybe

F# scale and G^b are basically the same thing. G^b is thought to be easier to read.

F# G# A# B C# D# E# F#

G^b A^b B^b C^b D^b E^b F G^b

C# scale and D^b are basically the same thing. D^b is thought to be easier to read.

C# D# E# F# G# A# B# C#

D^b E^b F^b G^b A^b B^b C^b D^b

When counting the number of sharps or flats don't count the 8th note

Other type of Scales

[Introduction to Scales](#)

[Create the scale of E \(Major\)](#)

[Tones and Semitones](#)

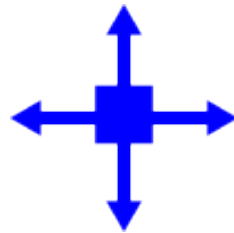
[Play the scale of E on the guitar](#)

[Using a piano keyboard](#)

[Creating scales with flats](#)

[Creating the scale of C \(Major\)](#)

[Other type of scales](#)

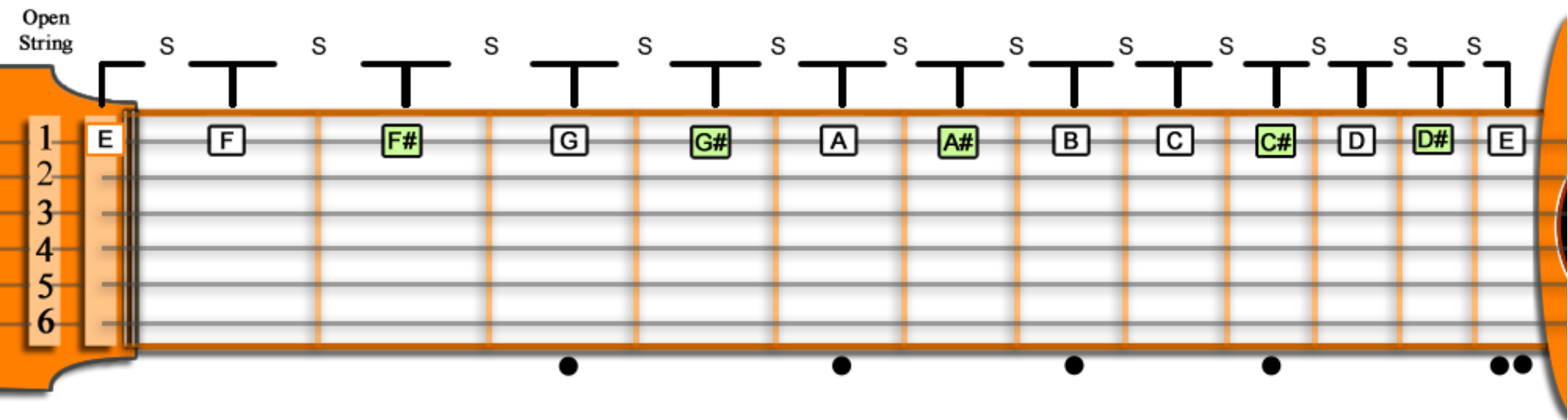


Navigate Pages

The Music Readers ToolboxTM

Chromatic Scales

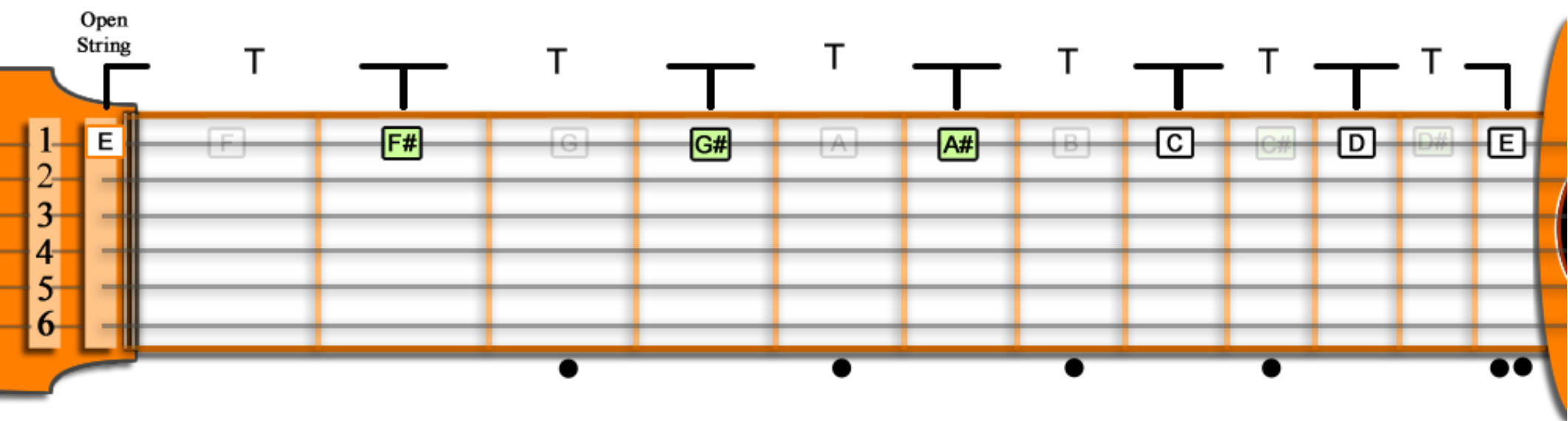
This is a semitone scale, because each interval is a semitone apart.
A chromatic scale can start on any note working from low to high and back again playing each note one fret apart.



Augmented Scales

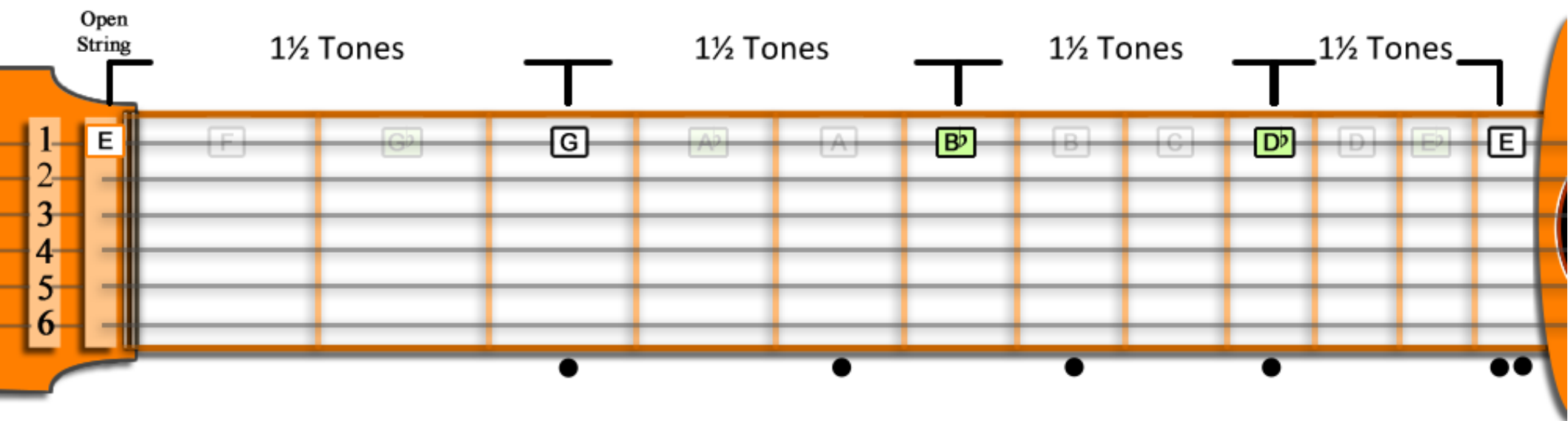
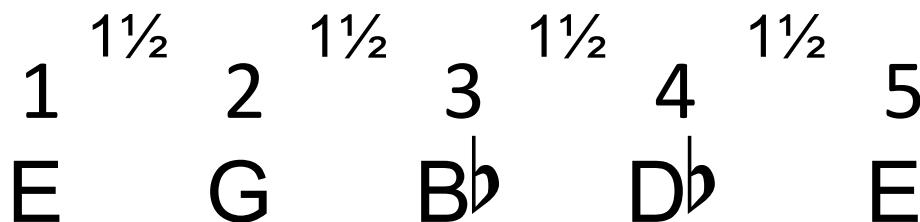
This is a whole tone scale, because each interval is a whole tone apart.
An augmented scale can start on any note working from low to high and back again playing each note two frets apart.

E T F# T G# T A# T C T D T E



Diminished Scales

A diminished scale is made up of intervals $1\frac{1}{2}$ tones apart.
A chromatic scale can start on any note working from low to high and back again playing each note three frets apart.



Summary

[Introduction to Scales](#)

[Create the scale of E \(Major\)](#)

[Tones and Semitones](#)

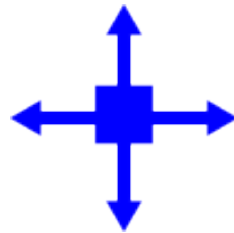
[Play the scale of E on the guitar](#)

[Using a piano keyboard](#)

[Creating scales with flats](#)

[Creating the scale of C \(Major\)](#)

[Other type of scales](#)



Navigate Pages

The Music Readers ToolboxTM

Summary

I said at the beginning of this, the scales section, a scale is a collection of notes that sound good together. Scales are the best means to improve your speed of playing on the fretboard. Nimble fingers love scales. Chase one note after another from low to high and back again until your fingers blur. One octave, two octaves, three octaves.

With practice, scales turn fingers into hi-octane racers flying across the fretboard. The fretboard and scales are the backbone of guitar playing.



Scales change into keys

When a scale becomes a key a whole new world opens up.

In the final section of The Music Readers Toolbox you will discover why a scale become a key. Keys contain modes, from the modes come chords. Combine modes and chords together and it's possible to improvise without making a single mistake.

I will teach you how it is possible to play a melody and a chord sequence at the same time.

Every piece of written music has a Key signature at the start. It is literally the key that let's you in. When you understand what the key is telling you everything is possible.

Next: Music Reading

To get the best from the fretboard and scales you have to give them a song to play. Please don't use an exercise song. Find a real piece of music from a film, the radio or something your mother would like to hear.

As you read music you will understand why I place so much emphasis on the fretboard and the scales.

Remember to practice, be patient and perform your scales to anybody who will listen.