

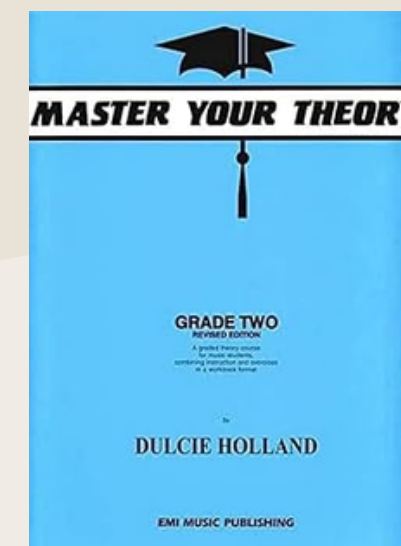


Music Theory Grade 2

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 five-line staff. The scale is divided into two tetrachords. The lower tetrachord, highlighted in blue, consists of the notes C, D, E, and F. The upper tetrachord, highlighted in green, consists of the notes G, A, B, and C. Brackets below the notes indicate the intervals: T (Tone) between C and D, T (Tone) between D and E, S (Semitone) between E and F, T (Tone) between F and G, T (Tone) between G and A, T (Tone) between A and B, and S (Semitone) between B and C. The notes C, D, E, F are labeled in orange below the blue background, and G, A, B, C are labeled in orange below the green background.

lower **Tetrachord**

upper **Tetrachord**

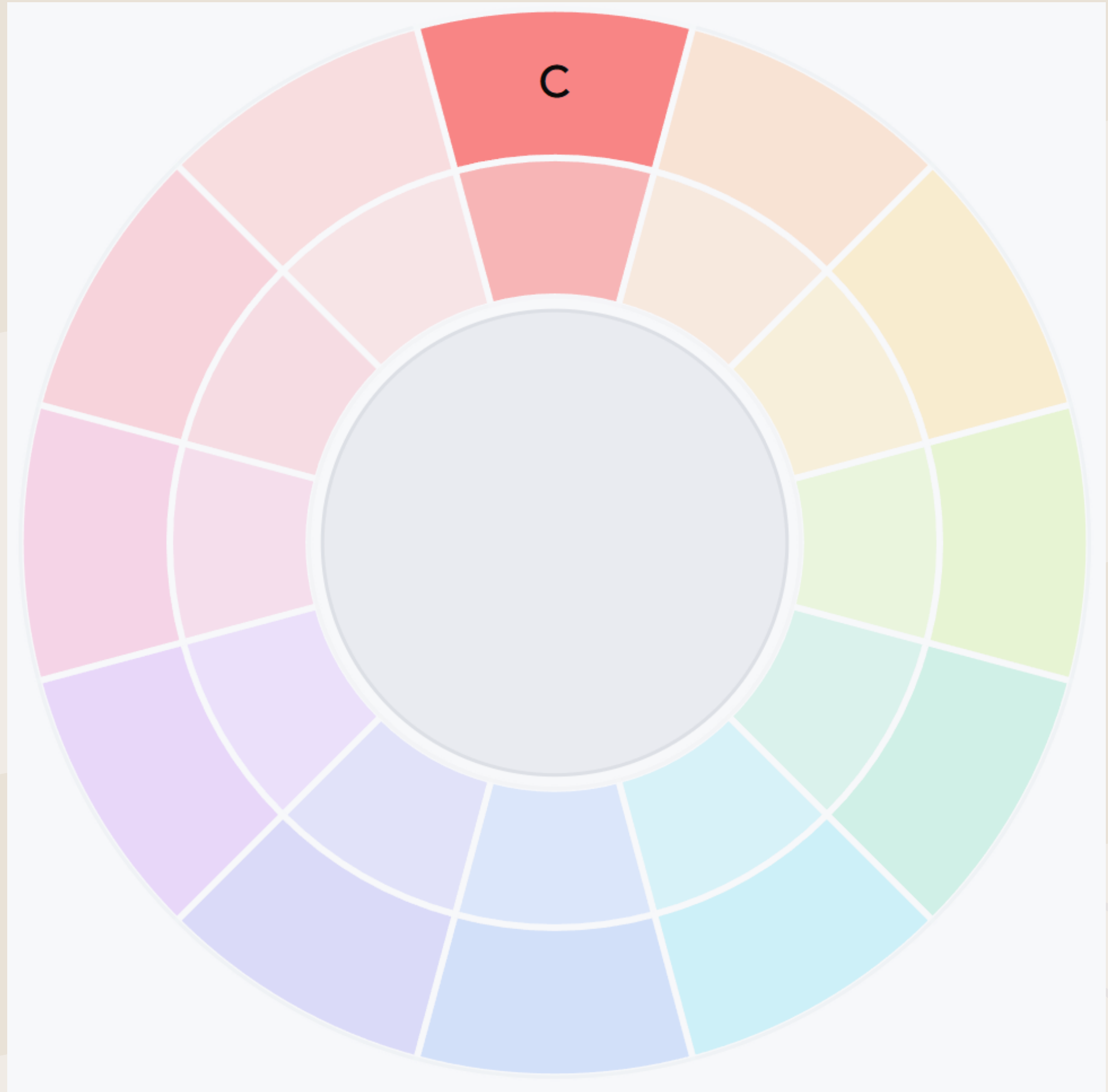
C D E F G A B C

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

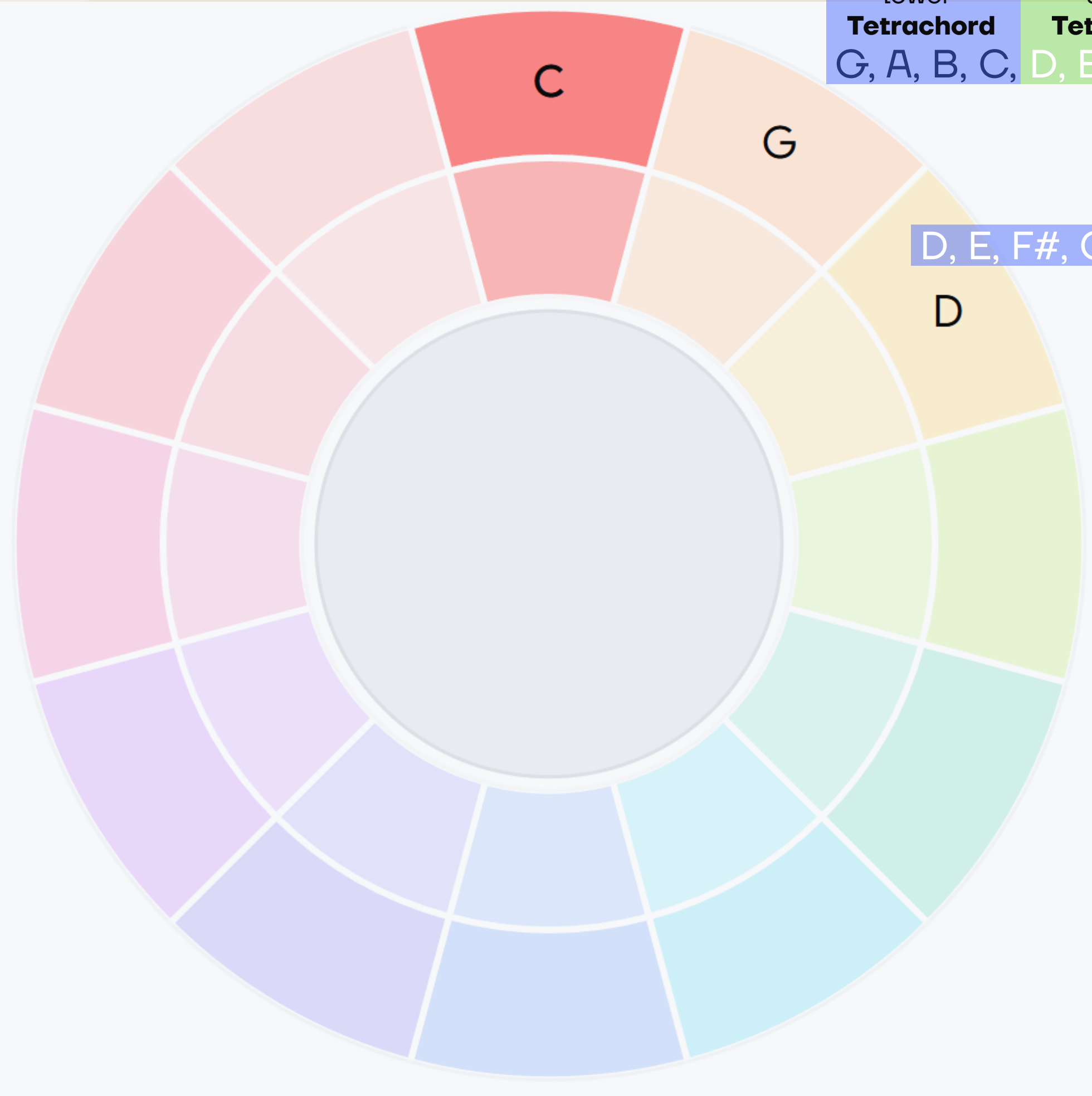
- There are 12 different notes in music (the Chromatic scale).
- Therefore, a major scale may start on each of these 12 unique notes.
- We can write these 12 unique major scales in a circle (like a clock face).
- Starting with C Major in the 12 O'clock position.



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

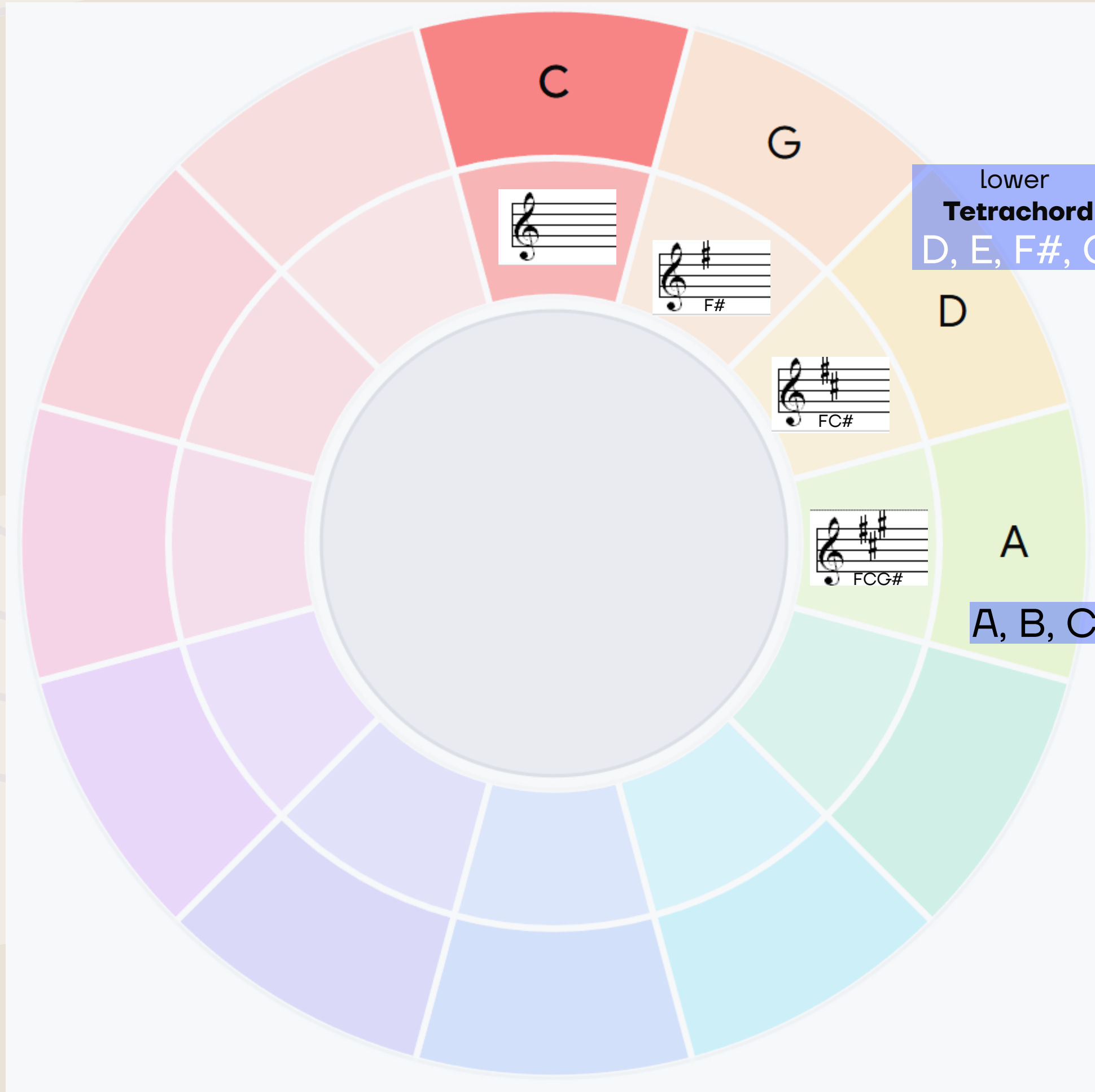


- Using the upper tetrachord of C Major we know that the next scale in a clockwise direction is G Major. We also know that G major has one sharp (F#).
- As we move clockwise, each scale will have one more sharp than the previous scale (until we get to the “7 O’clock” position on the “clock”).
- The notes 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#**

Adding Key Signatures



lower
Tetrachord
D, E, F#, G,

upper
Tetrachord
A, B, C#, D

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

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

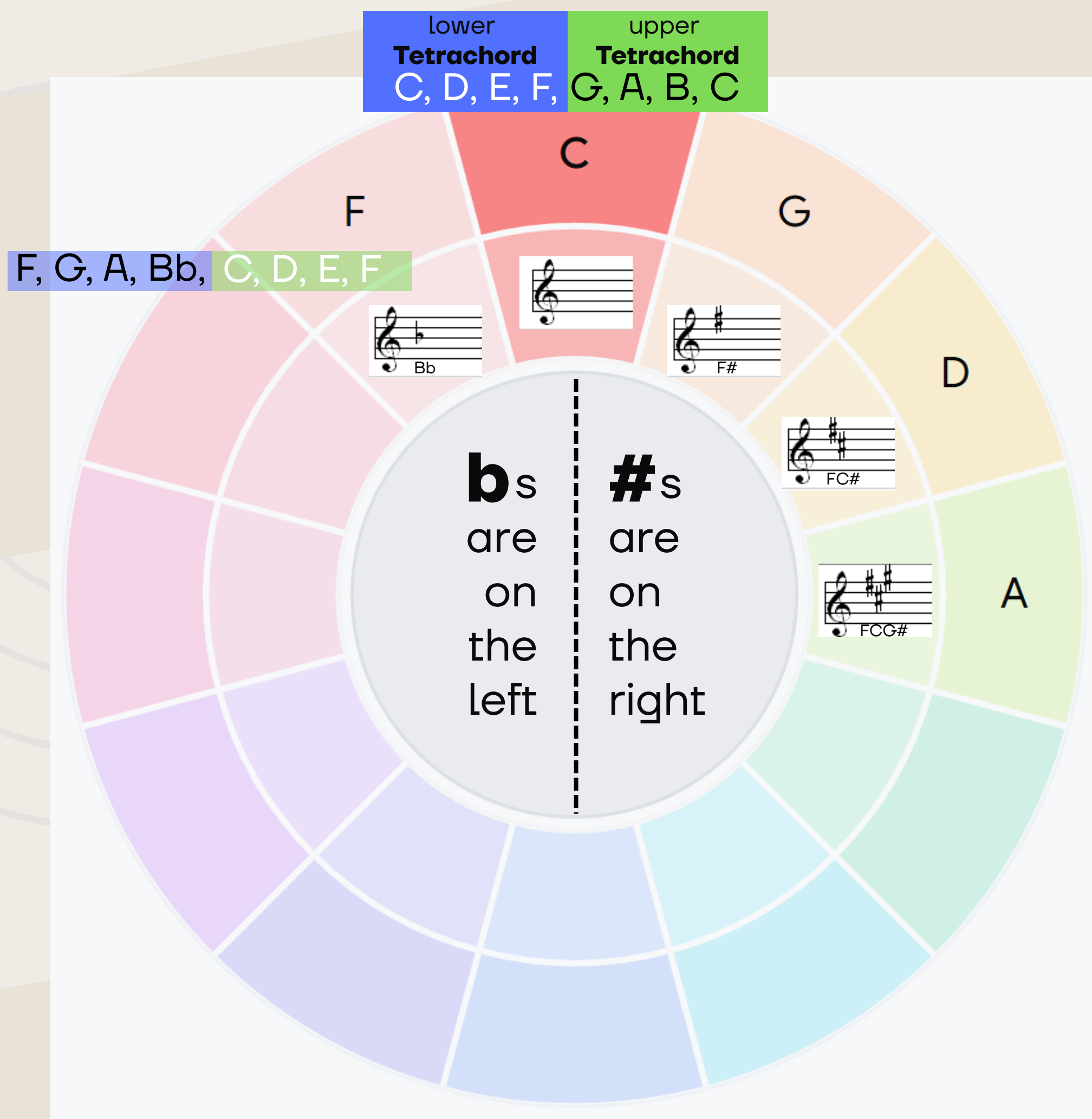
- We need to add one new sharp to the upper tetrachord of this new scale.

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

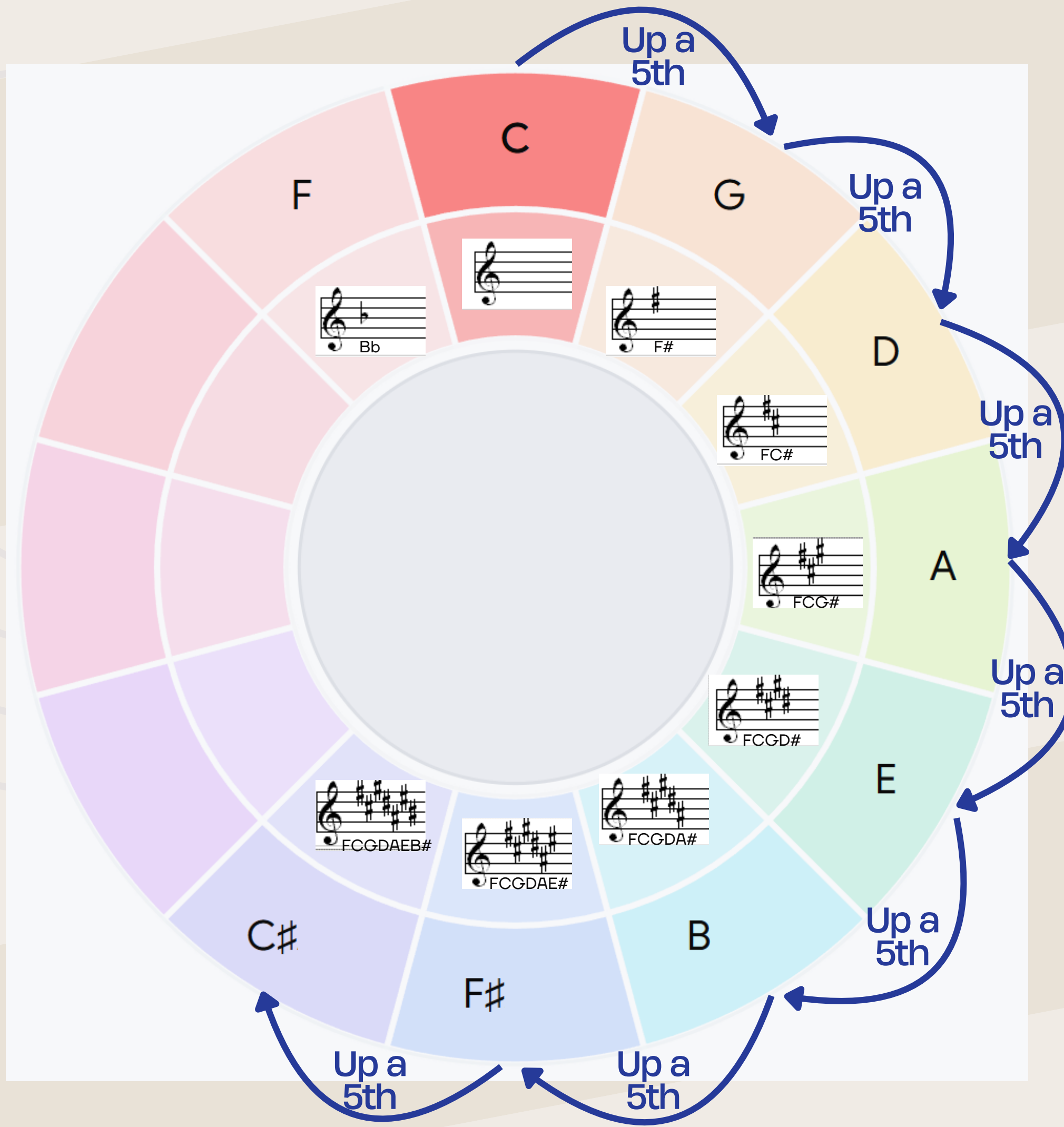
- The other Major scale that we learned is F Major.
- It has a Bb, so it goes on the left side of our circle as **all the scales with flats are on the left** side and **all the scales with sharps are on the right** side.
- Although we already know the notes in F Major, we can use our trusty tetrachords to figure them out.
- So the upper tetrachord of F Major is the same as the lower tetrachord of the previous scale (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.



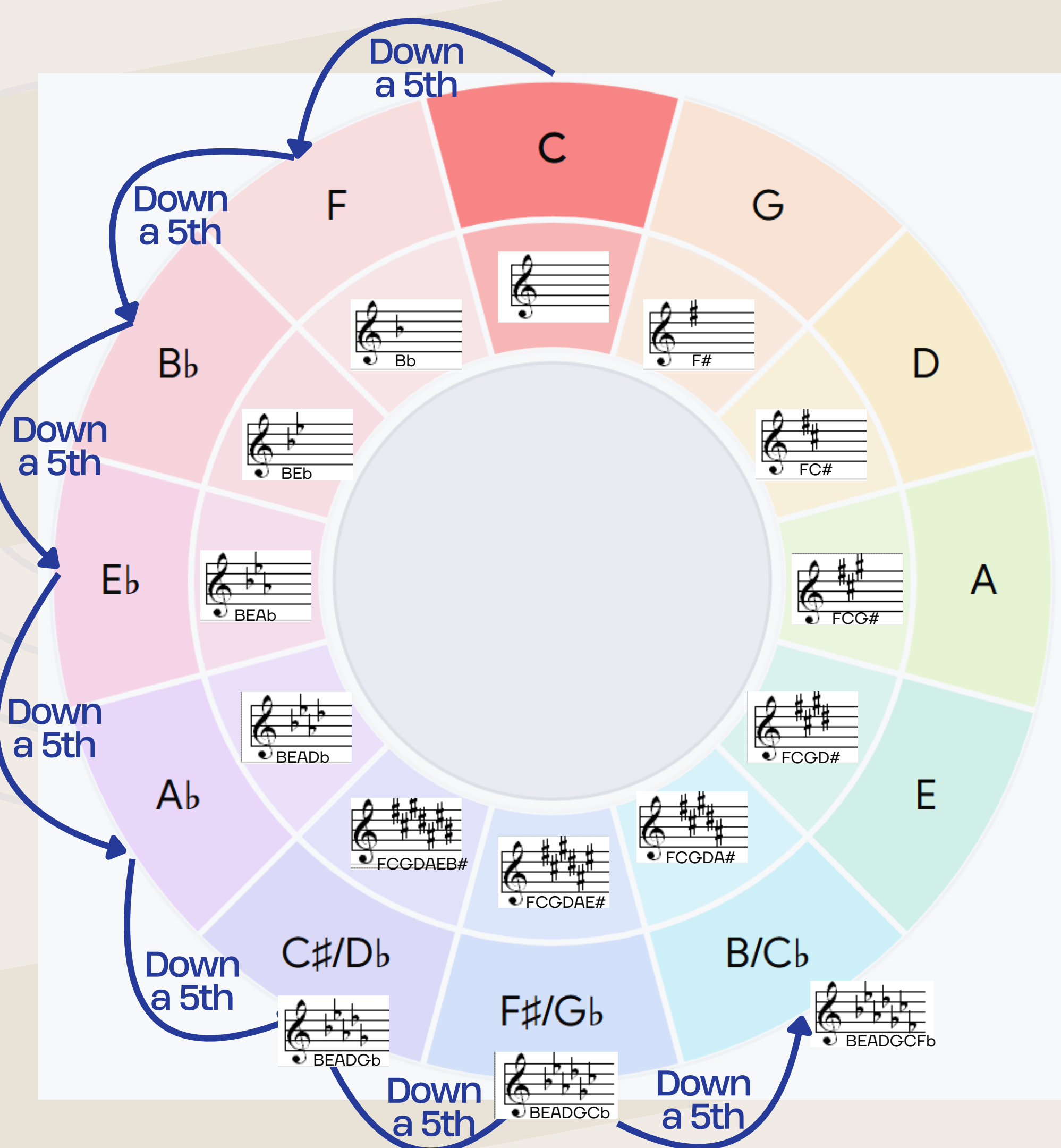
Completing the **b** Keys

- 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?

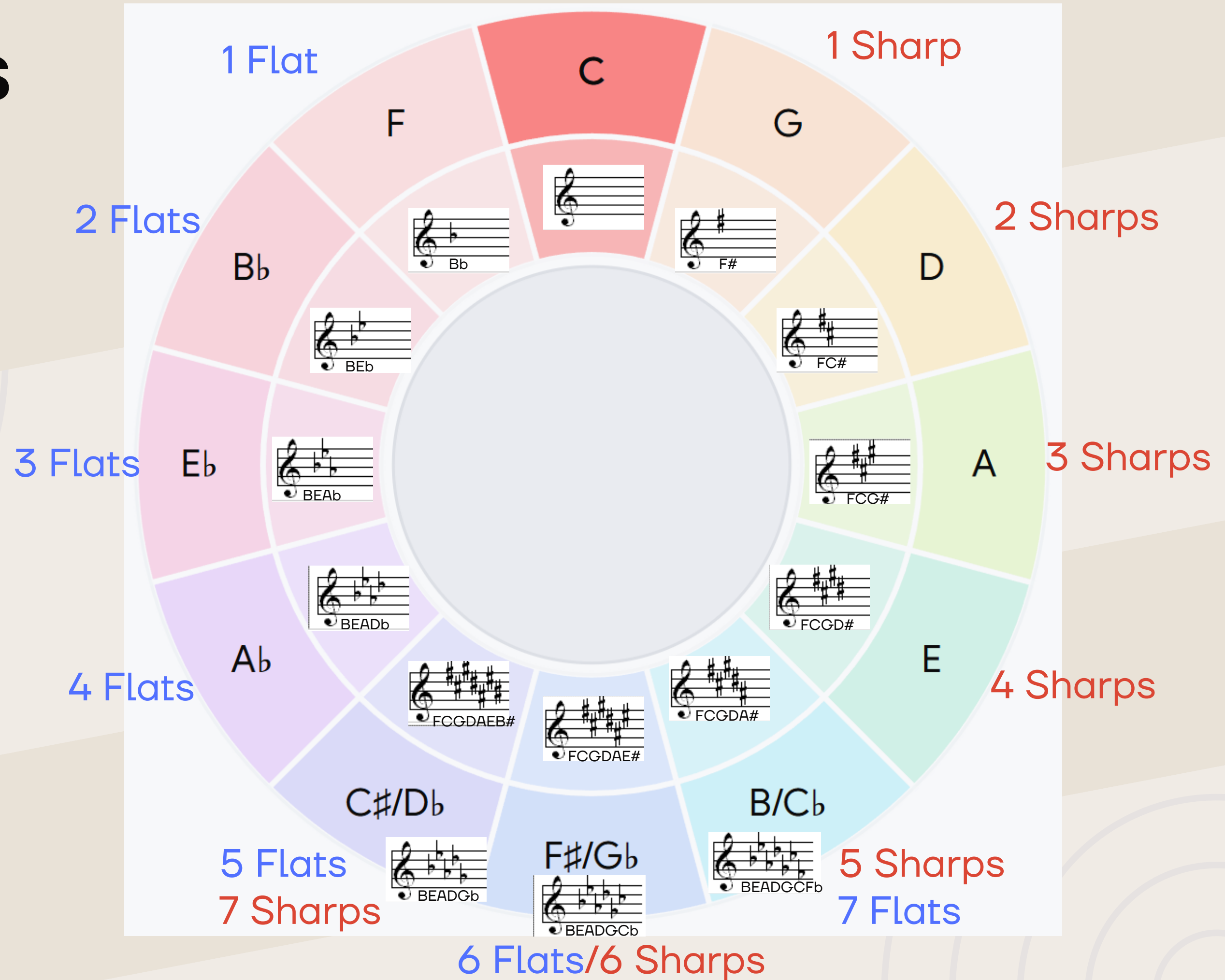
- But there are only 5 black keys. So how does that work?
- Look closely at the flats in Gb Major. The 6th one is Cb. There is no black key called Cb. However, a flat lowers the note by a semitone, so **Cb** is also called **B**.
- Similarly, Cb Major adds a 7th flat called **Fb**, an F lowered by a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



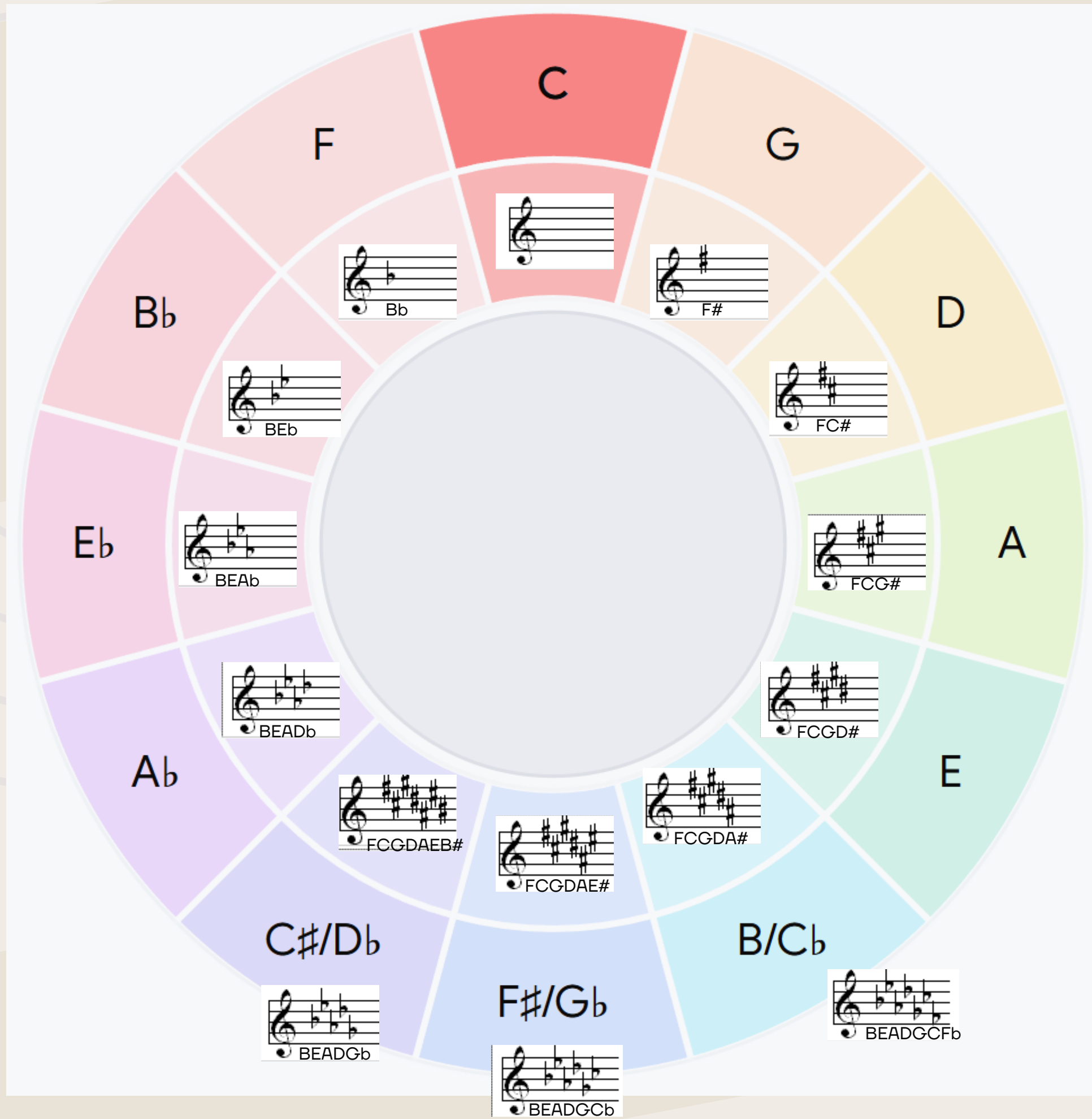
The Numbers

0 Sharps/Flats

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

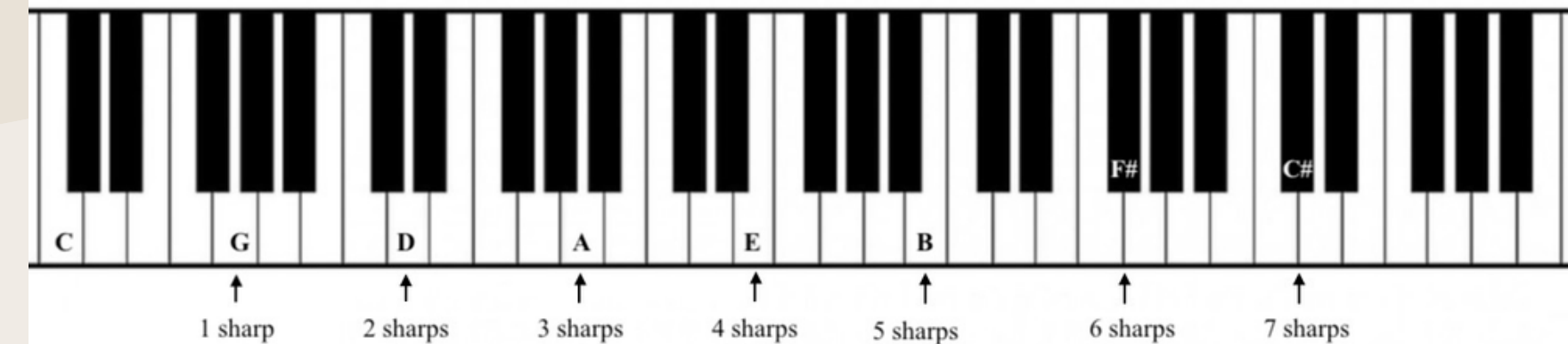


On a Keyboard



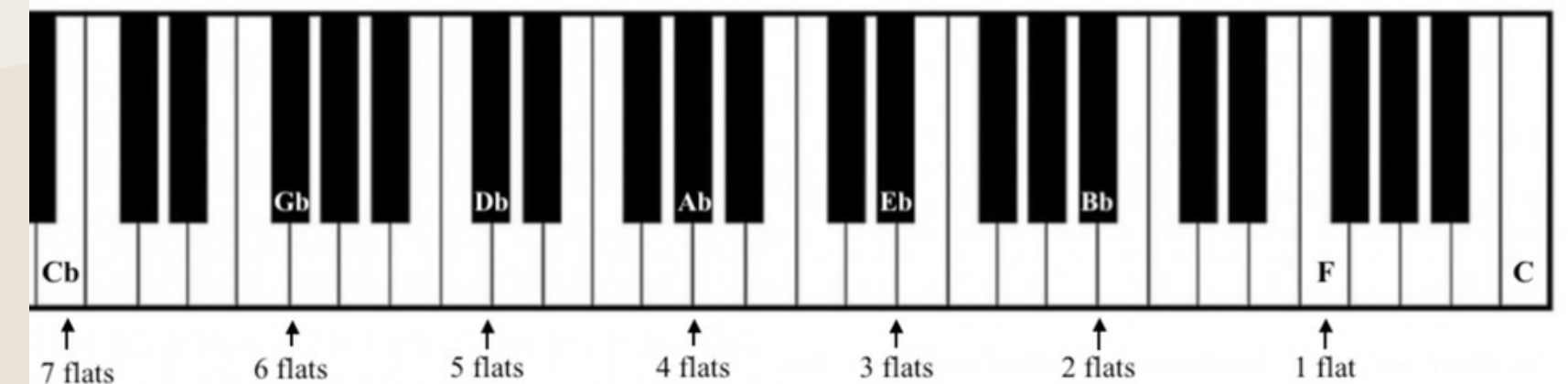
Sharps

Up a Fifth (7 semitones)

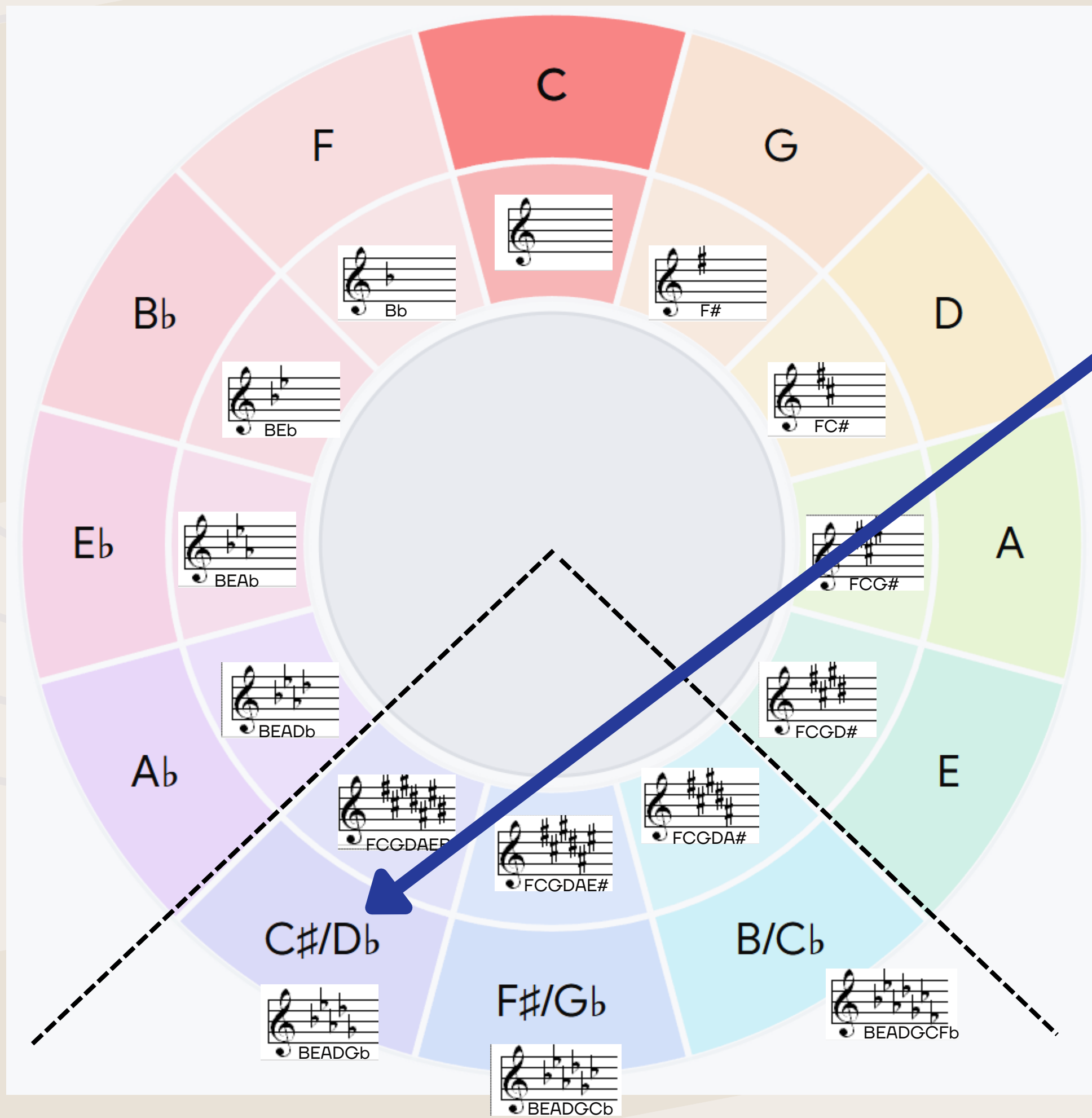


Flats

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**. F#/Gb and B/Cb 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:

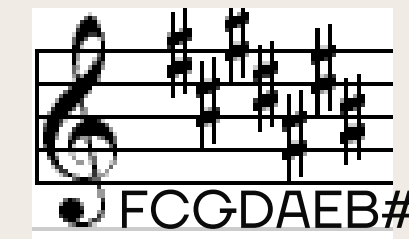
Father Charles Goes Down And Ends Battle

You can use this acronym to remember:

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

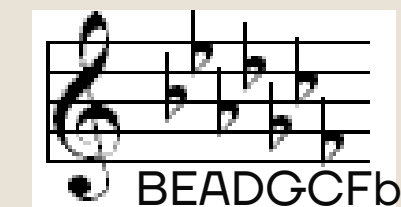
2. The Order of Sharps:

Father Charles Goes Down And Ends Battle



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

Battle Ends And Down Goes Charles Father



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**

Layout
Start

Battle

Ends

And

Down

Charles

Father

Goes

Down

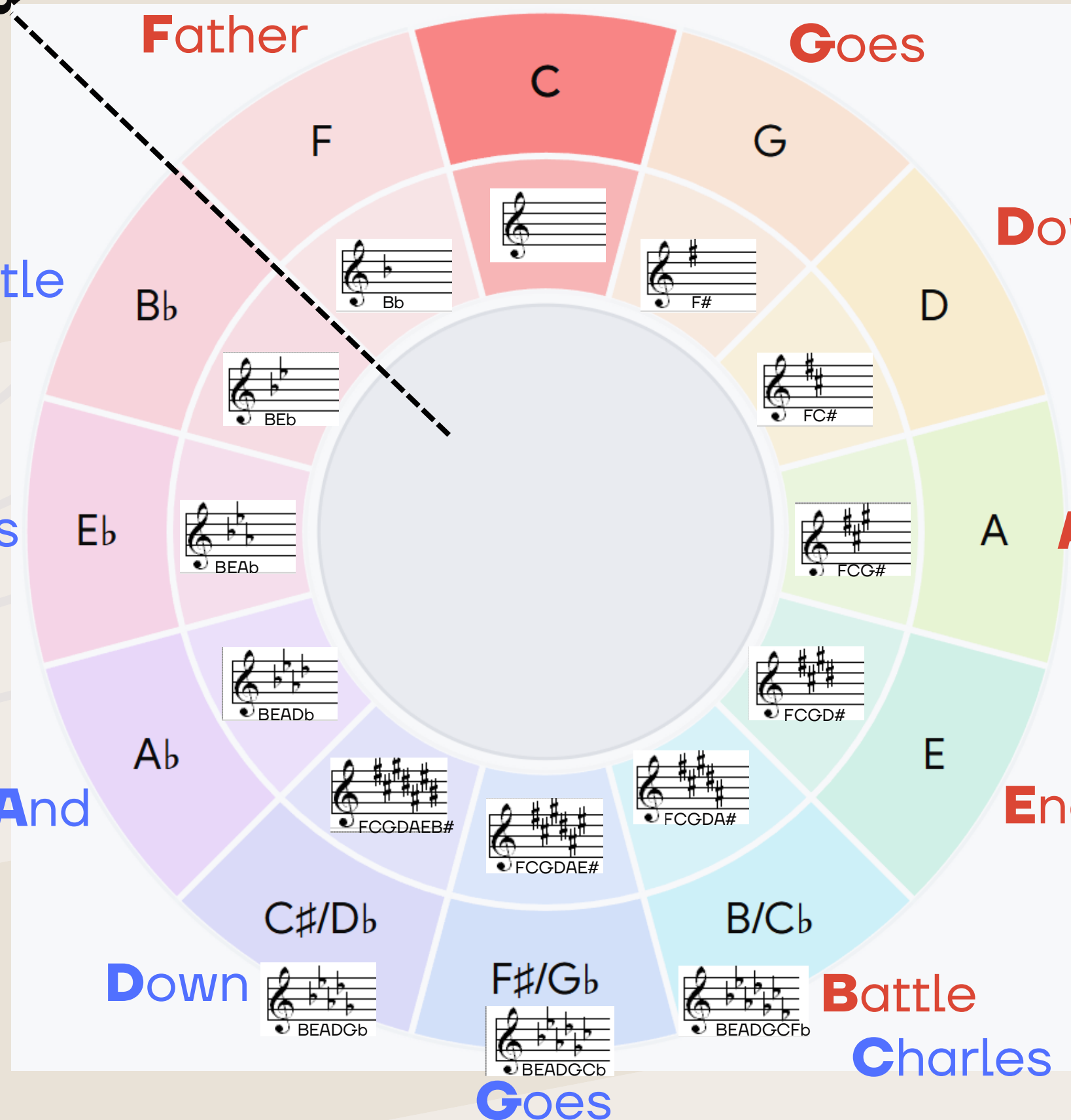
And

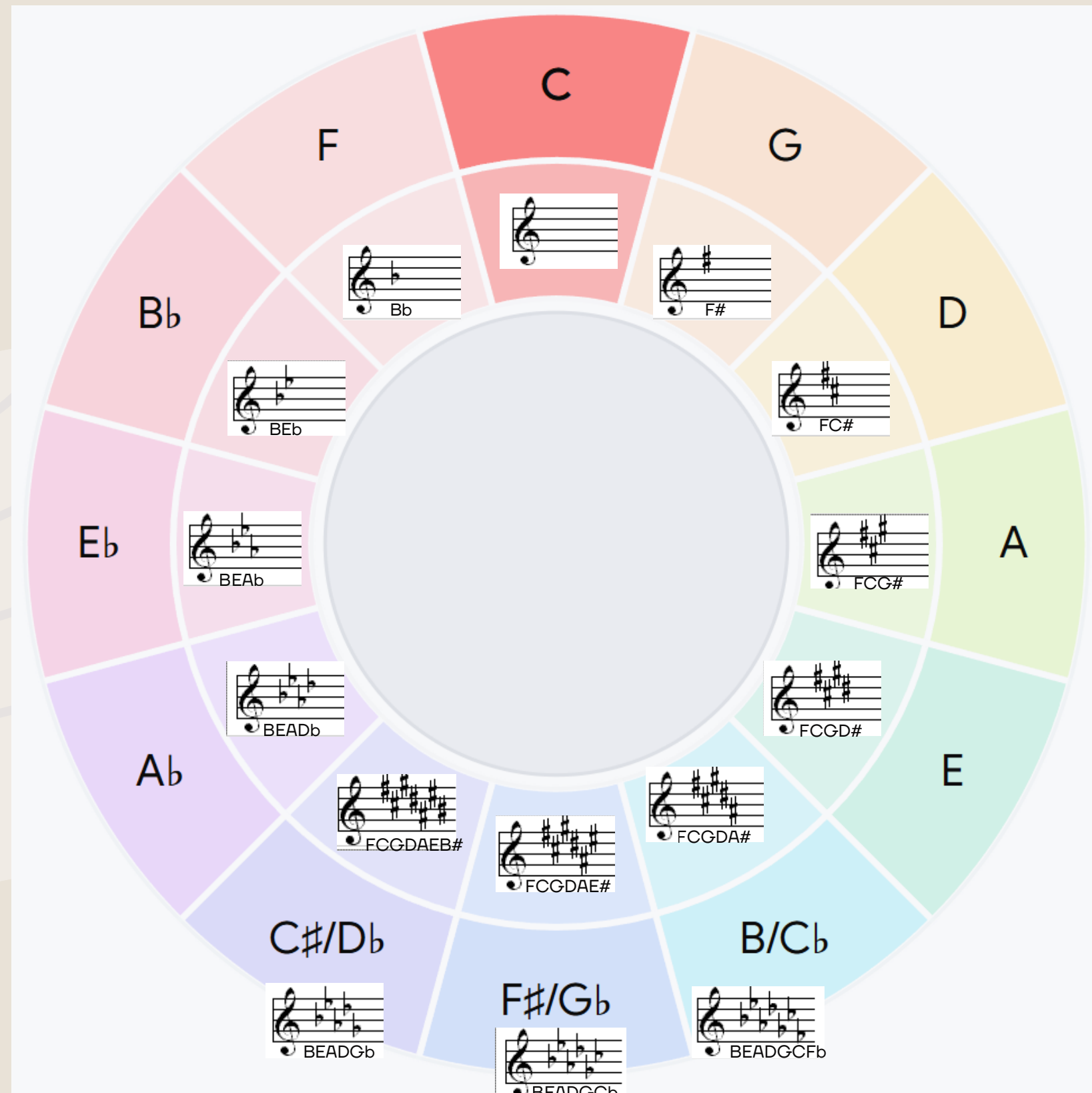
Ends

Battle

Charles

Goes

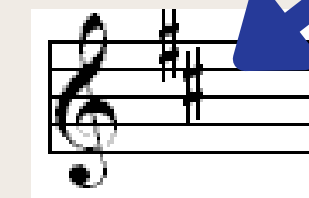




How to Get the Key from the Key Signature

Maggie's tip:

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

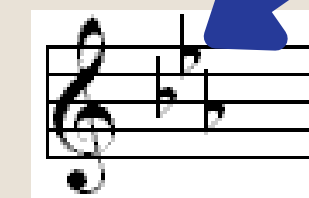


In this example, the last sharp is:

C# + 1 semitone = D

So the key is D Major.

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



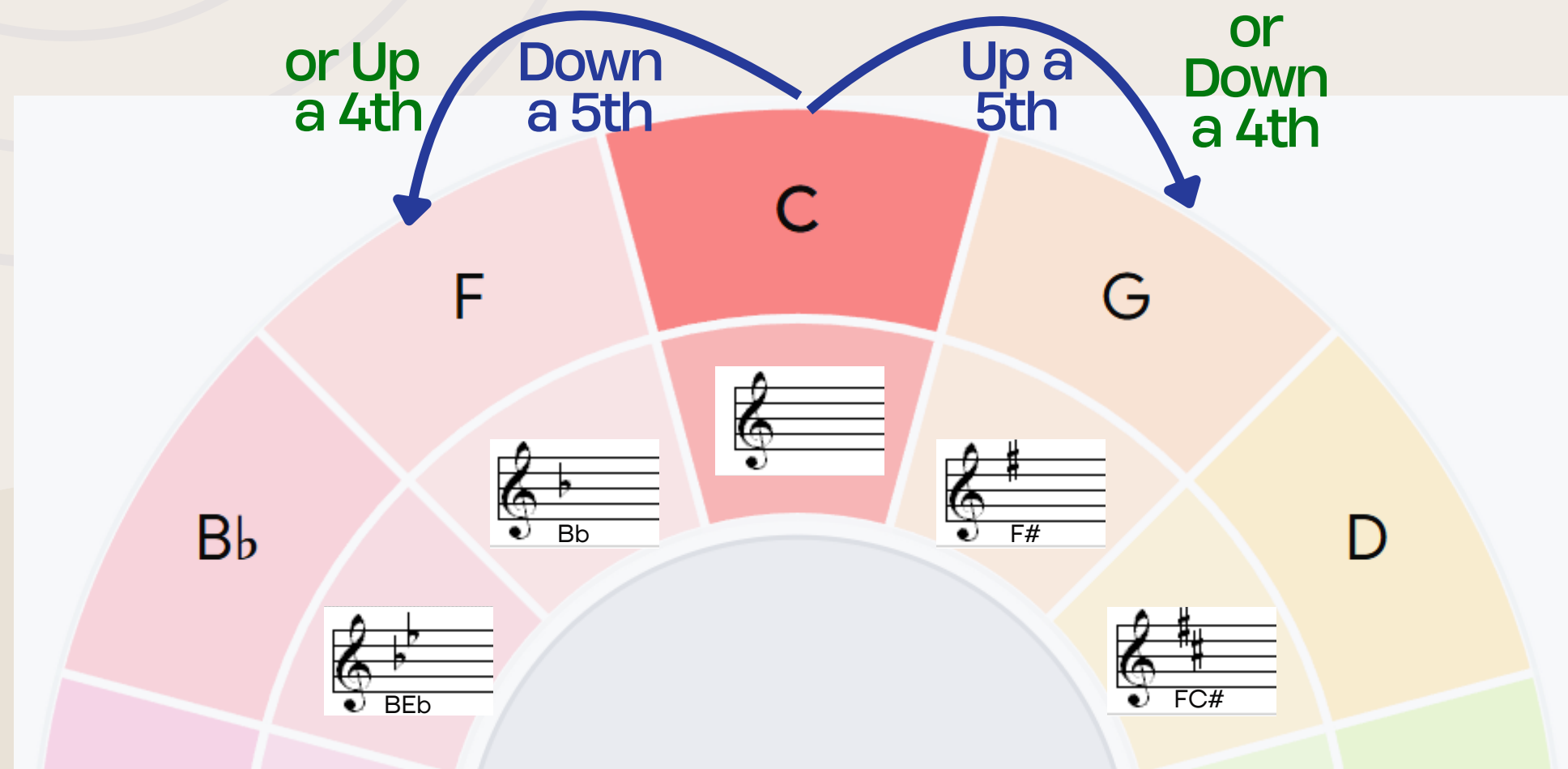
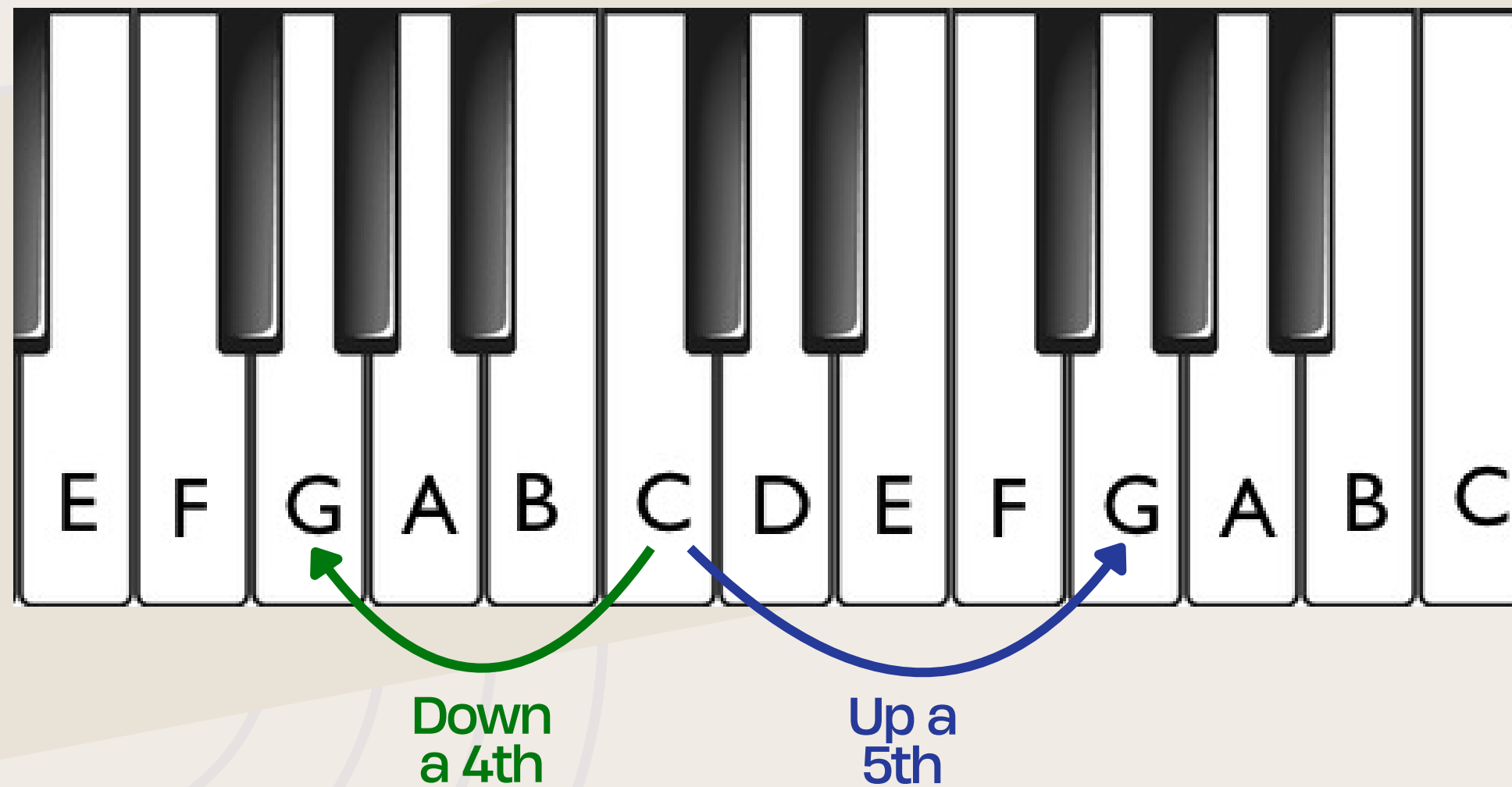
In this example, the second last flat is:

E_b

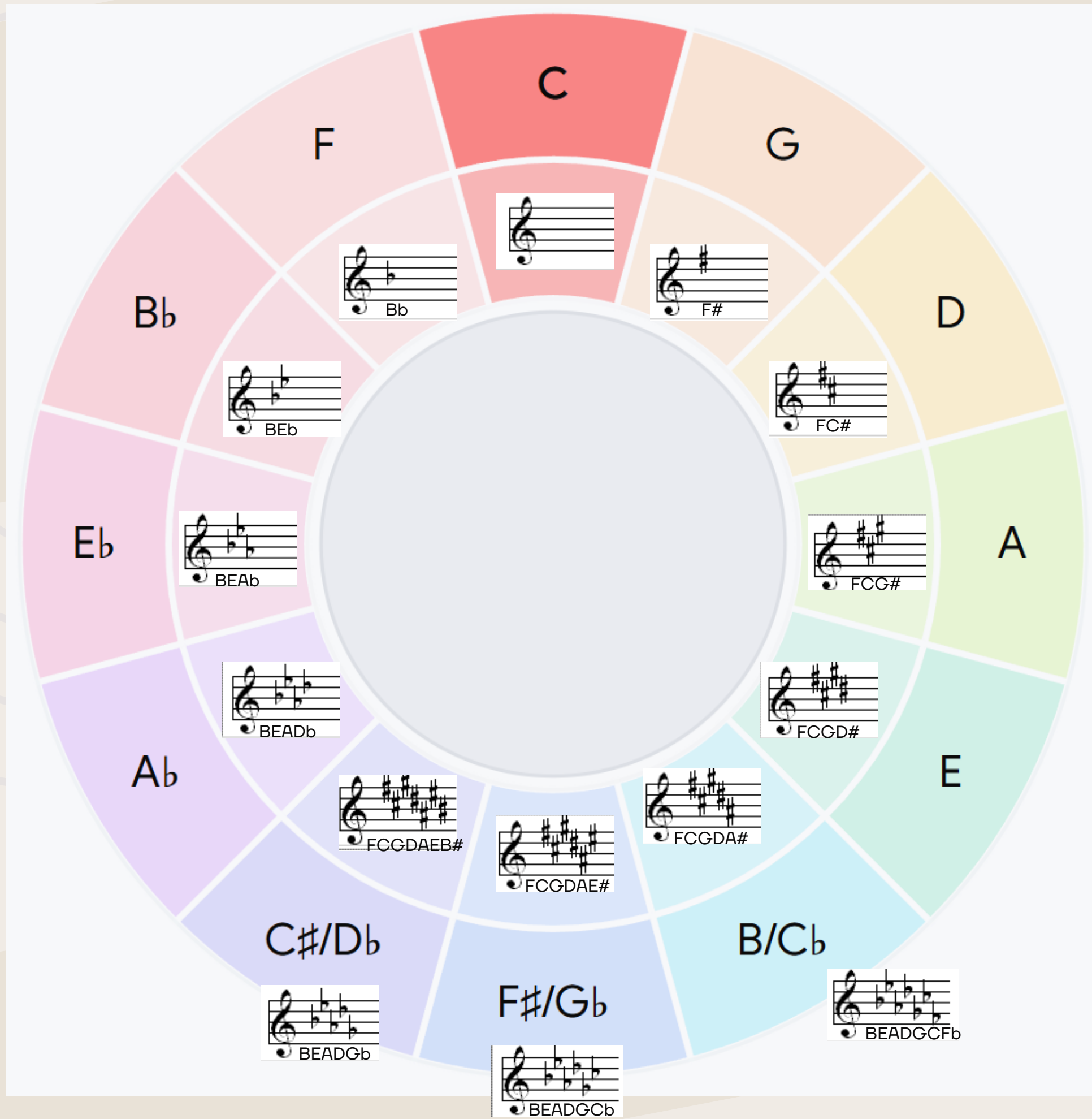
So the key is E_b Major.

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 all they 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 and others. These are for higher music theory grades.