

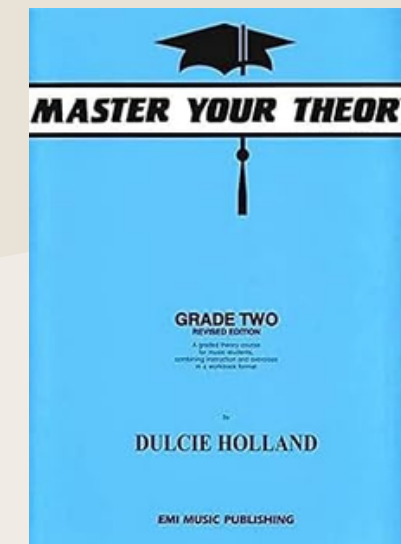


Music Theory Grade 2

Understanding Music Theory using
Real Music Examples

Prerequisites: Grade 1

Exercise Workbook: **Master Your Theory
Grade Two
by Dulcie Holland**
(Available on Amazon or
from music stores)



Download Slides From: www.davebstevens.com/music-theory

Major Scales of C, G, D, A and F

Lesson 1

In Grade One, we learnt that the **Major Scale** is the most common type of Scale, and all Major Scales use the same interval pattern of **Tones (T)** and **Semitones (S)**:

T - T - S - T - T - T - S

Here is one octave ascending of **C Major**, with the 8 notes split into two groups of four notes each. These are called **Tetrachords**. Each Tetrachord is made up of **T - T - S**. The lower tetrachord is connected to the upper tetrachord by the distance of a Tone.

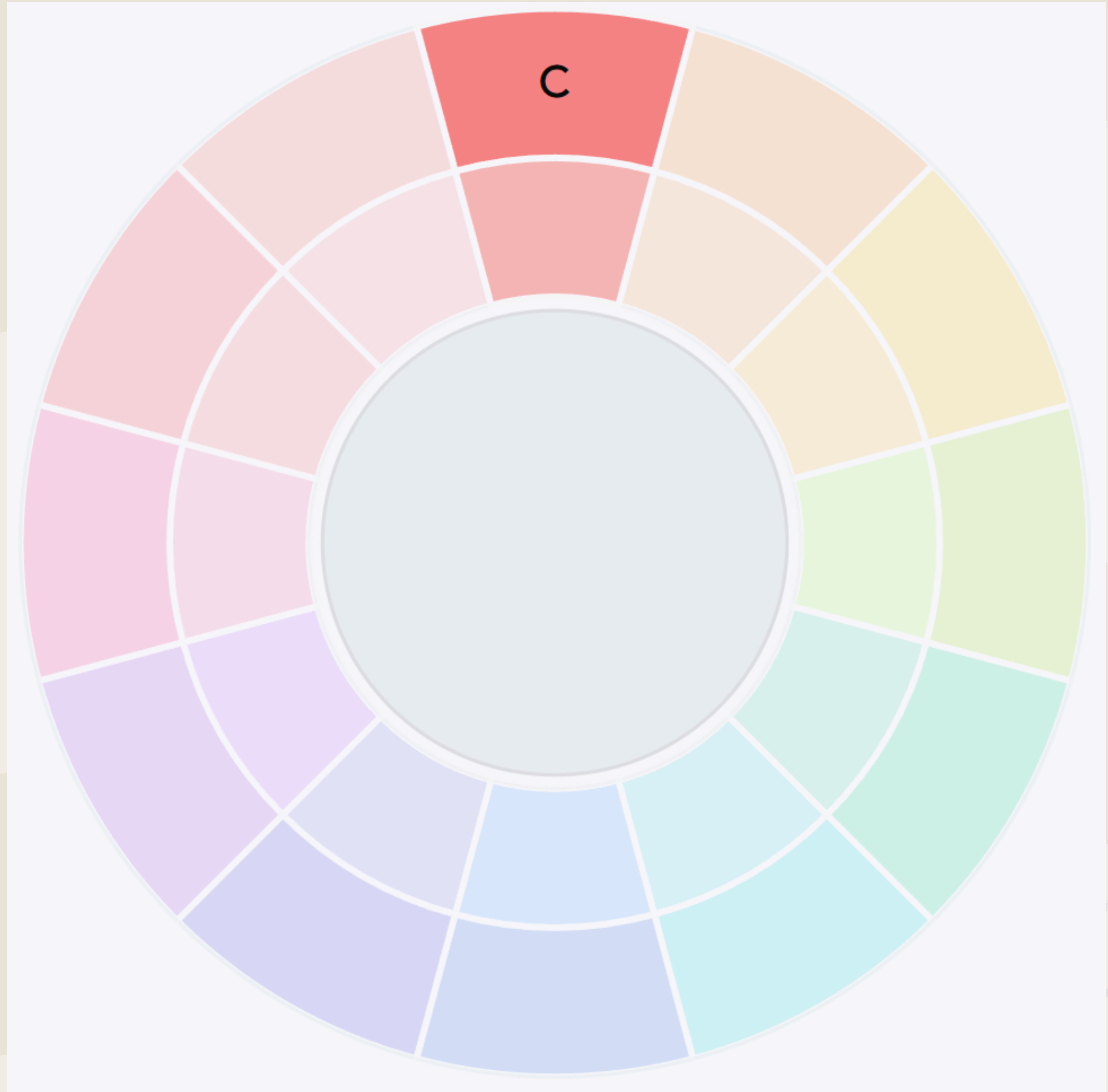
The diagram illustrates the C Major scale on a single staff, divided into two sections: the lower Tetrachord (blue background) and the upper Tetrachord (green background). The lower Tetrachord consists of the notes C, D, E, and F, with intervals of Tone (T) between C and D, D and E, and Semitone (S) between E and F. The upper Tetrachord consists of the notes G, A, B, and C, with intervals of Tone (T) between G and A, A and B, and Semitone (S) between B and C. A bracket connects the F of the lower tetrachord to the G of the upper tetrachord, indicating a Tone interval. The notes C, D, E, F are labeled in orange below the staff, and G, A, B, C are labeled in orange below the staff.

The clever bit: The upper tetrachord of one scale becomes the lower tetrachord (or beginning) of the next scale. In the example above, we see **C Major** with a lower tetrachord of C, D, E, F and an upper tetrachord of G, A, B, C. Therefore, G, A, B, C are the first four notes of the next scale. Because the first note of the new scale is G, the scale is called **G Major**.

Complete
Exercises **1-2**

Circle of Fifths

- There are 12 different notes in music (the Chromatic scale).
- Therefore, a major scale may start on each of these 12 unique notes.
- We can write these 12 unique major scales in a circle (like a clock face).
- Starting with C Major in the 12 O'clock position.



C, D, E, F, G, A, B, C

lower
Tetrachord
G, A, B, C, D, E, F#, G

upper
Tetrachord

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

- Using the upper tetrachord of C Major we know that **the next scale in a clockwise direction** is G Major.

- As we move **clockwise**, each scale will have **one more sharp** than the previous scale (until we get to the “7 o’clock” position on the “clock”).

- The notes of the upper tetrachord of G Major are D E F# G, therefore these are the first four notes of the next scale.

- Because the next scale starts with the note D, it is called the **D Major scale**.

- **D Major has two sharps.** It inherits the F# from G Major and gets a new sharp, C#. We could work this out using the pattern T-T-S-T-T-T-S, or we can use the shortcut below (which works for all major scales that have sharps):

**Scale Tonic less one semitone =
name of the new sharp that is added**

I.e., **D** less one semitone = **C#**

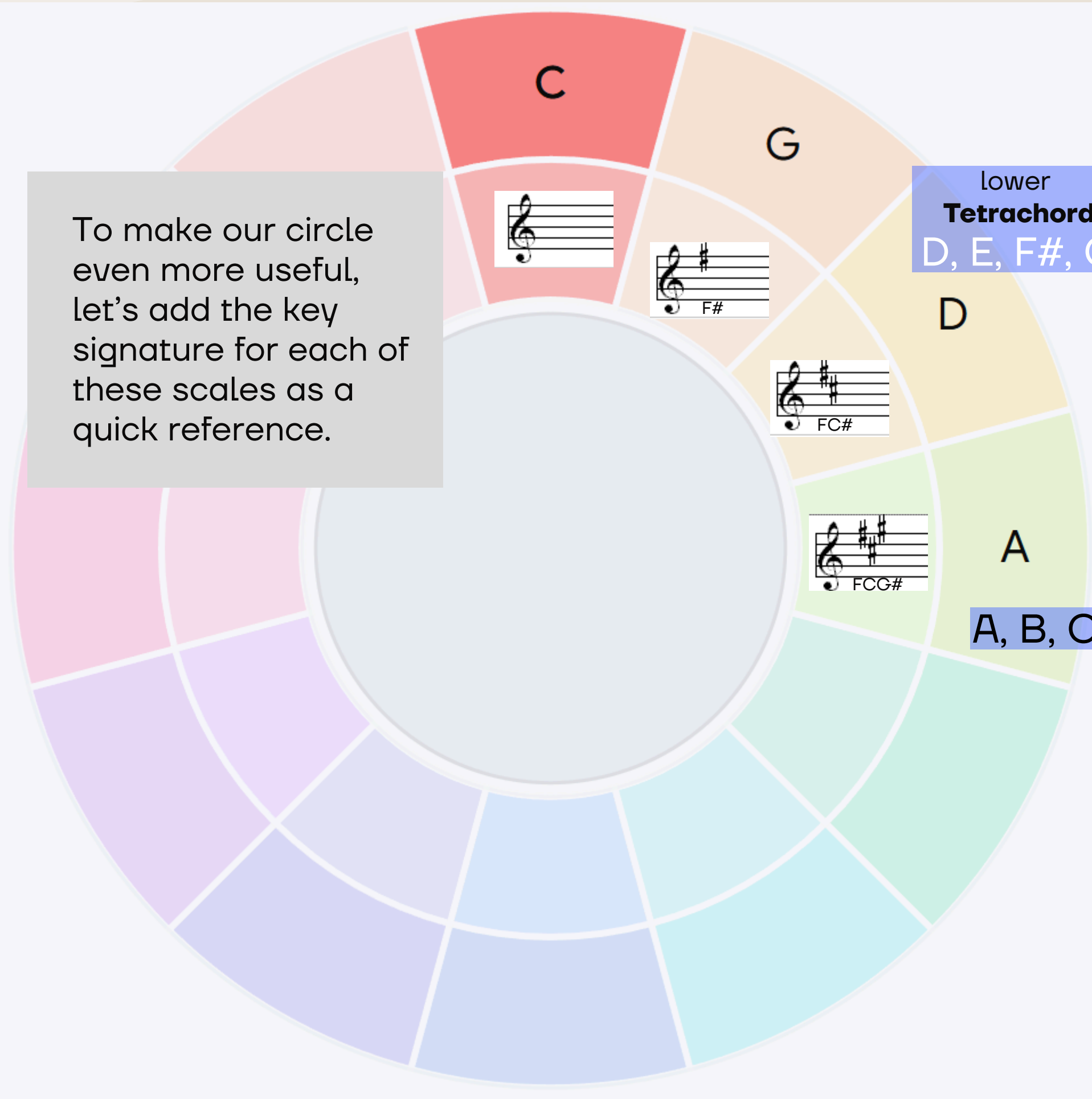
How do we know the notes of the Upper Tetrachord in a new scale?

In Grade 1 we learned that a major scale must use **each letter name once, in order**.

So if G Major starts with G, A, B, C it must continue with D, E, F, G. And we know it must follow the pattern T-T-S-T-T-T-S so the F must be an F#.

New Scale – A Major

To make our circle even more useful, let's add the key signature for each of these scales as a quick reference.



lower
Tetrachord
D, E, F#, G,

upper
Tetrachord
A, B, C#, D

- Using the upper tetrachord of D Major we know that the next scale in a clockwise direction is **A Major**.

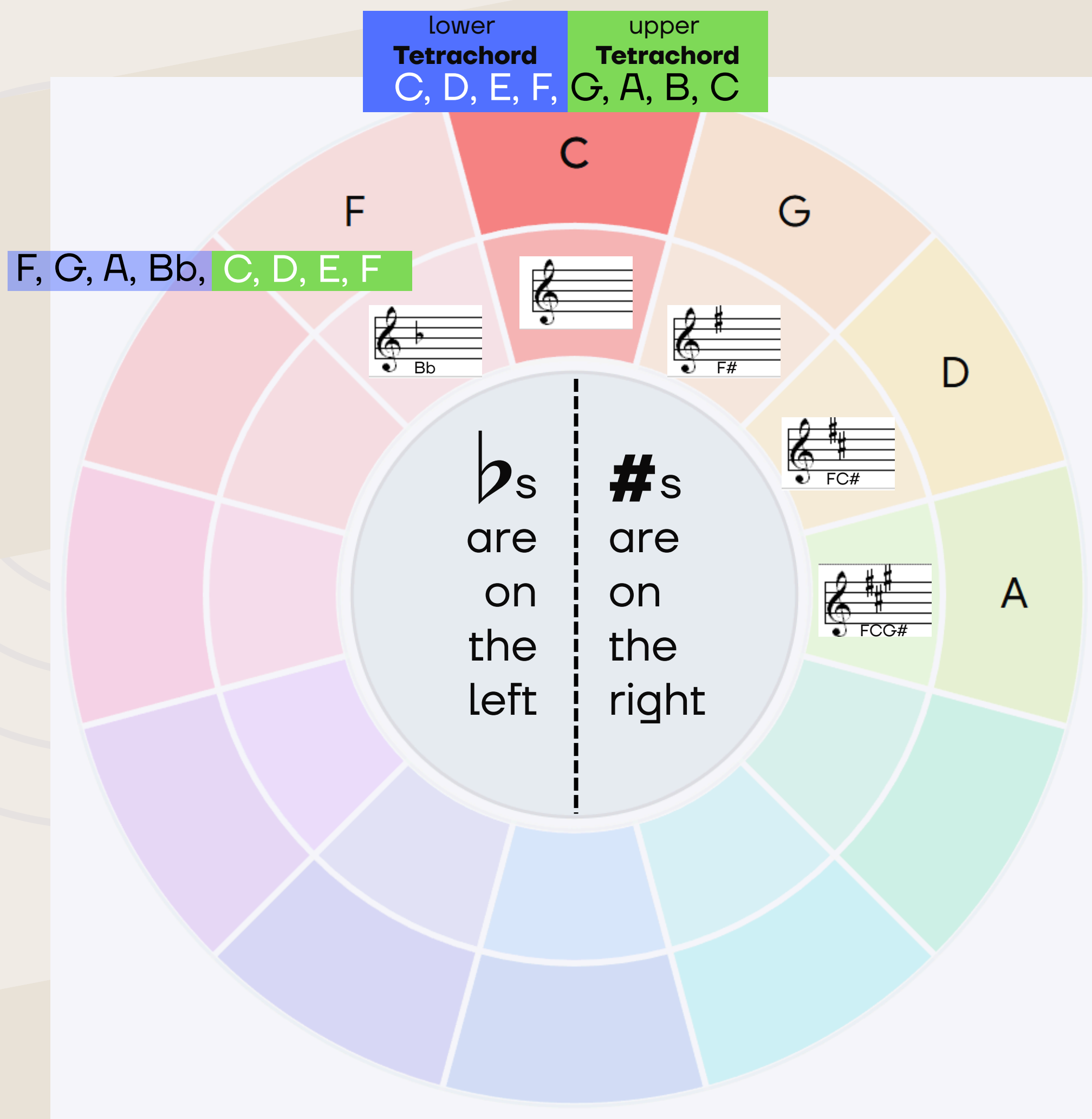
- We know that as we move clockwise, each scale will have one more sharp than the previous scale (until we get to 7 o'clock).
- So we need to add one new sharp to the upper tetrachord of this new scale.

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

- We can use our formula to work this out:

**Scale Tonic less one semitone =
name of the new sharp that is added**

I.e., **A** less one semitone = **G#**



Adding F Major

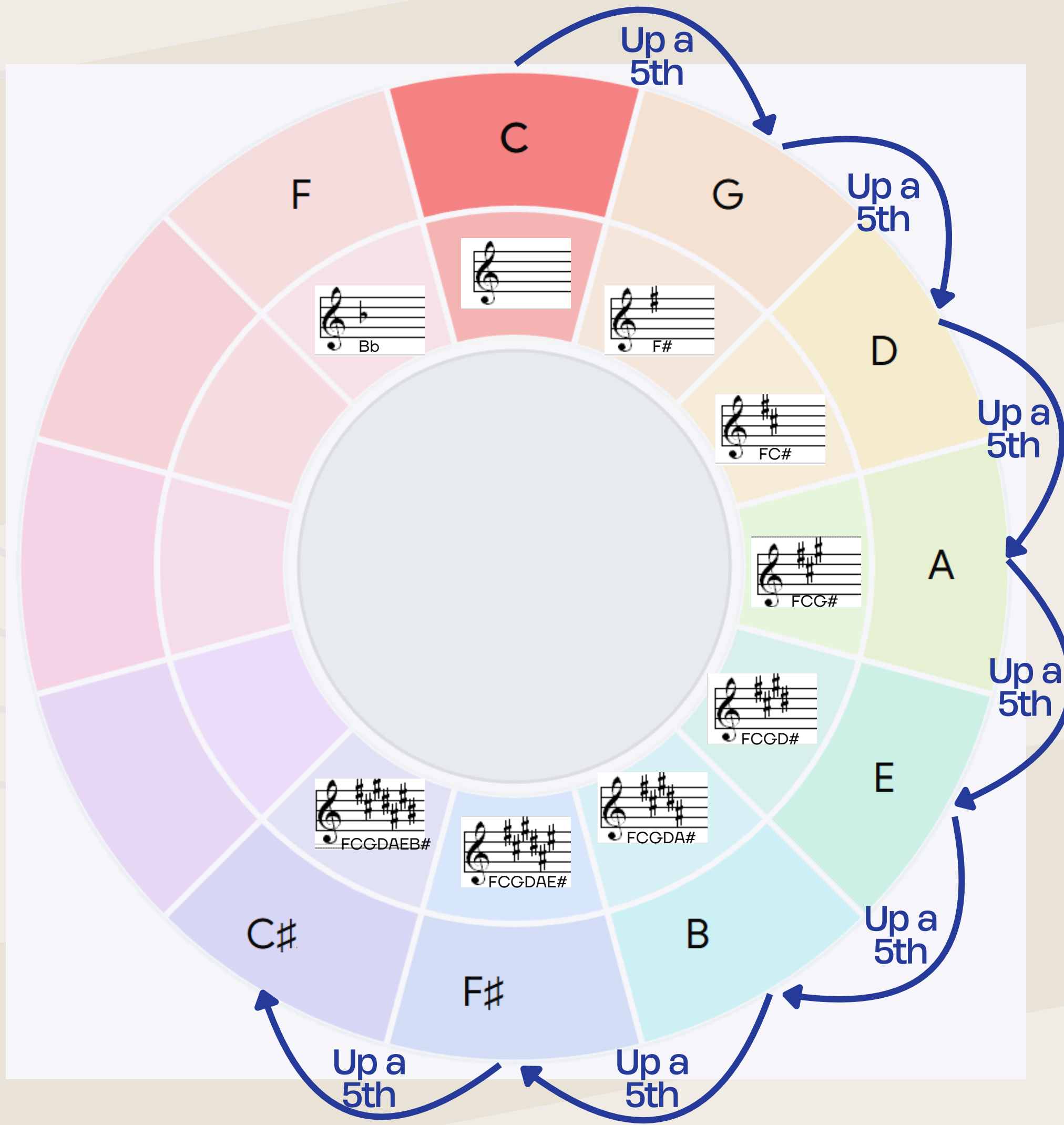
- The other Major scale that we learned is F Major.
- It has a Bb, so it goes on the left side of our circle as **all the scales with flats are on the left** side and **all the scales with sharps are on the right** side.
- Although we already know the notes in F Major, we can use our trusty tetrachords to figure them out.
- So the upper tetrachord of F Major is the same as the lower tetrachord of the scale to its right (C Major).
- We also know that in a Major scale we must use each letter once, in order. So we can write F, G, A and B as the lower tetrachord.
- We also previously learned that the B in F Major is actually Bb, so that it follows the pattern of T-T-S-T-T-S.

Completing the # Keys

- We can continue to use tetrachords to complete all the **sharp** keys, or
- We know that the interval between keys is a **fifth** (C to G is a fifth, G to D is a fifth, etc). Hence the name **The Circle of Fifths**.
- So a fifth above A is the next key. **A fifth is equal to 7 semitones**, so if we count 7 semitones above **A** we get **E**.
- A fifth (7 semitones) above **E** is **B**.
- A fifth (7 semitones) above **B** is **F#**.
- A fifth (7 semitones) above **F#** is **C#**.

F# Major has 6 Sharps?

- But there are only 5 black keys. So how does that work?
- Look closely at the sharps in F# Major. The 6th one is E#. There is no black key called E#. However, a # raises the note by a semitone, so **E# is also called F**.
- Similarly, C# Major adds a 7th sharp called **B#**, a B raised by a semitone is **C**.



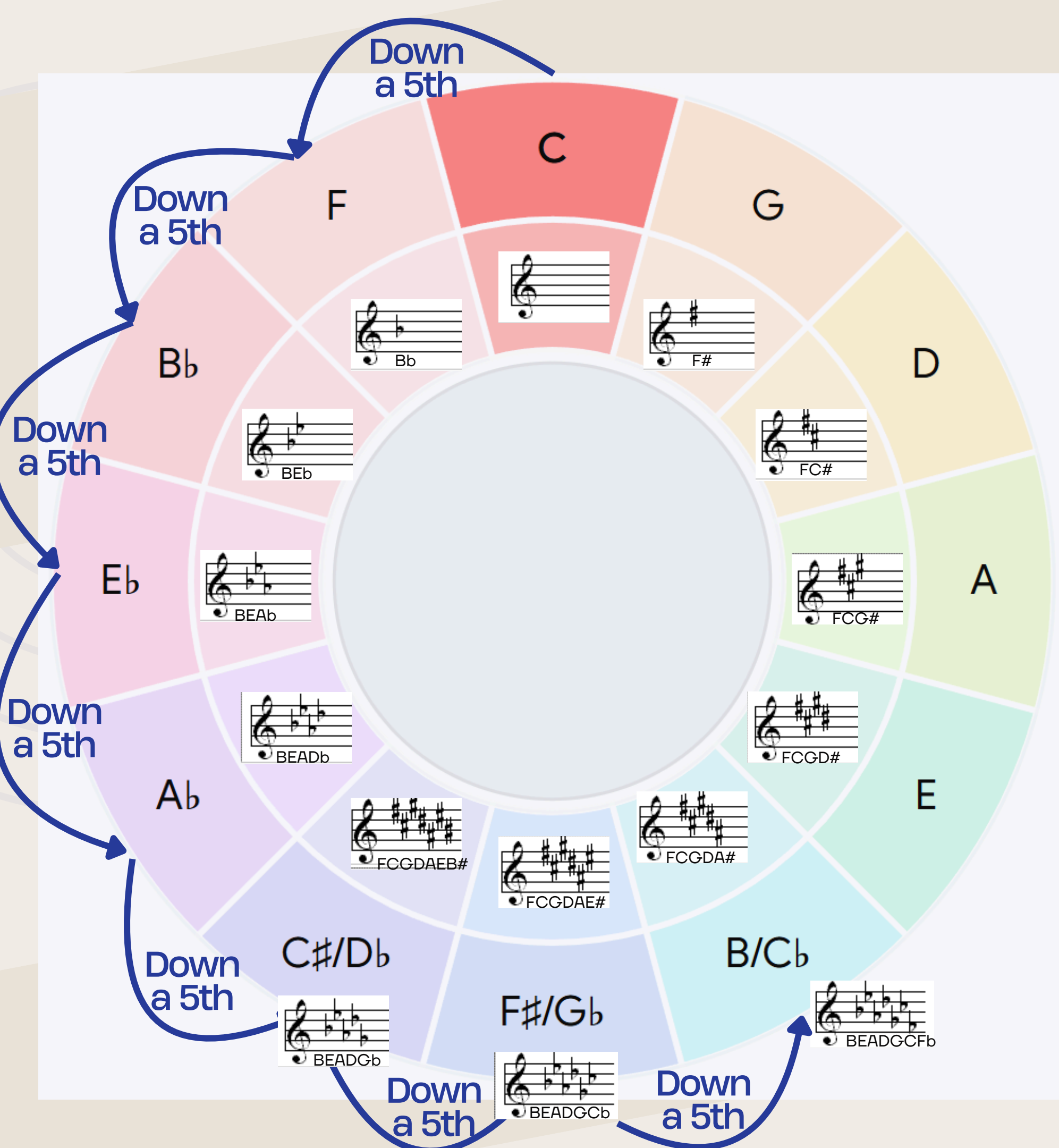
Completing the **b** Keys

- We can continue to use tetrachords to complete all the **flat** keys. But we know that the interval between keys is a **fifth** (C to F is a fifth). Hence the name **The Circle of Fifths**.

- A fifth (7 semitones) below **F** is **Bb**.
- A fifth (7 semitones) below **Bb** is **Eb**.
- A fifth (7 semitones) below **Eb** is **Ab**.
- A fifth (7 semitones) below **Ab** is **Db**.
- A fifth (7 semitones) below **Db** is **Gb**.
- A fifth (7 semitones) below **Gb** is **Cb**.

Gb Major has 6 Flats?

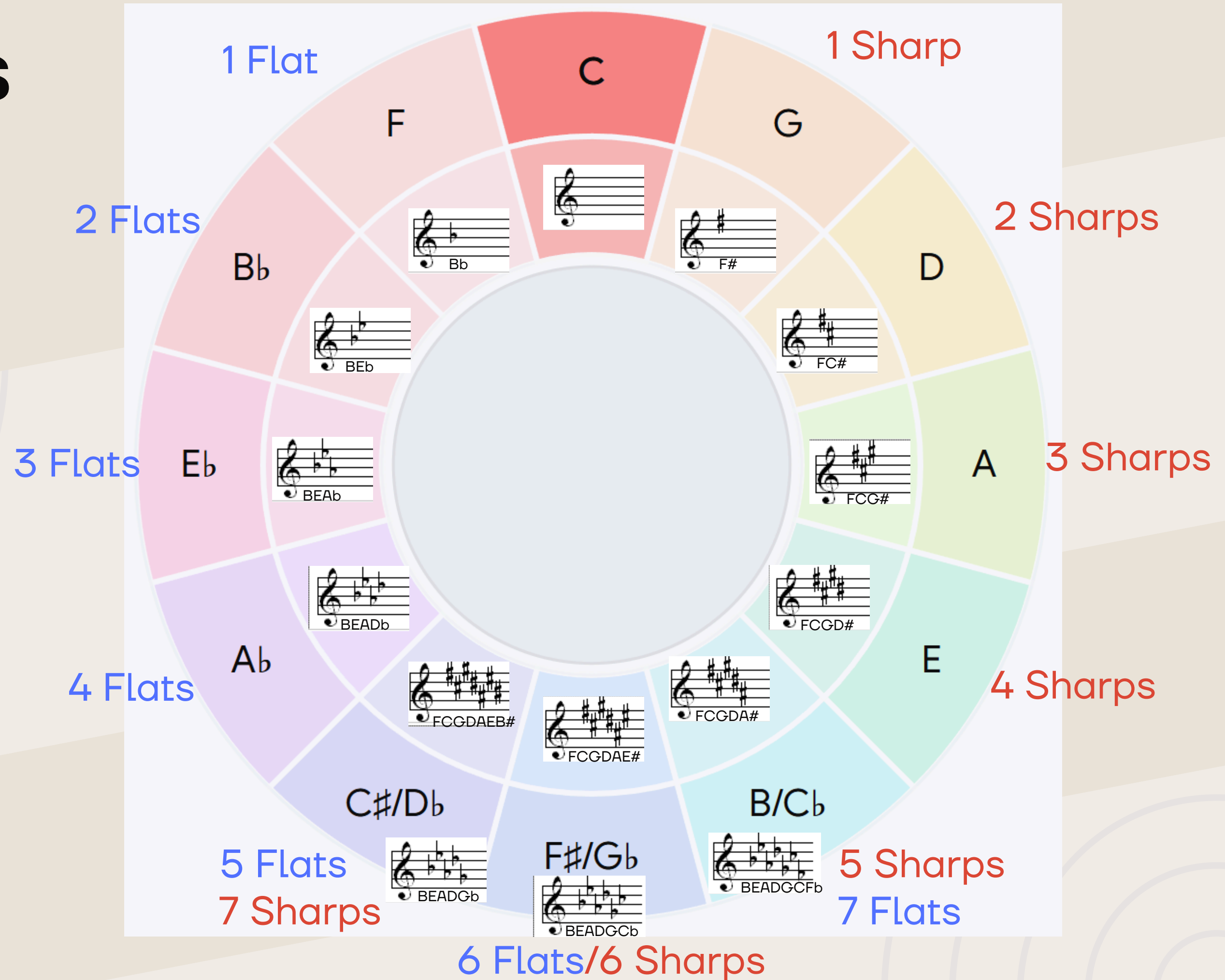
- But there are only 5 black keys. So how does that work?
- Look closely at the flats in Gb Major. The 6th one is Cb. There is no black key called Cb. However, a flat lowers the note by a semitone, so **Cb** is also called **B**.
- Similarly, the Cb Major scale adds a 7th flat called **Fb**, an F lowered by a semitone is **E**.



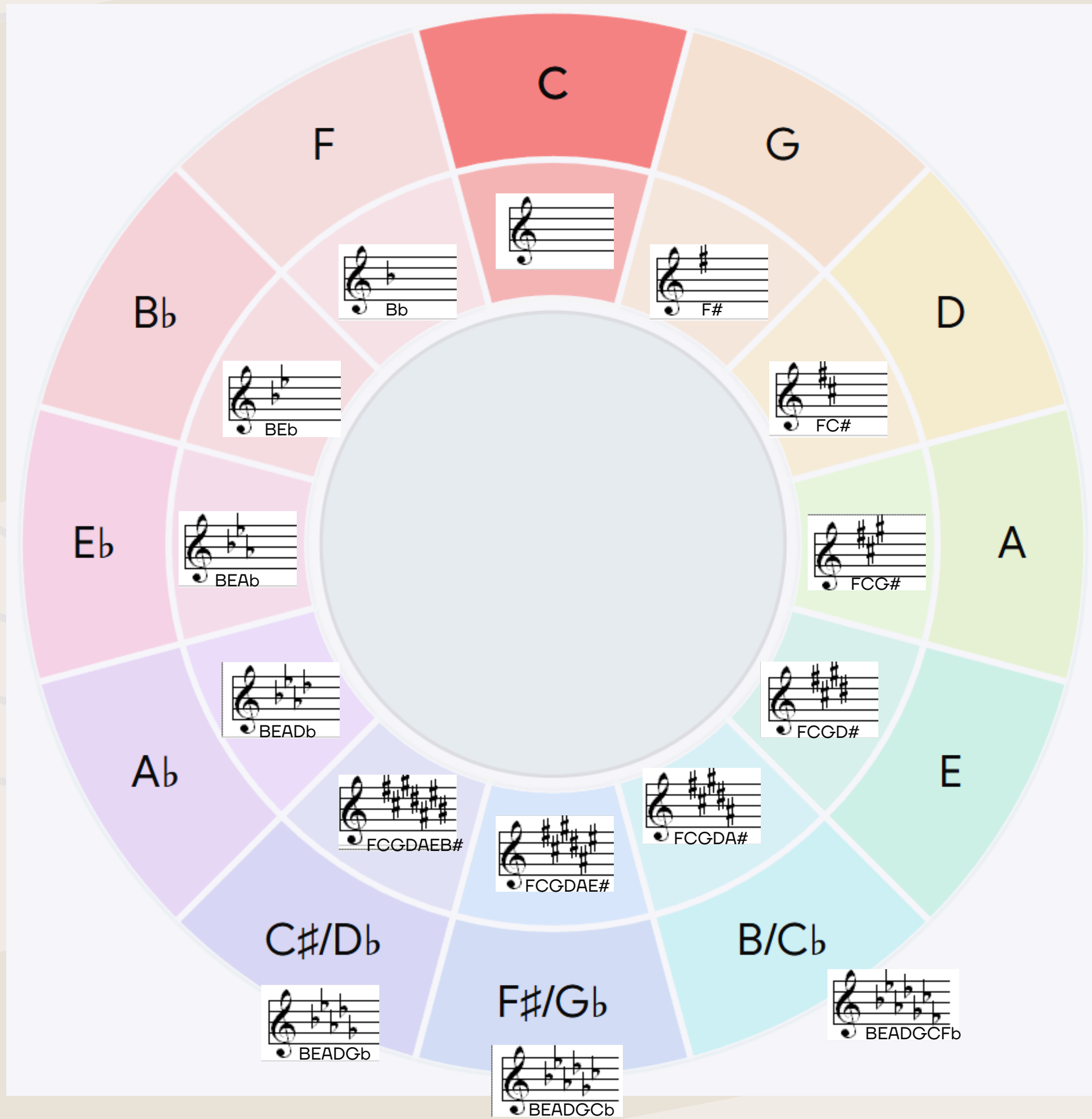
The Numbers

0 Sharps/Flats

Only Major Scales C, G, D, A and F are in the Exam

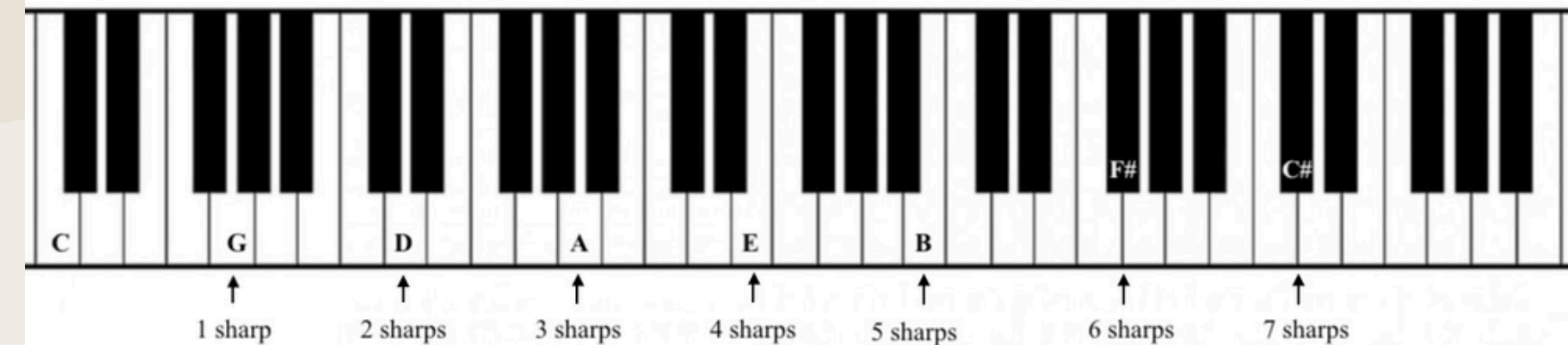


On a Keyboard



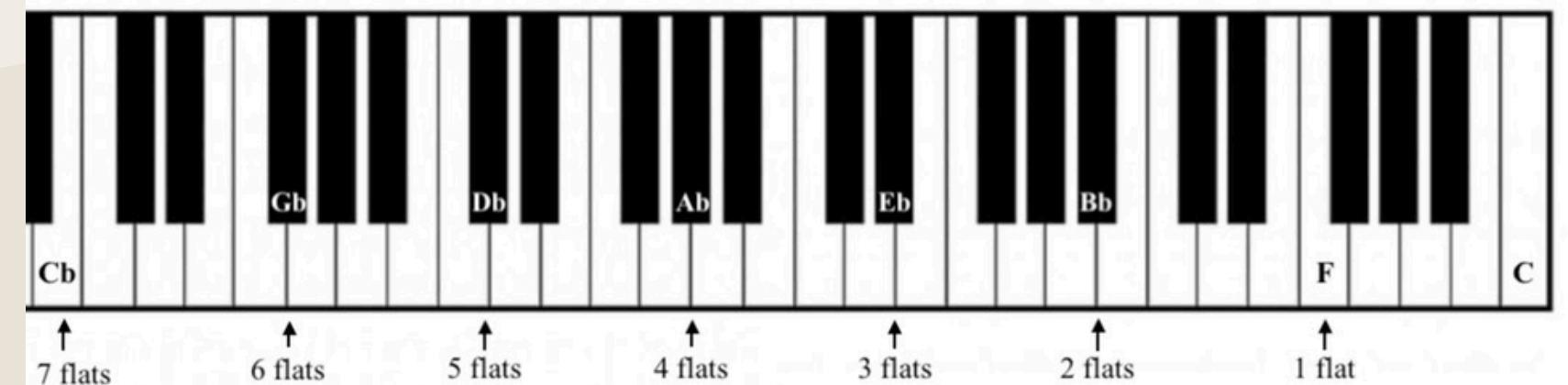
Sharps

Up a Fifth (7 semitones)

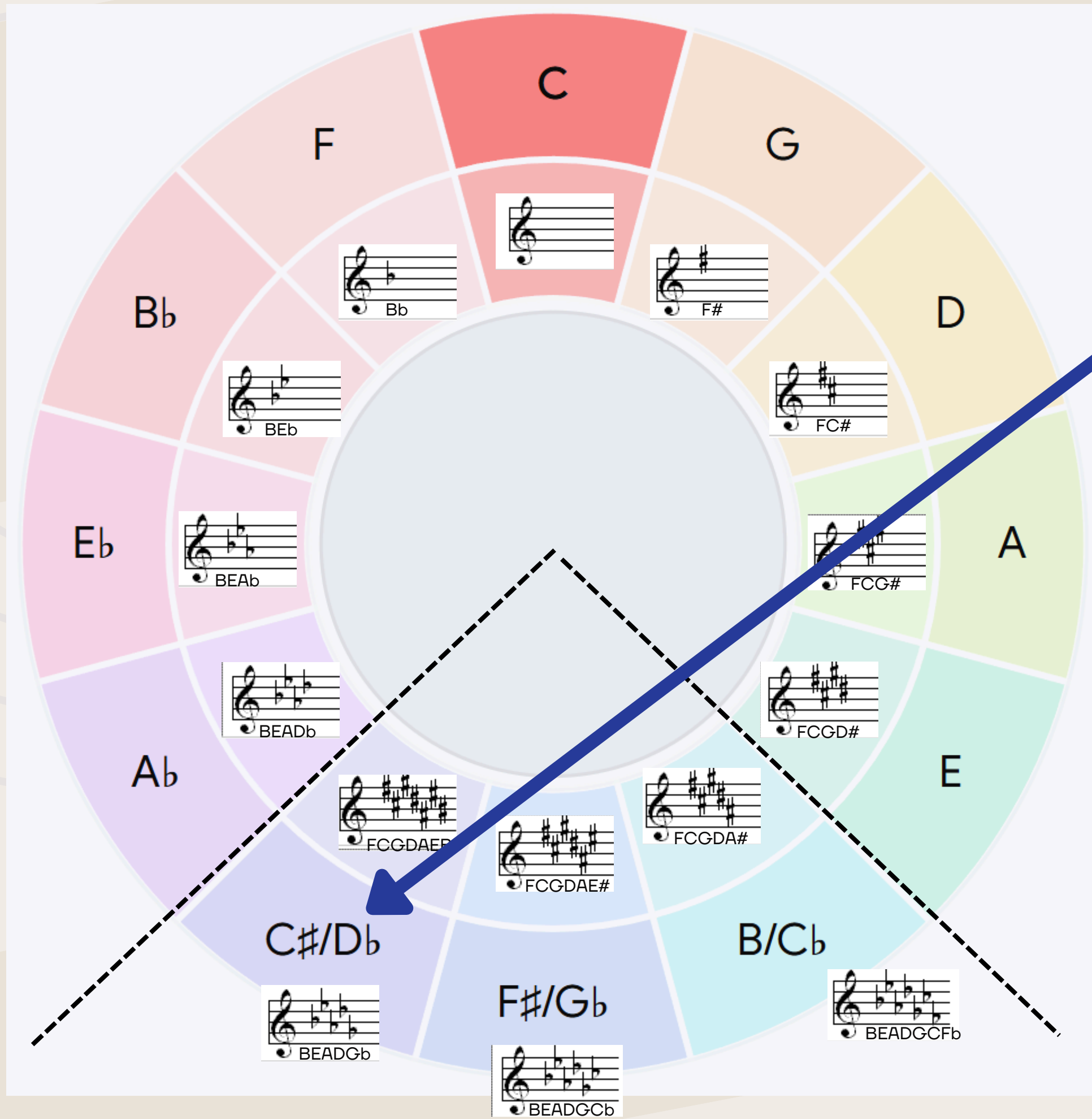


Flats

Down a Fifth (7 semitones)



12 Keys with 15 Names?

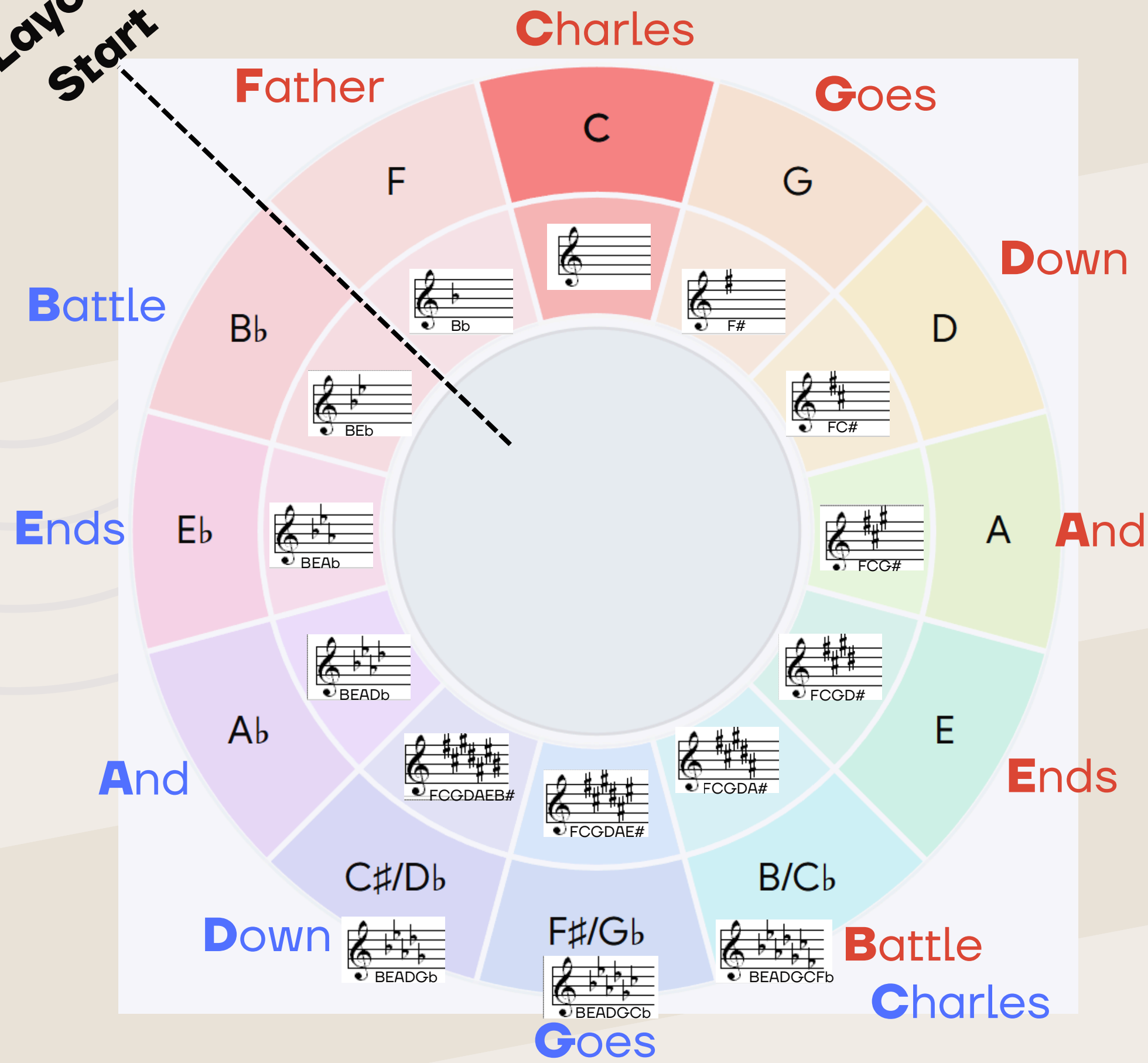


- There are only 12 pitches on a keyboard, and therefore 12 different Major keys.
- **C# and Db** are both names for the same key. When we first learned the names of the black keys we learned that this is called **enharmonic**. The F#/Gb scale and the B/Cb scale are also enharmonic.
- For **F#/Gb** you can use whichever name you prefer. F# Major is correct, and so is Gb Major.
- **Neither C# Major nor Cb Major are common keys in music**, as musicians almost always prefer their simpler enharmonic equivalents, Db Major (5 flats) and B Major (5 sharps).
- So, why have keys with 7 sharps or 7 flats, and when would you use them? Well, if you are transposing down from Gb Major, you could use Cb Major and add one new flat, or you could use B Major and rewrite all the music using sharps. So Cb Major is much less work in that case.
- Similarly, if transposing up from F# Major, you would probably use C# Major rather than Db Major, simply because it is less work.

Here's an acronym to help memorise the Circle of Fifths:

Father Charles Goes Down And Ends Battle

Layout
Start



You can use this acronym to remember:

1. The layout of the Circle of Fifths (as shown on the left).

2. The Order of Sharps:

Father Charles Goes Down And Ends Battle

FCGDAEB#

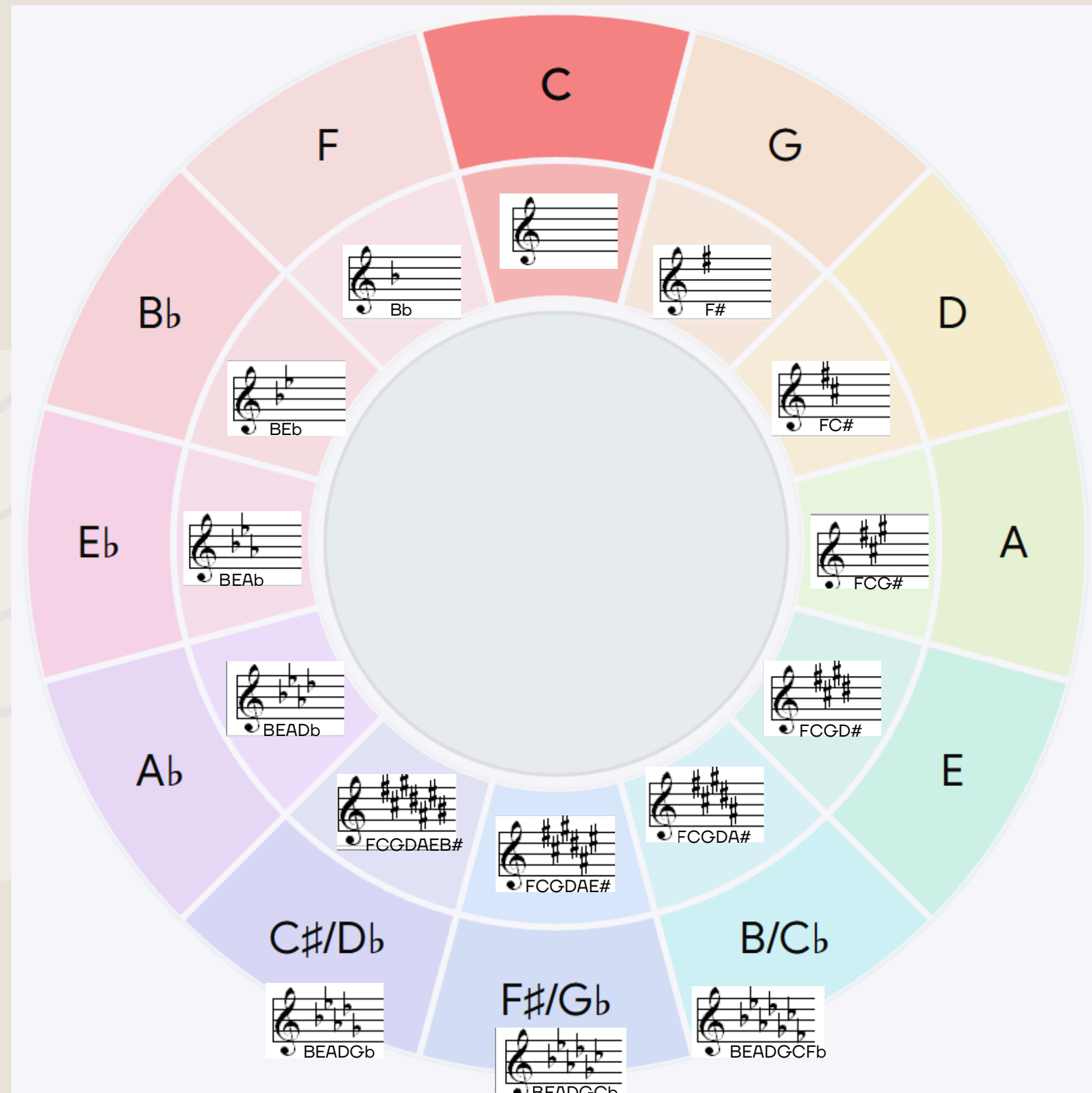
3. The Order of Flats: (reverse the phrase)

Battle Ends And Down Goes Charles Father

BEADGCFb

Alternative Acronyms

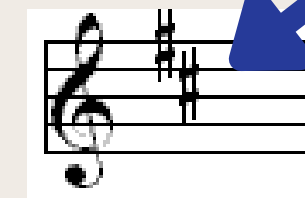
There are several alternative acronyms. My favourite:
Father **C**hristmas **G**ets **D**iarrhoea **A**fter **E**ating **B**iscuits
... but it doesn't reverse very well.
Also, Bb, Eb, Ab and Db (on the left side) spells **B E A D**



How to Get the Key from the Key Signature

Maggie's tip:

For Sharps: The **last sharp** in the key signature plus one semitone equals the key.

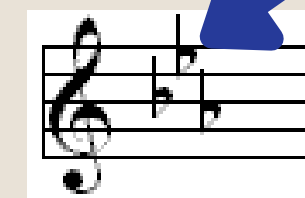


In this example, the last sharp is:

C# + 1 semitone = D

So the key is D Major.

For Flats: The **second last flat** in the key signature equals the key.



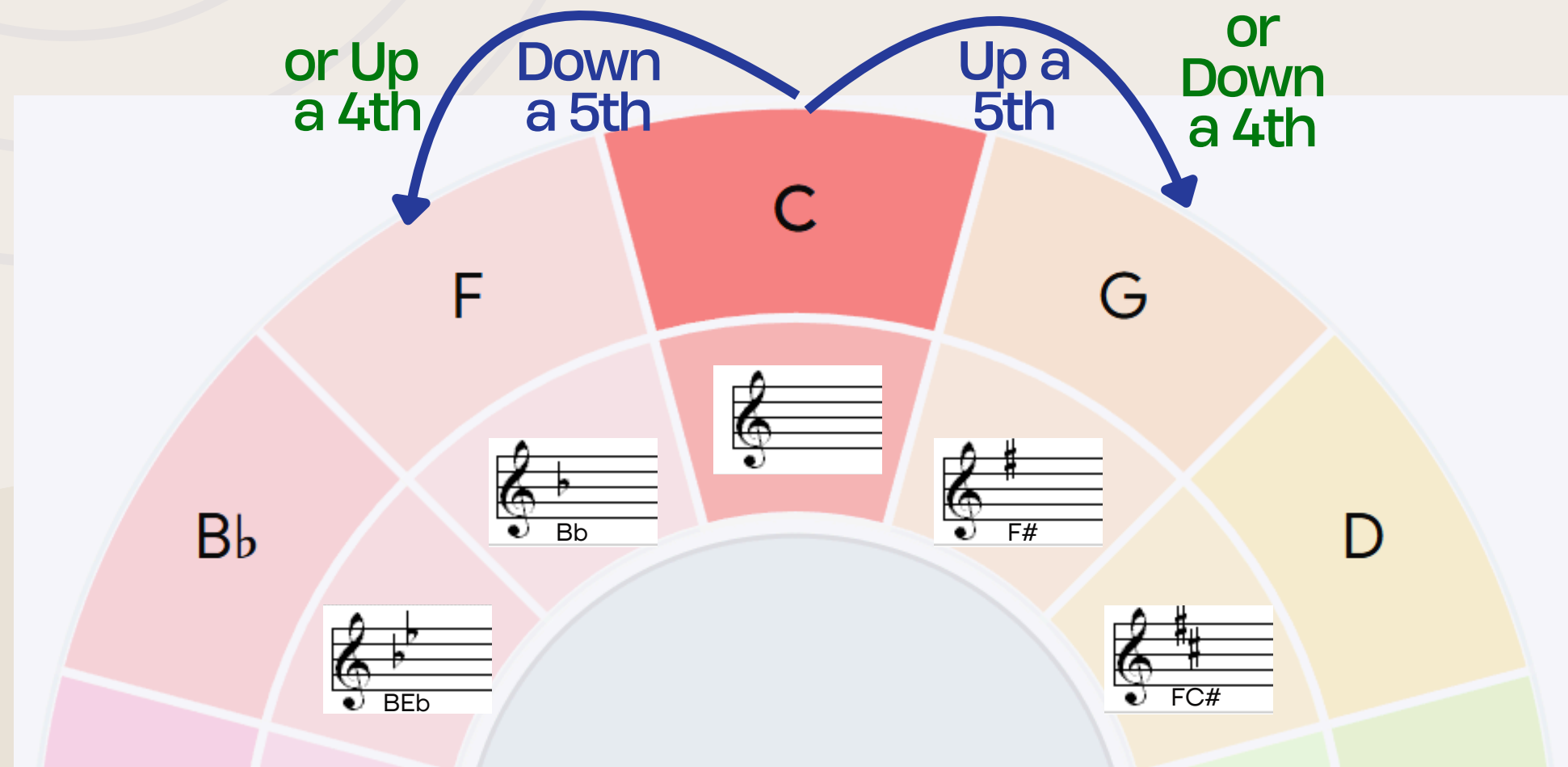
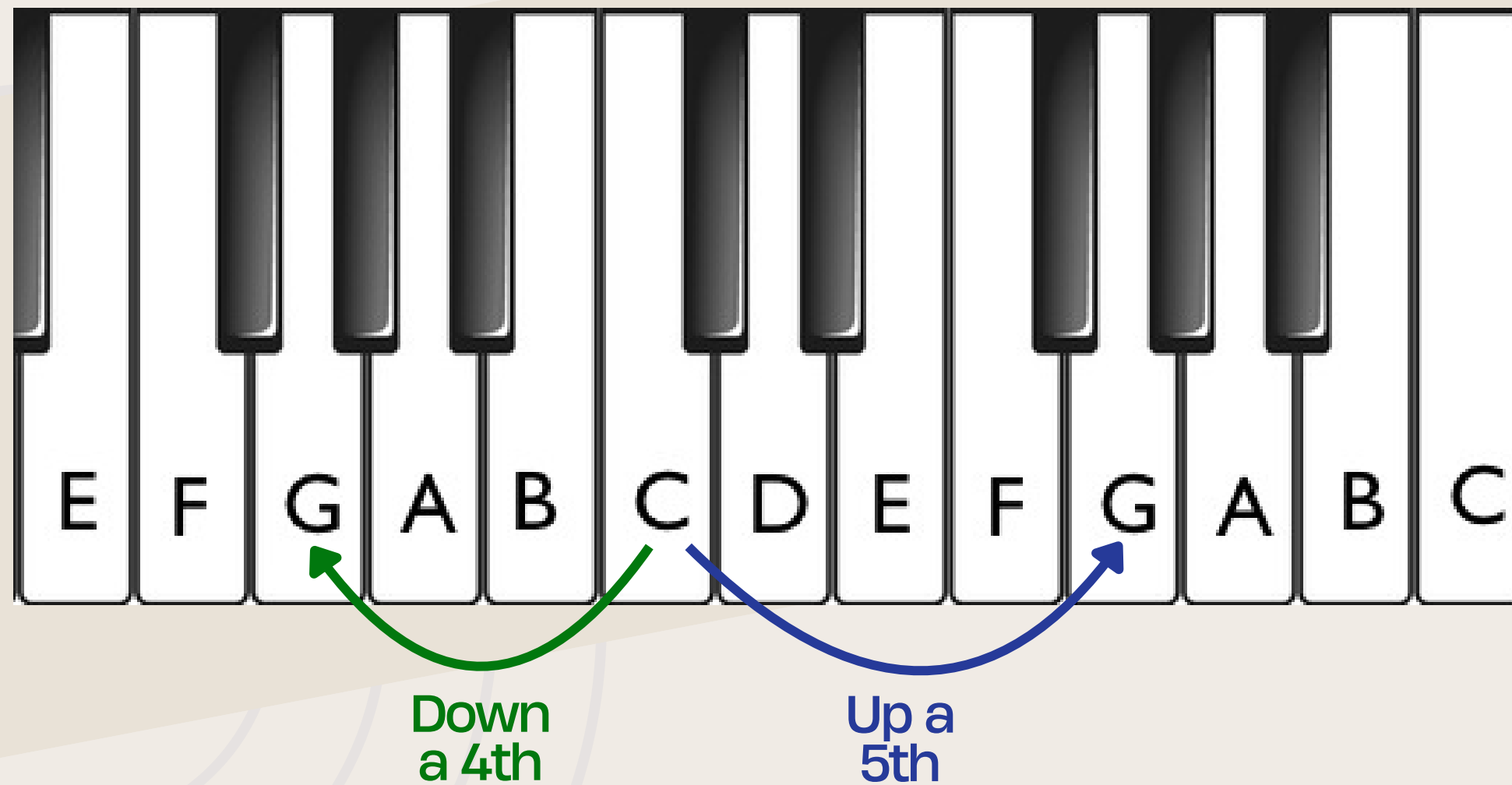
In this example, the second last flat is:

Eb

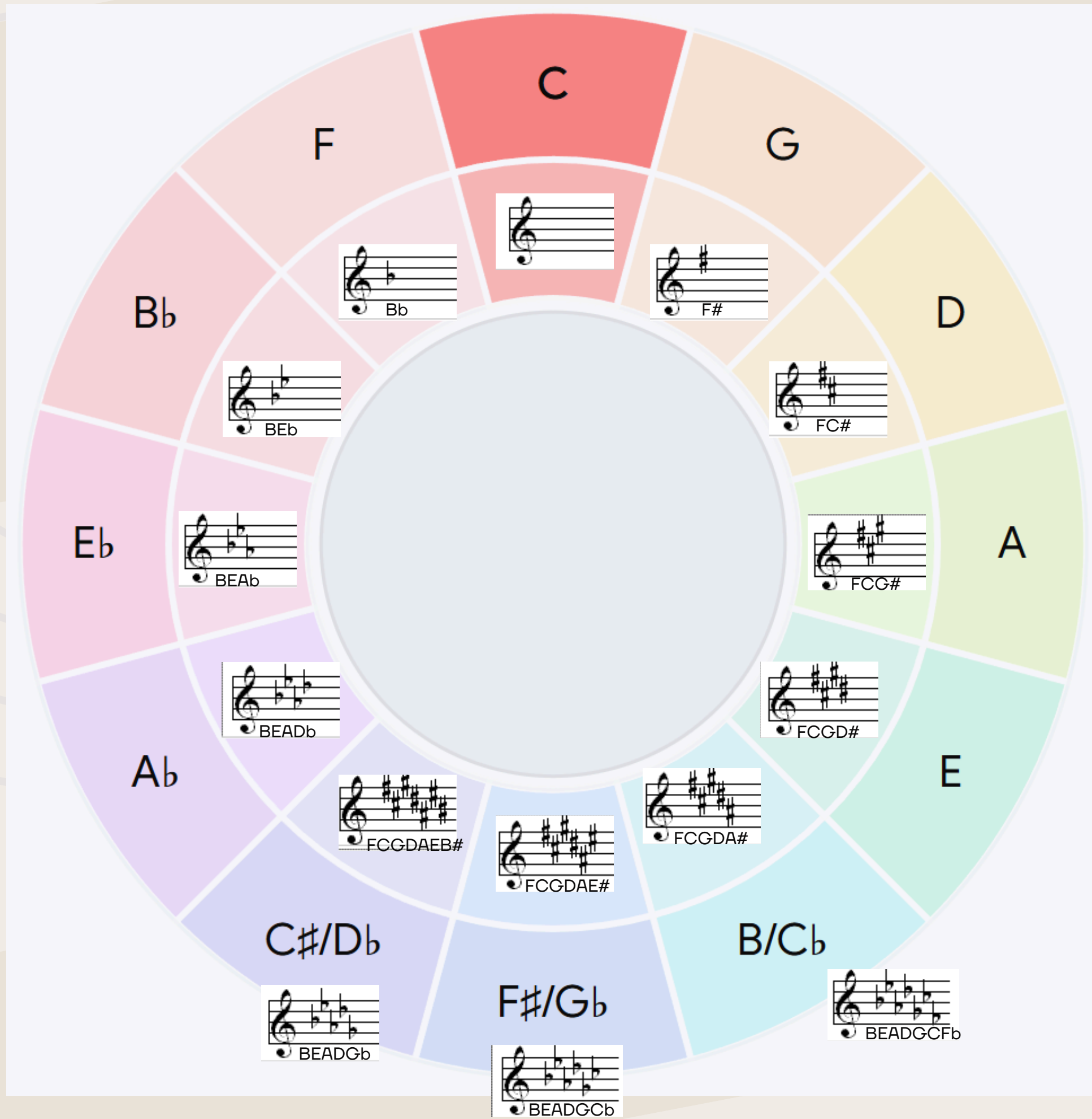
So the key is Eb Major.

Why is the Circle of Fifths also called the Circle of Fourths?

- There are only 12 pitches on a keyboard that repeat across octaves.
- If you start at any note and count 12 semitones up, you reach the same note, an octave above.
- Similarly, if you start at any note and count 12 semitones down, you reach the same note, an octave below.
- We know that an **interval of a fifth is 7 semitones**. If you start at C and count 7 semitones up, you reach G an octave above.
- An **interval of a fourth is 5 semitones**. So if you start at C and count 5 semitones down, you reach G an octave below (because $7 + 5 = 12$).
- So, in terms of finding a particular note, when moving clockwise on the circle, a fifth up and a fourth down reach the same note.
- Similarly, when moving anticlockwise, a fifth down will locate the same note as a fourth up.
- Personally, I find fifths easier to remember with clockwise being up and anticlockwise being down.



Uses for the Circle of Fifths



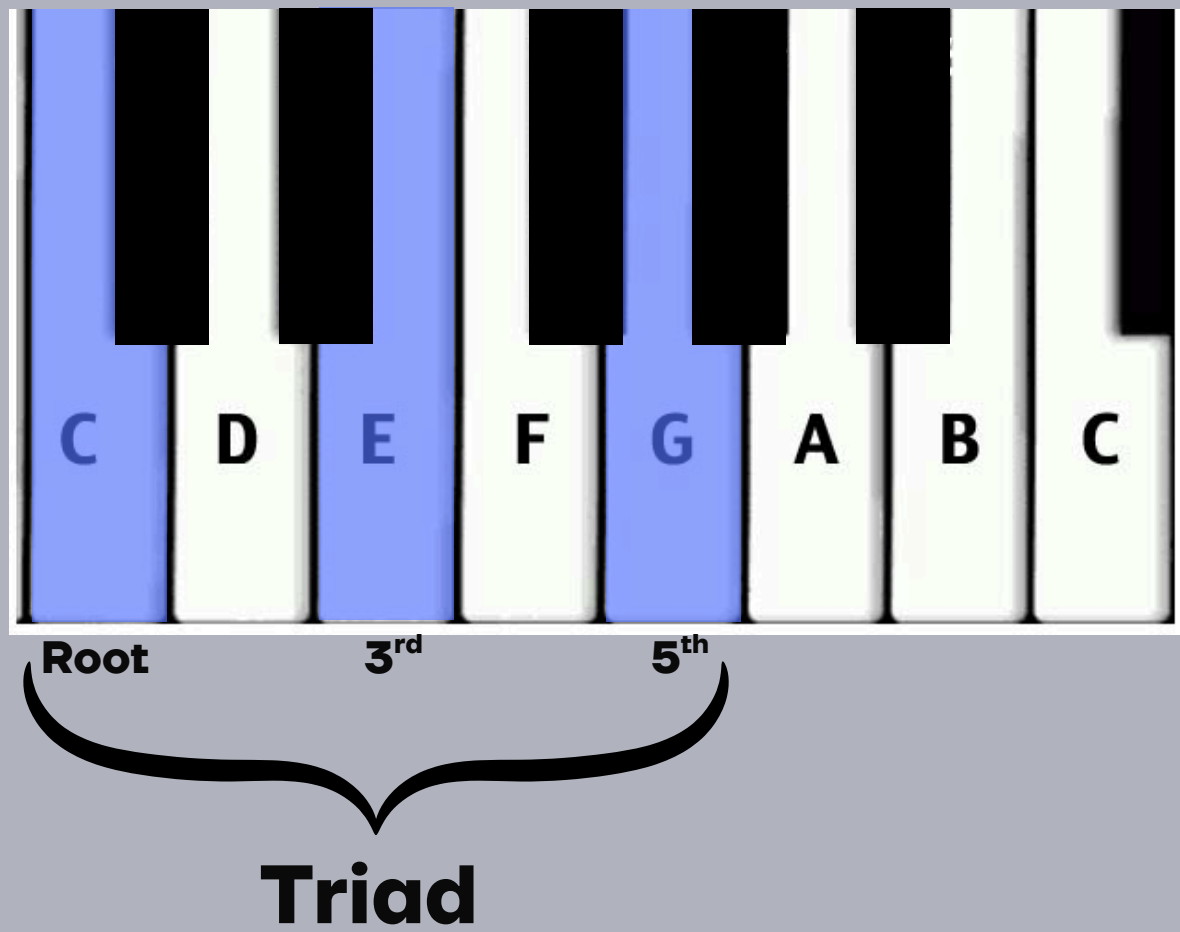
- Easy to remember all the keys and key signatures.
- Easy to remember which sharps and flats are in a key. Critical for when you're playing an instrument.
- **Harmony** - Notes that sound good together are near each other on the circle. For example, there are 3 major chords in the C Major scale: C, F and G. On the circle, F is to the left of C and G is to the right of C. These 3 chords sound good together. This works wherever you are on the circle. So in A Major the 3 major chords are D, A and E and they all sound good together.
- Minor chords are easily added to the circle and we will do this when we start discussing minor chords.
- There are lots of other uses once we get deeper into music theory (the relationships of most chord types form patterns on the circle).
- Other uses: transposition, intervals, chord structure, etc. These are for higher music theory grades.

Tonic Triads and Scales in Two Octaves

Lesson 2

As we learned in Grade 1, a **Tonic Triad** is a three-note chord built on the tonic (first degree) of the scale, with notes a third and fifth above it.

For example, in the C major scale:



We learned the following **Tonic Triads** in Grade 1:

Scale	Tonic Triad Chord Name	Tonic Triad Chord Name (short)	Notes
C major	C major	C	C - E - G
G major	G major	G	G - B - D
F major	F major	F	F - A - C

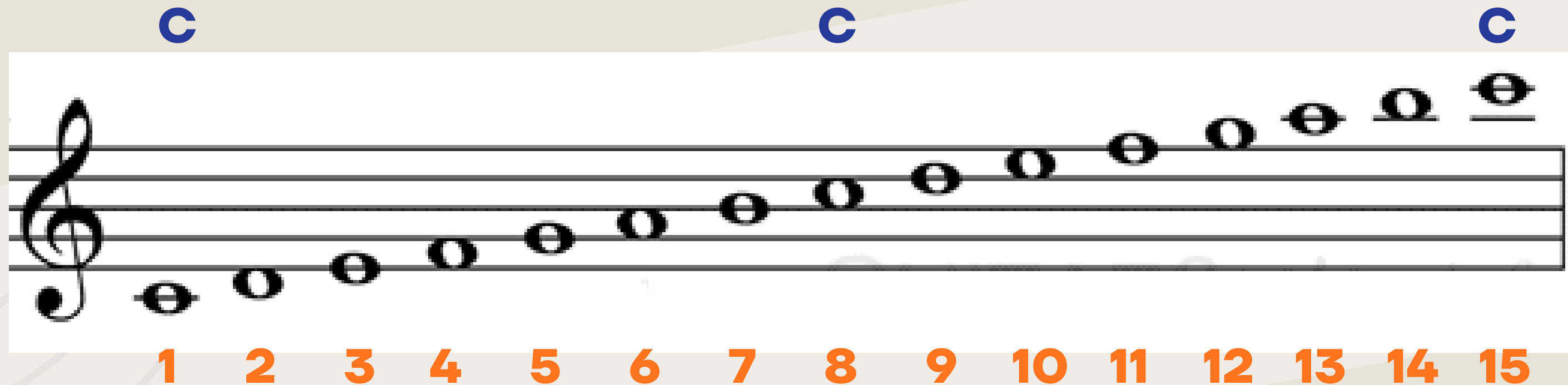
And now we've learned **two new major scales**, we can infer:

D major	D major	D	D - F# - A
A major	A major	A	A - C# - E

Scales in Two Octaves

In **one octave** the scale degrees are **1 through 8**.

When working **with two octaves** the scale degrees are **1 through 15** as shown below for **C major**:



Scale Degrees

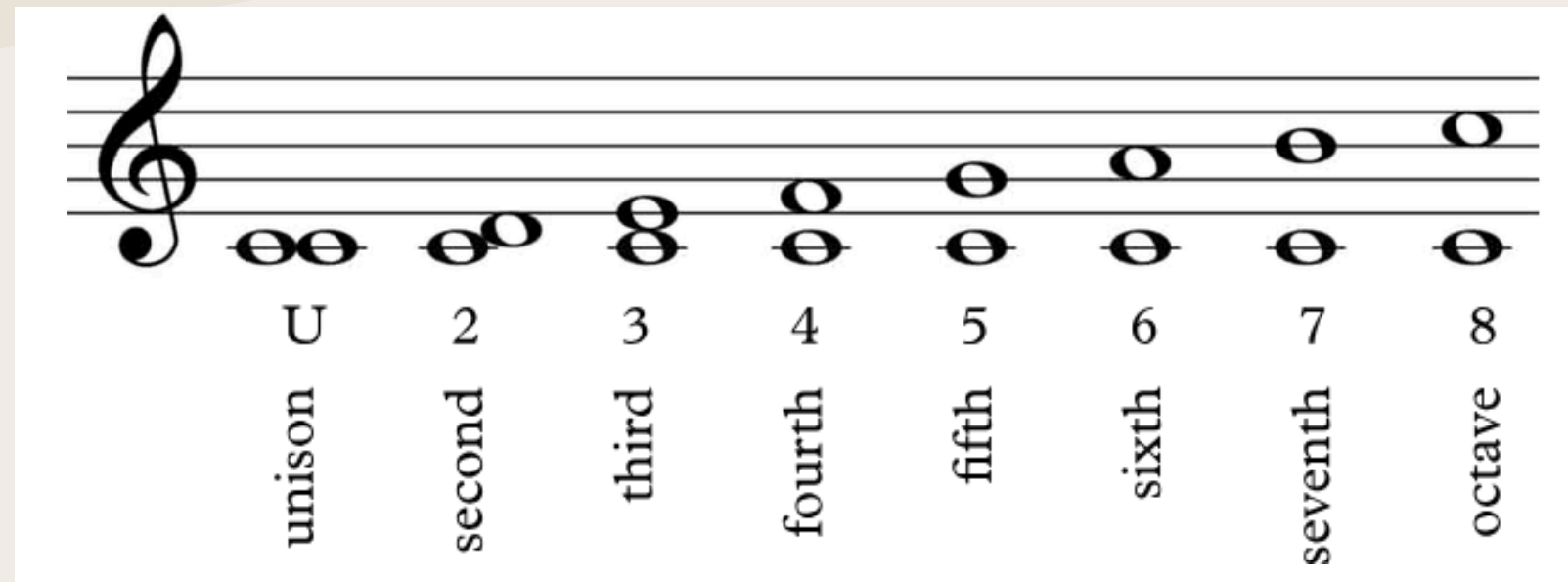
When working with **three octaves**, it would be accurate to continue counting from **16 through 22**. However, the size of the staff means that you are unlikely to encounter scale degrees above 15.

Intervals

Lesson 3

In Grade One we learned that an **Interval** describes the distance between two notes (letter names).

We count the letter names from the bottom note through to the top note (including themselves) to find the name of the interval. For example, C to E is a third (three notes C, D and E).



This is called the **Interval Number**.

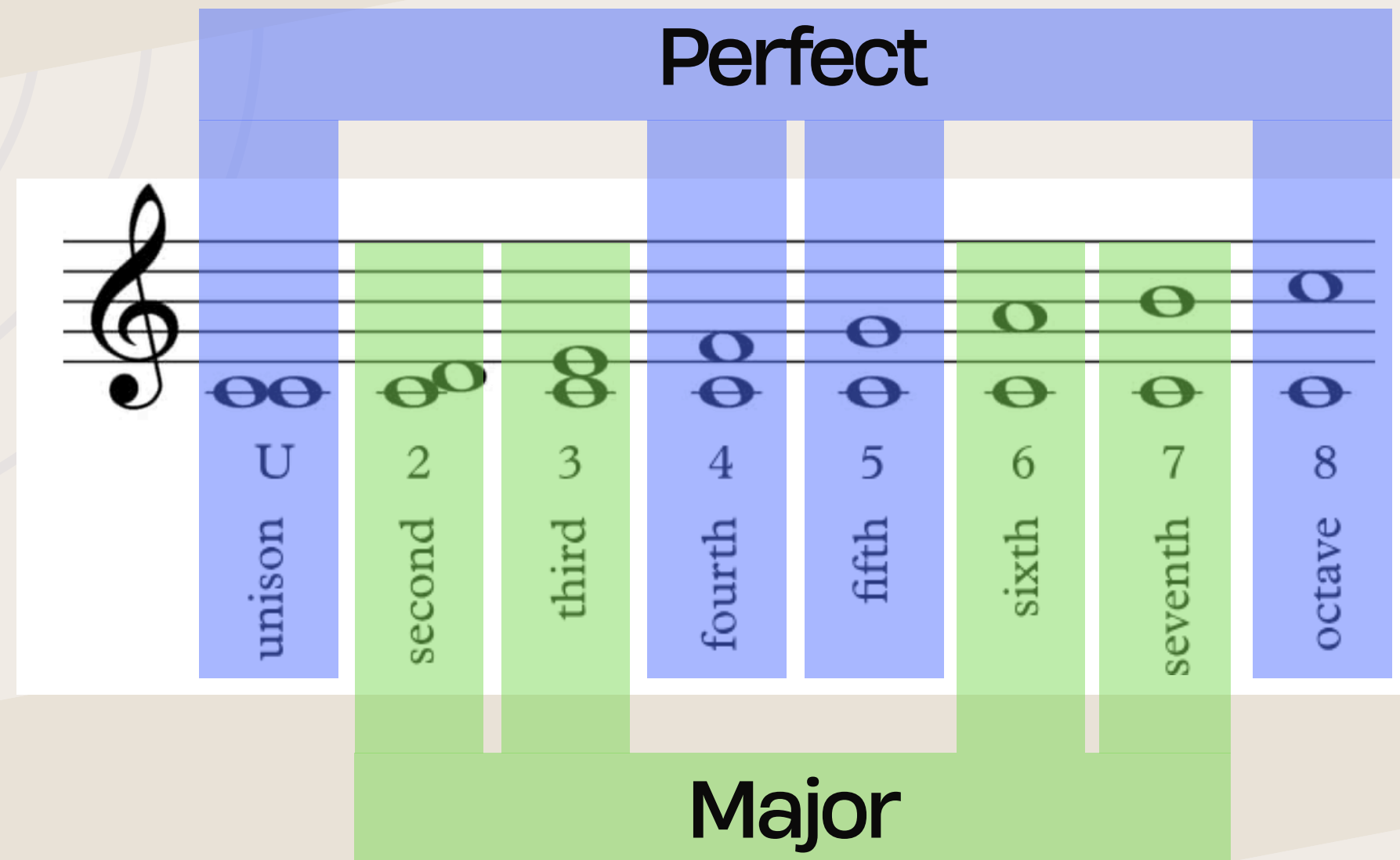
We can also describe an Interval's **Quality**, and we'll learn about that on the next slide.

Interval Quality

While the interval number (such as a 3rd or a 5th) tells you how far apart two notes are on the musical staff, the **Quality** of an interval describes its **flavour or emotional colour**. For example:

- Major (**happy**)
- Perfect (**neutral**), or
- Minor (**sad**).

When considering an interval in a major scale, the intervals **unison, fourth, fifth** and **octave** are described as **Perfect**.

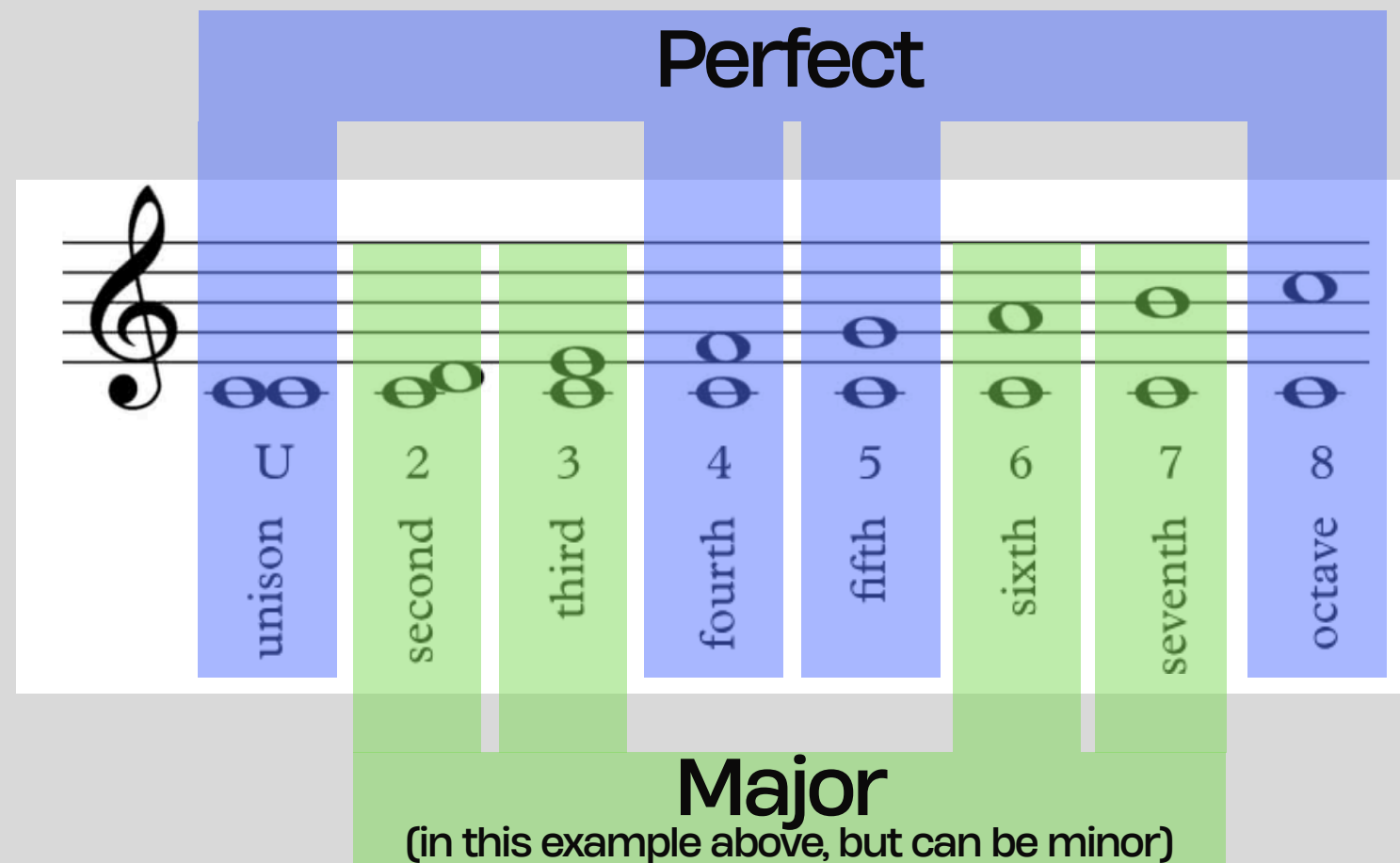


When writing an Interval's Quality and Number, **always write the Quality first**. For example:

- Perfect fifth.
- Major third.

When considering an interval in a major scale, the intervals **second, third, sixth** and **seventh** are described as **Major**.

Here's the diagram and types of Interval Quality from the previous page for reference:



Remember the types of Interval **Quality**:

- **Major** (happy)
- **Perfect** (neutral), or
- **Minor** (sad).

How to Change a Major Interval (happy) into a Minor Interval (sad)

A **minor interval** is exactly **one semitone smaller than a major interval**.

Only major intervals (2nds, 3rds, 6ths and 7ths) can become minor.

How: Lower the top note of the interval by one semitone. For example:

- The **Major third** (happy) in the diagram above shows C to E.
- Lowering the top note by one semitone changes the E to an Eb.
- So C to Eb is a **Minor third** (sad).

Revision



Complete
Exercises **9-13**

The Minor Scale of A

Lesson 4

Why Have a Minor Scale?

- Music in a **major scale** sounds **bright and cheerful**.
- Music in a **minor scale** sounds **sad and wistful**.

Are there 2 Minor Scales or 3?

The textbook states there is:

- only one type of Major Scale (absolutely right), and
- two types of Minor Scales:- **Harmonic Minor** and **Melodic Minor** (which is not the entire story).

There is a **third type of Minor Scale called the Natural Minor**. It is not covered in the textbook or the AMEB exam because it is not used in classical music. However, it is used in pop, rock, jazz and other types of music, and was in use before the Harmonic or Melodic minors were created.

It is also the easiest to understand, and shares most of its properties with the other two types.

So we're going to divert from the textbook and cover it first!

Each of the twelve Major Scales has a related Minor Scale (its **relative minor**) that uses the same key signature. Any major scale always sounds good when played together with its relative minor scale.

Scale degree 6 of a major scale is always the start of its relative minor scale:

C major scale

1 2 3 4 5 6 7 8

C D E F G A B C

A natural minor scale

1 2 3 4 5 6 7 8

A B C D E F G A

Scale Degrees

So A minor is the **relative minor** of C major. And neither of these scales has a key signature.

A minor is abbreviated as Am. Whereas C major is abbreviated as C.

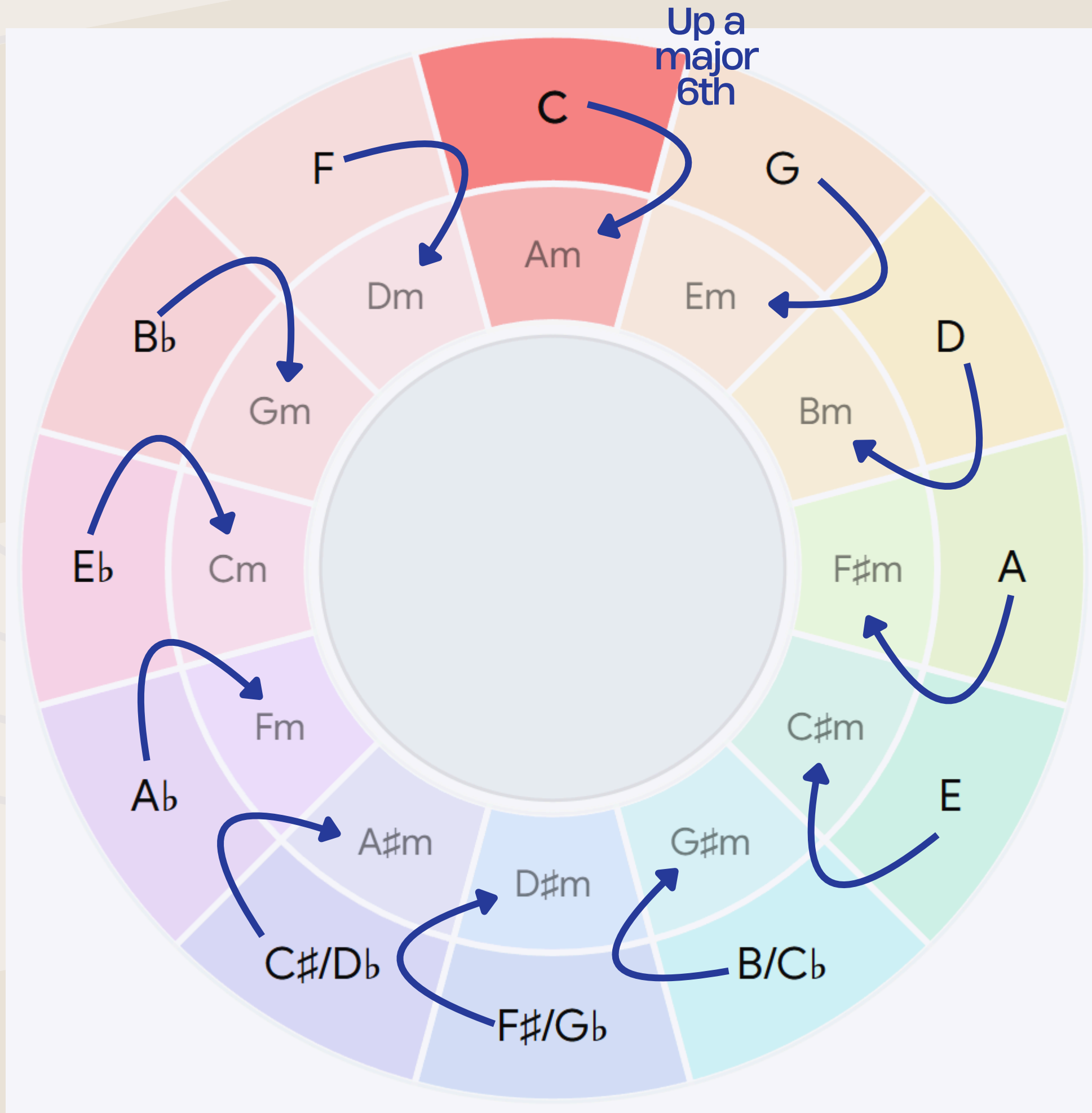
Q. Why is the above “A natural minor scale” and not one of the other types of minor scale?

A. Because it uses all the same notes as its relative major scale with no added sharps (the Harmonic minor adds one sharp and the Melodic minor adds 2 sharps).

Circle of Fifths – Relative Minor Keys

Let's add the minor scales. We know that:

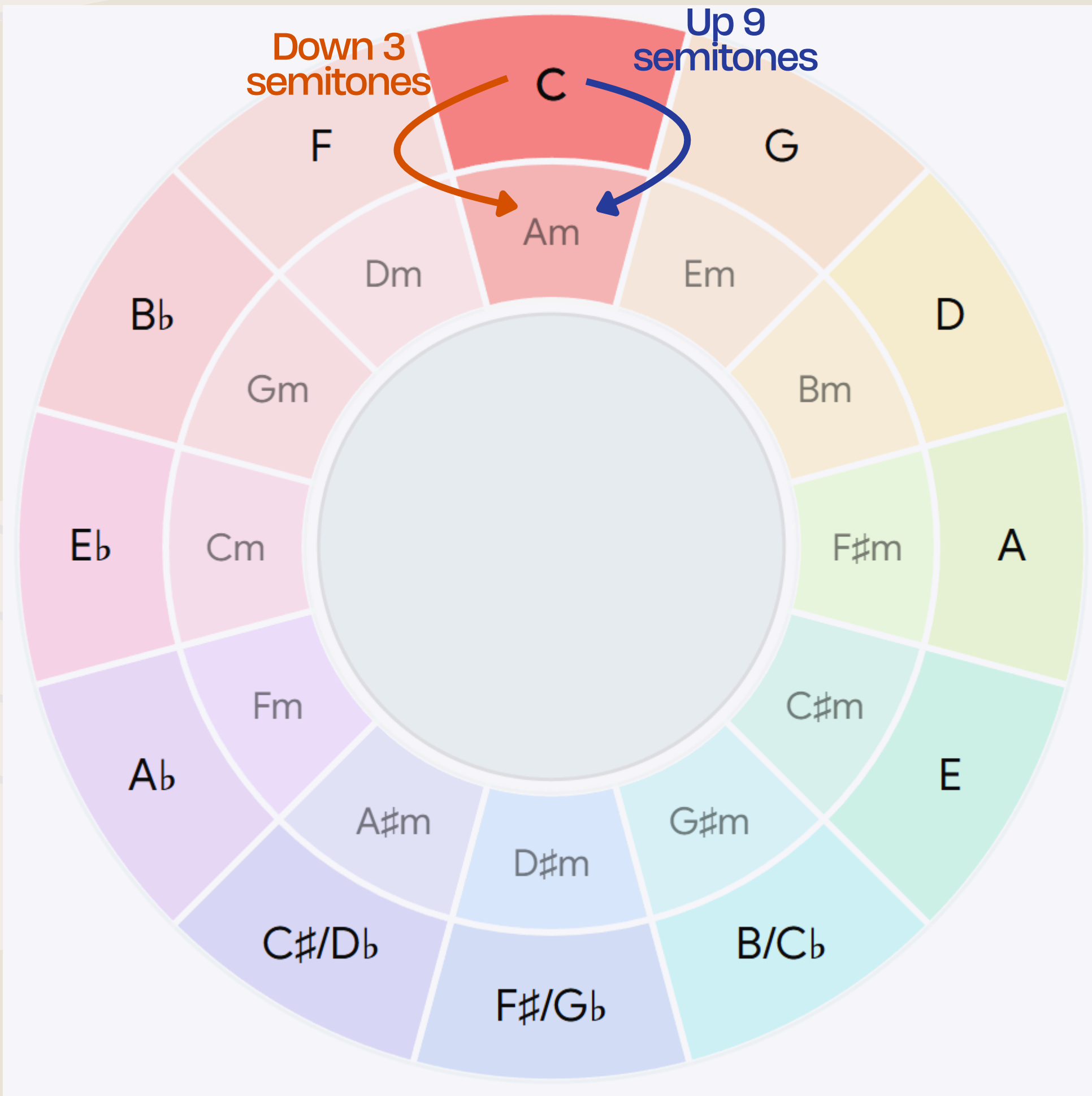
- Every major scale has a **relative minor** scale (which sound good when played together).
- **Scale degree 6** of a major scale is the start of its relative minor scale.
- In terms of interval, **scale degree 6 is a major 6th** above the tonic of the major scale.
- A major 6th **is equal to 9 semitones**, so if we count 9 semitones above the tonic of any major scale we arrive at it's relative minor.
- A major 6th (9 semitones) above **C** is **A**. A minor is abbreviated **Am**.
- Continuing clockwise, a major 6th (9 semitones) above **G** is **E**. E minor is abbreviated **Em**.
- Jumping to 5 o'clock, a major 6th (9 semitones) above **B** is **G#**. G# minor is abbreviated **G#m**.
- This works for all the major scales.



Relative Minor Keys – Shortcut

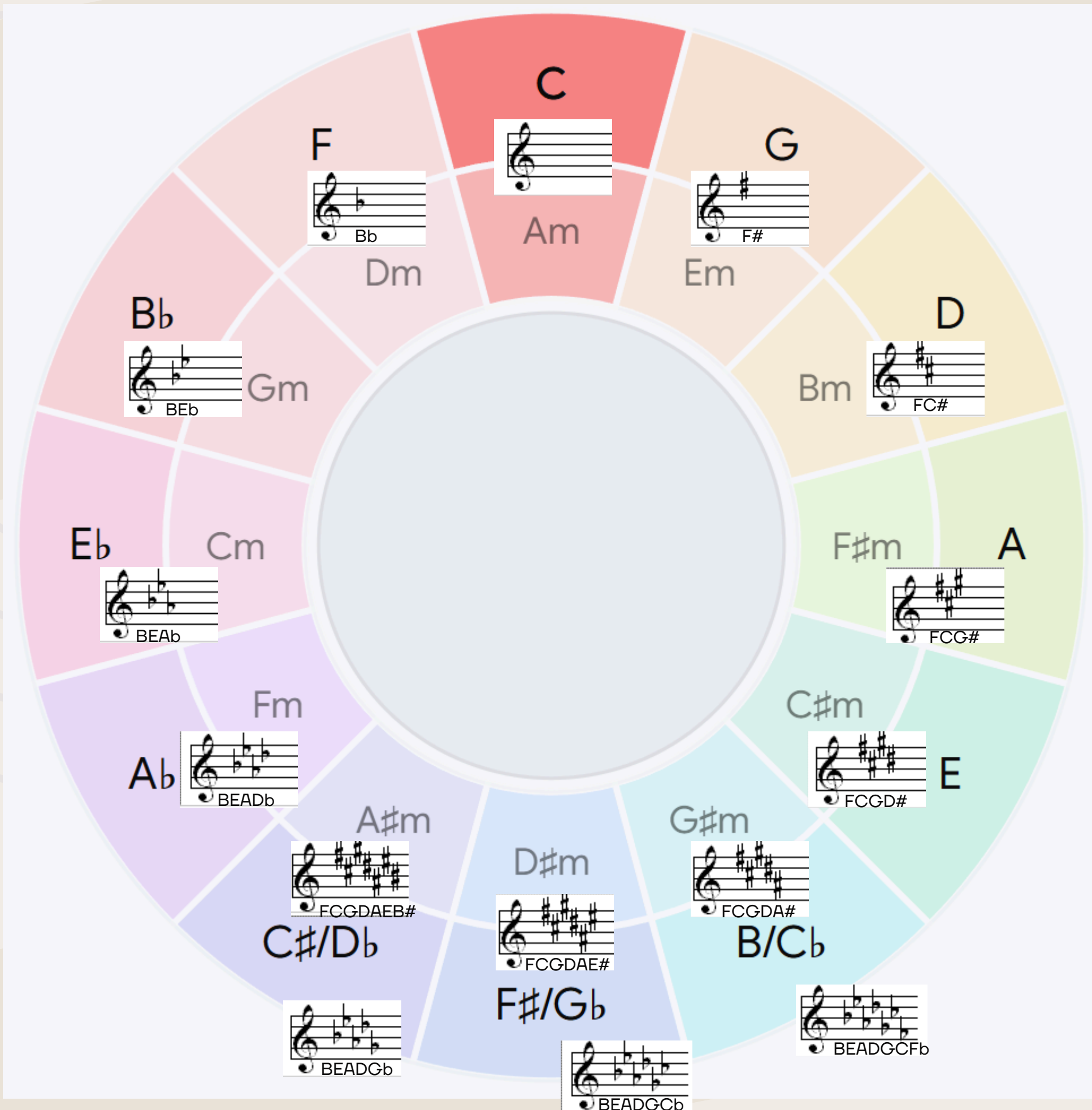
But there's an easier way.

- We know we can count UP 9 semitones to find the relative minor.
- We know there are 12 semitones in an octave.
- So **counting DOWN 3 semitones** ($12 - 9 = 3$) will also find the relative minor.
- It is much quicker to count down 3 semitones than to count 9 up!



The Complete Circle of Fifths

Now that we've added minor keys, the Circle of Fifths is complete.



Continuing to learn about Minor Scales ...

We know that all Major Scales use the same interval pattern of Tones and Semitones:

Major Scale: T - T - S - T - T - T - S

The diagram illustrates the relationship between the C major scale and the A natural minor scale. It features two musical staves. The top staff, labeled 'C major scale', shows the notes C, D, E, F, G, A, B, C with intervals T, T, S, T, T, T, S. The bottom staff, labeled 'A natural minor scale', shows the notes A, B, C, D, E, F, G, A with intervals T, S, T, T, S, T, T. A red vertical box highlights the A note on both staves, demonstrating that the A natural minor scale uses the same sequence of intervals as the C major scale, starting from a different note.

All natural minor scales use the same interval pattern as the major scale, but it starts in a different place:

Natural Minor Scale: T - S - T - T - S - T - T

This gives minor scales a sadder feeling when played, compared to a major scale.

Back to the textbook

In classical music, the natural minor scale is not used. However, you can think of the natural minor scale as the “parent” scale on which the other types of minor scale are built.

Therefore, a great deal of what we’ve learned about the **Natural Minor** scale carries over to the other two types of minor scale: **Harmonic Minor** and **Melodic Minor**.

The Harmonic Minor Scale

Classical composers found the 7th note in the natural minor scale sounded a bit too "weak" when moving back to the 1st note.

To fix that "weak" sound, composers **raised the 7th note by a semitone** (using a sharp). This created a dramatic pull back to the home note.

A Natural Minor



A Harmonic Minor



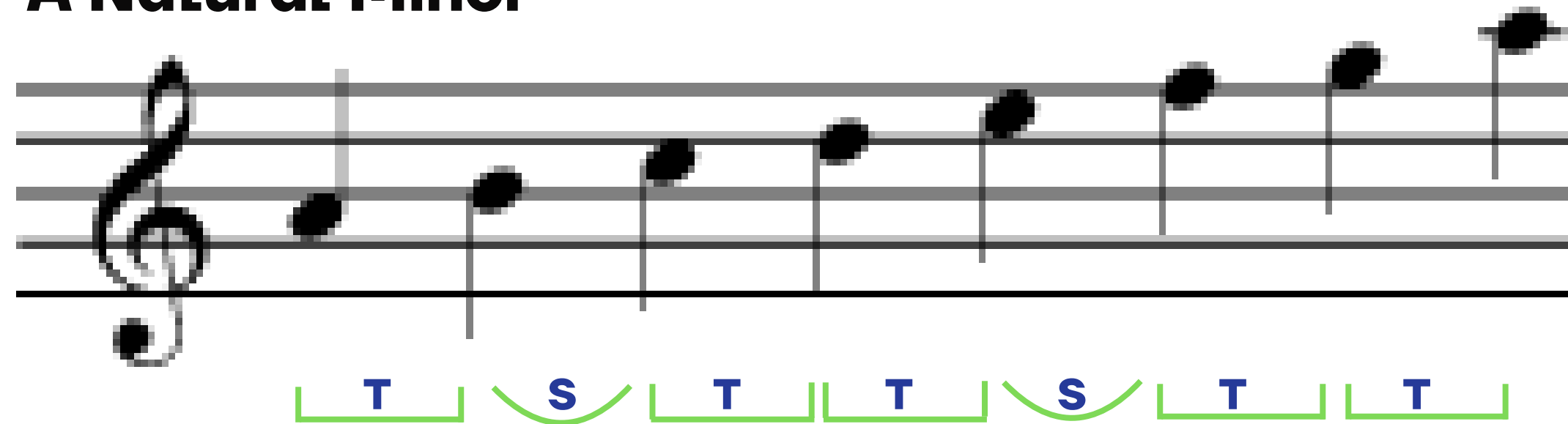
The Harmonic Minor Scale

Raising the 7th note by a semitone, also changes the interval patterns of tones and semitones.

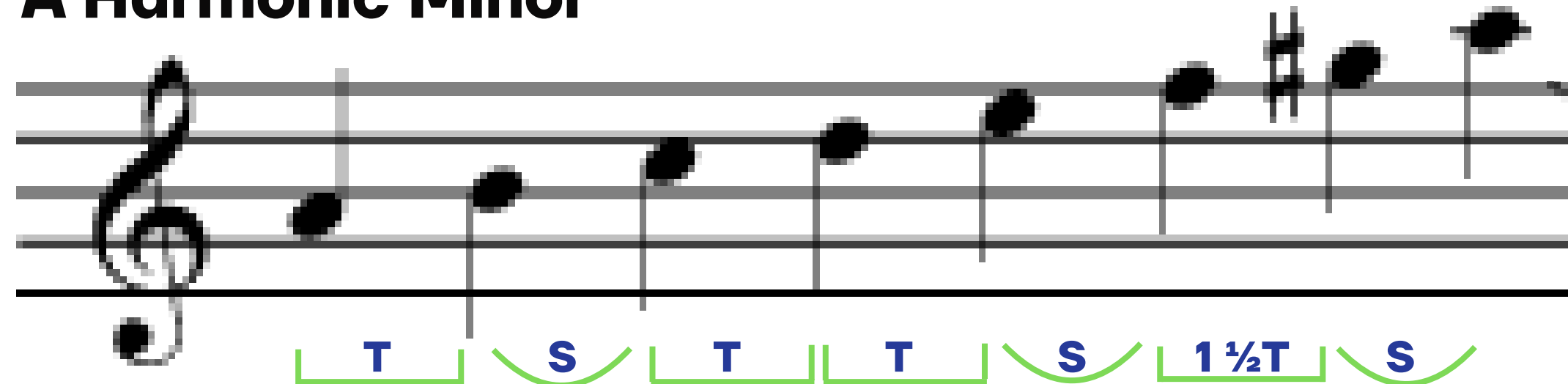
The jump between the 6th and 7th note is now a **massive** Tone and a Half ($1\frac{1}{2}$ T).

Because we are skipping a whole note-and-a-half in one step, it creates that signature 'exotic' or 'Egyptian' gap that makes the Harmonic Minor scale sound so distinct!

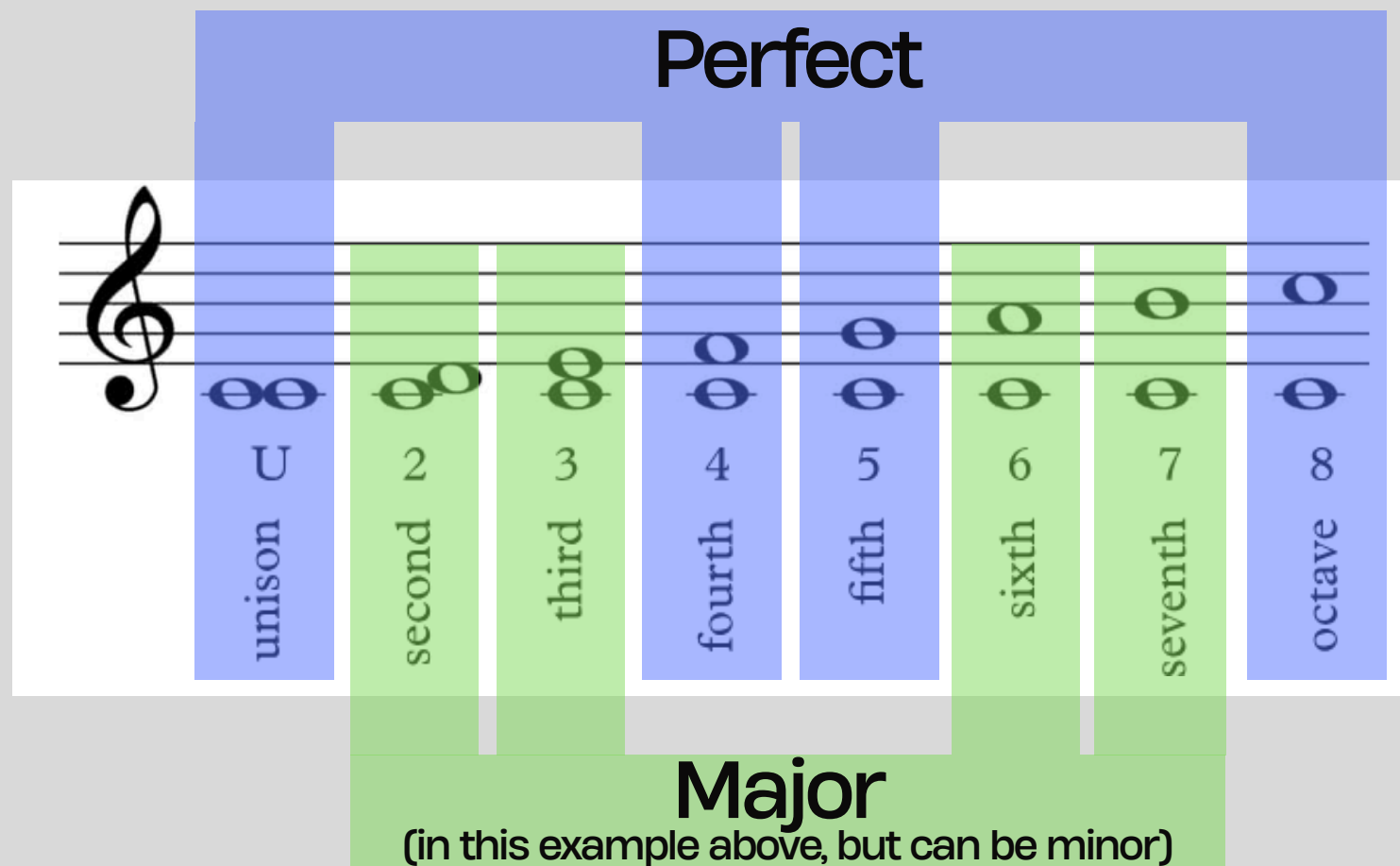
A Natural Minor



A Harmonic Minor



Interval Quality Reminder:



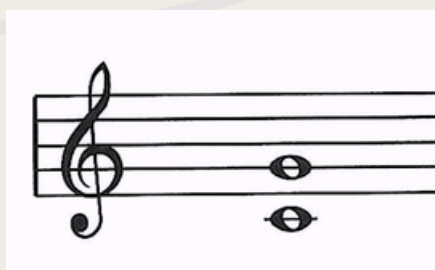
Remember the types of Interval **Quality**:

- **Major** (happy)
- **Perfect** (neutral), or
- **Minor** (sad).

How to Determine an Interval's Quality

Ignore any key signature for the piece of music – it doesn't matter.

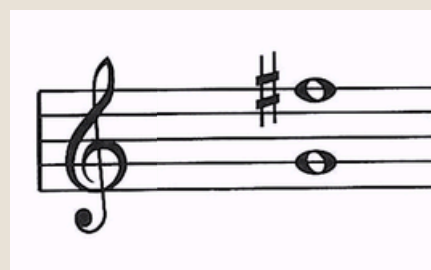
Example 1:



1. Look at the lowest note (C).
2. Count the interval (a fifth).
3. The quality of a fifth is perfect.

Answer: Perfect fifth.

Example 2:



1. Look at the lowest note (G).
2. Count the interval (a seventh).
3. A quality of a seventh can be major or minor.
4. Look at the higher note (F#).
5. In the G major scale, is the 7th note F#?
 - a. If yes the interval is major,
 - b. if no it is minor.

Answer: Major seventh.

How to Write an Interval on the Staff when given Number and Quality



Answer: F# in the first space of the staff.

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How we got there:

1. Ignore any key signature for the piece of music – it doesn't matter.
2. Identify the lowest note (D). This is the major scale we will use.
3. Write the note a 3rd above it (F).
4. Check the Major Scale (in this case D Major): The 3rd note is F#.
5. If asked for a Major 3rd, keep the F#.
6. If asked for a Minor 3rd, lower it by a semitone to F natural.