INTRODUCTION (Table of Contents on Page 3)
The title may sound like advertising gas prices to owners of an electric car. People take up the NAF because it’s a relatively simple instrument, one that can be played without worrying about scales and intervals and the dreaded “music theory.” Some of the best NAF players don’t even read music! (This is also true of many musicians who play the fiddle and other folk instruments.) You don’t need “Basic Music Theory” to play the NAF.

Nonetheless, it helps to understand basic music theory for any instrument you play, even the simplest ones. For the NAF, such knowledge can answer a whole lot of questions, such as: why tablature works for any NAF you may own; why the pentatonic minor scale is played the same on a 5- and 6-hole flute; why your flute in the key of A (or G, or most others) does not play the actual notes shown on NAF tablature; why you may need a different flute if you play in a group; etc.

If you’ve read this far, I assume you have some interest in NAF music theory. You may have even read about it, in books or online. If so, chances are these sources did not adequately explain the subject, or they may have left you a little confused. That was certainly my own situation when I took up the NAF and tried to learn basic theory from books and web sites – a certain degree of frustration and confusion. For example, I found that the notes in NAF tablature did not correlate with the notes I was playing on my A flute.

The explanation was there somewhere, just not clearly explained. Why not? One reason is that music theory explanations are written by musicians. Musicians obviously understand the subject but often don’t have a good grasp of what we – beginners, non-musicians, musical dolts – don’t know. Put another way, they may assume we know more than we actually do.
Perhaps the best way to learn basic music theory is to study piano, so I began Piano 101. I also took up the ukulele, and by studying both instruments gradually learned about musical keys, scales and intervals. To help me better understand the uke, I wrote a beginner’s music theory book for the instrument, which has been well received on uke forums.

Then I decided to create a similar syllabus for the NAF – from the perspective of a beginner and a definite non-musician. Writing this syllabus has helped me better understand the NAF, and I believe it should help most non-musicians as well. If you follow this syllabus step by step, and do the simple exercises I recommend, you should achieve a much deeper understanding of the NAF than you now possess.

The syllabus is not a quick read, especially if you have no musical background. I have simplified the material as much as feasible, while still presenting what I believe are the essentials for understanding basic NAF music theory. It is divided into four parts, with 3 steps in each part. I recommend doing only one part at a time, and even that may be broken up into a couple of sessions. However you choose to proceed, I advise not going to a new step until you feel thoroughly comfortable with the previous one.

NOTE. This syllabus does not teach how to blow into the flute, or how to hold it or cover the holes, or anything about the how the flute is designed. The syllabus assumes you: 1) have a NAF; 2) know how to hold and blow into it to sound a note; 2) have access to the internet (smart phone, tablet or computer). If you need instruction on how to hold, blow and cover the flute holes, I highly recommend a Youtube video by master player and flute maker Odell Borg. The URL below is Part 1 of a 6-part series by Borg on flute basics.
https://www.youtube.com/watch?v=D7tCU5CQ_Os&list=PLD72967DD3931DBF8&index=1
The other five parts follow without having to enter a new URL.

If you are brand new to the NAF, you might enjoy a comprehensive video Getting Started: The Beginner’s Guide to the Native American Style Flute at https://www.youtube.com/watch?v=dqIwczesD6k.

If you have specific questions about the NAF, chances are you’ll find the answer in Flutopedia, an online encyclopedia of everything about the Native American flute (http://www.flutopedia.com). I refer frequently to this essential work in the syllabus. The green-shaded finger tab diagram used throughout is courtesy of Clint Goss, www.Flutopedia.com.
BASIC MUSIC THEORY
FOR THE NAF

Photo from High Spirits Flutes, https://highspirits.com/

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PART 1 – FLUTE KEYS AND THE PENTATONIC SCALE

STEP 1. Play the pentatonic minor scale on your NAF.

This is the primary scale all modern NAFs are designed to play. Penta means five, but you’ll play 6 notes; the 1st (lowest) and 6th (highest) are the same note, the latter an octave higher than the former. Later I’ll define “pentatonic” but for now just play this standard basic scale one note at a time, as shown below, starting from left to right. Dark circles are closed holes. The mouth end is at the top. Thus the lowest note has all holes closed, and the highest note has just one hole closed, the 4th from the bottom.

![Pentatonic Minor Scale Diagram](http://www.flutopedia.com/scale_PentatonicMinor.htm)

Lowest note -------------------------Highest Note

Figure from: [http://www.flutopedia.com/scale_PentatonicMinor.htm](http://www.flutopedia.com/scale_PentatonicMinor.htm)

Watch the following videos if you’re not familiar with playing this scale.

[https://www.youtube.com/watch?v=1RPIVL-qaOg](https://www.youtube.com/watch?v=1RPIVL-qaOg)
[https://www.youtube.com/watch?v=jAfBYywQr50](https://www.youtube.com/watch?v=jAfBYywQr50)

NOTE: If you have a 5-hole flute, keep your fingers in the same position as on a 6-hole flute. As you’ll see, the 4th hole from the bottom is always covered when playing this scale, so it doesn’t matter if you have a 5- or 6-hole flute.

* Keep the 4th hole covered at all times when playing the minor pentatonic scale.
STEP 2. Check the key of your flute.

The musical “key” indicates the pitch of sounds when the notes are played. A key of A minor will have notes of a certain pitch: higher, for example, than a key of F# minor. Each NAF has its own unique musical key; if you want to play in another key, you need another NAF. (This is in contrast to a piano or guitar, for example, which can play in many keys). Except for pocket flutes, the key is usually printed somewhere on the body, as a single letter, e.g., A or F#. For pocket flutes it may be printed on a tag, e.g., G. (See figures below of three High Spirits flutes). Although not written out on the flute or the tag, these letters stand for the key of A minor, F# minor and G minor.

Back of flute showing key of A (minor)
Back of flute showing key of F# (minor)

Tag that comes with pocket flute indicating it is in key of G
STEP 3. **Play the scale again with a tuner and write down the notes you play.**

Suppose, for example, that you have a flute in the key of A minor. This exercise will show you what notes you are sounding when you play the minor pentatonic scale on that flute, as shown in the figure below.

![Pentatonic Minor](image)

Flute Key: A Minor

Notes played with fingering as shown:

| A | C | D | E | G | A |

You can use a downloaded tuner from the internet, or an actual physical tuner. The internet offers several free tuners, but they all seem to come with some gimmick (i.e., installing unwanted software along with the tuner). Instead, you should either pay a few bucks for a safe, downloadable tuner to your smart phone or tablet, or buy an inexpensive physical tuner. The tuner app I use on my smart phone is Clear Tune ($4.99); the way it looks on your smart phone is shown in the figure. The website is [https://itunes.apple.com/us/app/cleartune-chromatic-tuner/id286799607?mt=8](https://itunes.apple.com/us/app/cleartune-chromatic-tuner/id286799607?mt=8).
If you are not familiar with electronic tuners, now is the time to become familiar. String players (guitar, ukulele, mountain dulcimer) rely on them to tune their instruments. While there is nothing to tune on the NAF, “seeing” the notes you play via a tuner is a valuable learning experience. THERE IS LITTLE POINT IN CONTINUING IF YOU DO NOT TAKE ADVANTAGE OF CHECKING YOUR NAF WITH A TUNER.

Many physical electronic tuners can be attached to your flute, such as the Snark tuner shown below. Clipping it to the opening at the bottom of your flute should not affect the playing. You may also be able to pick up the notes by clipping it to the festish, as shown.

Snark tuner on left, showing note of E. Snark tuner clipped onto the end hole (middle) and to the flute’s festish (right).

Play your flute so that the tuner (either the downloaded app, or one connected to your flute) picks up the sound, and see what note is registered. If clipping it to the end hole and the festish don’t give consistent results, then I recommend using a downloaded tuner.

Whatever method you use, write down the notes for each fingering position. You may have to play the scale a few times until you have consistent responses. A word of caution, though. YOU CAN CHANGE THE PITCH OF A NOTE BY BLOWING HARDER OR SOFTER. Blowing harder makes the pitch go up, toward the “sharp” side of the note (e.g., from A to A#), and blowing softer makes the pitch go down, toward the flat side of the note (e.g., A to Ab). Try to blow “medium.” Downloaded tuners such as Clear Tune are very precise, so don’t be surprised by needle fluctuation. Still, you should end up with notes that accurately reflect the key of your flute. Just accept that the needle of the may not sit exactly over the note you are playing, but may be off centered a bit.

Compare your flute’s notes with the following table. In the left hand column are all the common minor keys for Native American Flutes. When you cover the holes as shown, you should be playing the note indicated in that key.
If you haven’t completed Steps 1-3, please do them before proceeding. Establish what notes you are sounding when you play the minor pentatonic scale on your flute.
PART 2 – SCALES, THE KEYBOARD AND THE TREBLE CLEF

STEP 4. Get to a keyboard (real or simulated) and play middle C.

If you have ready access to a keyboard or piano, great. If not, I recommend going online for a free piano simulator, at http://virtualpiano.net/. A screen shot of this simulated keyboard is shown below. (If you prefer some other simulated online keyboard, that’s fine.)

When you press a note on this simulated keyboard using your mouse or trackpad pointer, the name of the note shows at top, as in this figure. Pressing middle C (first green arrow) gives “C-25”, which just means that middle C is the 25th note on this keyboard; the “25” has no other significance.

Next, play all the notes up from middle C until you get to the next C (second green arrow). This is the so-called chromatic scale. The chromatic scale is composed of 12 consecutive white and black keys, each with a different name. Repeating the first note played, but at the higher pitch, will give a total of 13 notes. Repeat of the first note is usually shown in descriptions of the chromatic scale, but technically it is not part of the scale.
Note that the black keys are labeled as both # (sharp) and b (flat). Going up the scale we use sharps. Going down the scale we use flats. (This computer simulator doesn’t differentiate between going up and down, and labels all black keys with #.) The fact that each of the black keys can be a sharp or a flat means they are *enharmonic*, the term for when a single note can have two names. Here are the notes going up and down from C (with a repeat of the C).

| Chromatic Scale going up: | C, C#, D, D#, E, F, F#, G, G#, A, A#, B, C |
| Chromatic Scale going down: | C, B, Bb, A, Ab, G, Gb, F, E, Eb, D, Db, C |

The chromatic scale is any 12 consecutive notes, so it could start on D, E, F, etc. Starting on D, for example, you would play (including the repeat of D):

| Going down: | D, Db, C, B, Bb, A, Ab, G, Gb, F, E, Eb, D |

What’s all this got to do with the NAF? Just this: if you understand basic scales on the piano, then you will find it much easier to understand the “minor pentatonic” scale you’ve been playing on the NAF. And if you go beyond this scale to others that the NAF can play, such as the major pentatonic or diatonic (to be described later), familiarity with the keyboard will prove very helpful.
**STEP 5.** Become familiar with the treble clef.

This syllabus is not about learning to read music. You do not need to read music to play the NAF. However, as you’ll see, NAF tablature – the standard for almost all printed NAF music – utilizes the treble clef to display notes and rhythm, so musical notation is something you should become familiar with (if not already).

NAF tab (short for tablature) is displayed on the treble clef. Here is one example of NAF tab, which will be discussed in Part 4.

![NAF Tablature Example](http://www.flutopedia.com/song_amazing_grace.htm)

Focus in this step is on the treble clef, which is the scaffolding for NAF tab. (My experience is that about half the people who take up the Native American flute already have some musical experience on the piano, guitar or other instrument, and can read music. If that is your situation, you can skip the rest of this step.)

Most musical notation is displayed on one of two clefs, the treble clef at the top and the bass clef at the bottom. Generally (with many exceptions) the notes from middle C and higher – the right half of the keyboard – are displayed on the treble clef and notes from the other half of the keyboard are displayed on the bass clef.

![Clef Diagram](https://music.stackexchange.com/questions/9987/on-a-piano-scale-what-is-considered-middle-c)

NAF tablature does not include the bass clef, since most of the notes played fall in the range of the treble clef. Notes lower than middle C can still be displayed using the treble clef, on what are called ledger lines, as shown below. Thus, you will only see the treble clef in NAF tab.
Below is the chromatic scale you played on the piano, with notes placed on the treble clef. In this example the scale starts on middle C going up, and on the next higher C going down. Play this scale on the piano as you verbalize each note. Remember, all the sharps (going up) and the flats (going down) are the black keys, of which there are five. Thus the first black key going up is C#, and the exact same key going down is labeled Db.

It’s a good idea to memorize notes for lines and spaces of the treble clef. Lines going up are labeled E-G-B-D-F. The popular mnemonic is Every Good Boy Deserves Fudge. Spaces going up are labeled F-A-C-E, or FACE, also easy to remember.

Below is another example of NAF tablature, which will be discussed in greater detail in Part 4. The one-line samples of Amazing Grace and Earth My Body are presented in this step to help familiarize you with the treble clef.
Note the following about from these samples of NAF tab:

- **Key signature.** Indicated by the number and placement of sharps and flats after the treble clef sign. In both these songs there are 4 sharps, indicating the key of E major.

- **Time signature.** Two numbers, one above the other, indicating the beat. The top number is the number of beats in a measure. The bottom number is the note that gets one beat, with “4” indicating a quarter note. Thus, in *Amazing Grace* the time signature 3/4 indicates there are 3 beats to a measure, with a quarter note getting one beat. In *Earth My Body* the time signature 4/4 indicates 4 beats per measure, with a quarter note getting one beat.

- **Bar or measure.** The space between the vertical lines is called a “bar” or “measure.” The line from *Amazing Grace* shows five measures, with the first one being “incomplete” because it has only a single note (called a “pickup note.”). The line from *Earth My Body* shows two measures.

- **Duration of notes.** Below are several figures illustrating the relative duration of musical notes. The first figure shows that a whole note equals two half notes, a half note equals two quarter notes, etc. The next figure shows two measures in 4/4 time, meaning 4 beats to the measure, with each quarter note getting one beat. Since a half note equals two quarter notes, the first measure contains the equivalent of 4 quarter notes. And, since a whole note equals 4 quarter notes, the 2nd measure also contains the equivalent of 4 quarter notes.
The next figure shows that adding a dot after a note increases the length by one half.

\[ \begin{align*}
\cdot \cdot & = \cdot + \cdot \\
\cdot \cdot \cdot & = \cdot + \cdot + \cdot \\
\cdot \cdot \cdot \cdot & = \cdot + \cdot + \cdot + \cdot
\end{align*} \]

The next figure shows the note values, plus the same values for “rests”. When these rest symbols appear in a measure you rest (stop playing) for the duration indicated.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>NOTE</th>
<th>REST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole note/rest</td>
<td>♩</td>
<td>♩</td>
</tr>
<tr>
<td>Half note/rest</td>
<td>♩</td>
<td>♩</td>
</tr>
<tr>
<td>Quarter note/rest</td>
<td>♩</td>
<td>♩</td>
</tr>
<tr>
<td>Eighth note/rest</td>
<td>♩</td>
<td>♩</td>
</tr>
<tr>
<td>Sixteenth note/rest</td>
<td>♩</td>
<td>♩</td>
</tr>
</tbody>
</table>

There are other notations not shown here, such as those that indicate loud and soft, crescendo and decrescendo, legato and staccato, slurs, ties, etc. Over time you will learn these notations if you continue to play music using the NAF tab. Why, then, is this not reading music? Because you will not actually be playing the notes shown on the treble clef. I will explain this situation further in Part 4.
STEP 6. **Learn about the diatonic scale.**

In Step 4 I discussed the **chromatic scale**: 12 consecutive notes, including white and black keys when played on the piano. The **diatonic scale** is 7 of the 12 chromatic notes, in a sequence that adheres to a specific pattern. The 8th note repeats the first note. Understanding the **diatonic musical scale** – even though you may not play it on your NAF – will provide a better understanding of the NAF’s **pentatonic scale**.

There are many diatonic scales. Most common are major and minor diatonic scales. What makes the diatonic scale “major” or “minor” is the exact sequence of half steps and whole steps.

- A whole step is the distance between two keys when there is a single key between them.
- A half step is the distance between any two adjacent keys on the piano.

Refer to the following figure (WS = whole step and HS = half step). C-C#, E to F and F# to G are examples of half steps. C-D, F-G and F# to G# are examples of whole steps.

![Diatonic Scale Diagram](http://www.piano-lessons-central.com/piano-scales/piano-scales/)

A diatonic major scale has one specific sequence of half (H) and whole (W) steps and a diatonic minor scale has another.


The simplest diatonic scales are C Major and A minor, because these two scales use only the white keys: no black keys and hence no sharps or flats.

Below are the notes on both the piano keyboard and the treble clef for C major and A minor scales. (**NOTE:** When a scale is named major or minor, without another adjective like “chromatic” or “pentatonic”, it refers to the diatonic scale.) These scales have the **same notes**, but a different sequence of half steps and whole steps. **Play these scales on your keyboard.** Confirm the whole step-half step sequence as shown. (The following piano keyboard and treble clef figures are from [www.basicmusictheory.com](http://www.basicmusictheory.com), an excellent web site for finding any scale, along with a description, keyboard diagram and treble clef notation.)
Major scale: W-W-H-W-W-H

Minor scale: W-H-W-H-W-W
To preserve the whole step-half step sequence, other major and minor scales must use one or more black keys. I will show one more example of related scales – G major and E minor – before moving on to the pentatonic scale. Like C major and A minor, G major and E minor share the same notes, one of which is F#. 

### G major scale

**Major scale:** W-W-H-W-W-H

### E minor scale

**Minor scale:** W-H-W-H-W-W
PART 3 – THE PENTATONIC SCALE: KEYBOARD AND TREBLE CLEF

STEP 7. Learn what makes up the major and minor pentatonic scale.

Pentatonic scale: A pentatonic scale has 5 of the 7 notes of the diatonic scale. Repeating the first note gives 6 notes.

There are many pentatonic scales. Most common are the major and minor pentatonic scales. While they also have a specific pattern of whole-steps and half-steps, a better way to remember them is by what notes they omit from the diatonic scale. The major pentatonic scale omits the 4th and 7th note from the major diatonic scale. Thus for the C major pentatonic scale, the F (4th note) and B (7th note) of the C major diatonic scale are omitted. Play this scale on your keyboard.

The NAF can play music in both major and minor pentatonic scales, but music for beginners is typically in a minor pentatonic scale, since all standard flutes are designed to play in a minor pentatonic key. The next page shows the A minor pentatonic scale as played on the keyboard, as notes on the treble clef, and as played on an A minor flute. Note that the B (2nd note) and F (6th note) of the A minor diatonic scale are omitted. Play this scale on your keyboard. Then play it on your flute. If you don’t have an A minor flute, the notes you sound will not be the ones shown on the keyboard and the treble clef, but instead the notes for your flute’s key (see table of scales for each flute, below).
The modern NAF is designed to play the minor pentatonic scale. However, both the 5- and 6-hole flute can play many more notes, including all the scales and sheet music shown in this syllabus. Between the two basic flute styles the fingering for a given note will differ, but the note will sound the same. (And of course, many great flute players don’t even look at written music or tablature. They just “play from the heart,” or “play by ear.”)
STEP 8. Play your flute’s scale on the keyboard, then on your flute.

If you happen to have an A minor flute, you will play the notes shown in the A minor pentatonic scale, above. But if you have a flute in a different key, you will play different notes, which by now you should be able to figure out on the keyboard. Shown below are the notes you will play if you have, respectively, an E minor flute, an F# minor flute, and a G minor flute. As you go through these three examples, refer frequently to the following table of hole closures for each scale.

![Pentatonic Minor Diagram]

<table>
<thead>
<tr>
<th>Your Flute’s Key</th>
<th>Notes played with fingering as shown:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>A  C  D  E  G  A</td>
</tr>
<tr>
<td>B</td>
<td>B  D  E  F#  A  B</td>
</tr>
<tr>
<td>Bb</td>
<td>Bb  C#  Eb  F  G#  Bb</td>
</tr>
<tr>
<td>C</td>
<td>C  D#  F  G  A#  C</td>
</tr>
<tr>
<td>C#</td>
<td>C#  E  F#  G#  B  C#</td>
</tr>
<tr>
<td>D</td>
<td>D  F  G  A  C  D</td>
</tr>
<tr>
<td>E</td>
<td>E  G  A  B  D  E</td>
</tr>
<tr>
<td>Eb</td>
<td>Eb  F#  G#  Bb  C#  Eb</td>
</tr>
<tr>
<td>F</td>
<td>F  G#  Bb  C  Eb  F</td>
</tr>
<tr>
<td>F#</td>
<td>F#  A  B  C#  E  F#</td>
</tr>
<tr>
<td>G</td>
<td>G  A#  C  D  F  G</td>
</tr>
<tr>
<td>G#</td>
<td>G#  B  C#  Eb  F#  G#</td>
</tr>
</tbody>
</table>

← THE 2нд [F#] AND 6т [C] NOTES OF THE E MINOR (DIATONIC) SCALE ARE OMITTED.
In this keyboard diagram the second note played is labeled as B♭, which is the same as A# in the table of flute scales.

The 2nd [G#] and 6th [D] notes of the F-sharp minor (diatonic) scale are omitted.

Do you notice the similarity of notes to what you played on the keyboard? The keyboard notes may be higher or lower than what you played on the flute, but the intervals will be the same. Which leads us to Step 9.

The 2nd [A] and 6th [Eb] notes of the G minor (diatonic) scale are omitted.
STEP 9. Determine the intervals between notes on your NAF.

Now we get into scale intervals, which can be very confusing because each interval – the distance between two notes – can have several modifiers, such as “minor,” “perfect” and major.” These modifiers are based on how many “half steps” separate the note from the root. For example an interval of a “third” could be a “major” or a “minor” third. For our purposes the modifiers are not important, and it’s best to think of intervals as simple numbers: a second, a third, a fourth, etc. Ignoring modifiers allows us to consider only the white keys in naming the intervals. Thus if we look at the C major diatonic scale, we can name the intervals easily without using any modifiers.

### C major scale

<table>
<thead>
<tr>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
<td>F</td>
<td>G</td>
<td>A</td>
</tr>
</tbody>
</table>

**Intervals**

C is the root and the root is always an interval of “1.”

D is the second note up from C, so the interval from C to D is a “second.”

E is the third note up, so the interval from C to E is a “third.”

F is the fourth note up, so the interval from C to F is a “fourth.”

G is the fifth note up, so the interval from C to G is a “fifth.”

A is the sixth note up, so the interval from C to A is a “sixth.”

B is the seventh note up, so the interval from C to B is a “seventh.”

C is the eighth note up, so the interval from C to C is an “octave.”

Here are the intervals for the A minor diatonic scale.

### A minor scale

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
<td>F</td>
<td>G</td>
<td>A</td>
</tr>
</tbody>
</table>

**Intervals**

A is the root, and is an interval of “1.”

A-B is a second.

A-C is a third.

A-D is a fourth.

A-E is a fifth.

A-F is a sixth.

A-G is a seventh.

A-A is an octave.
Now consider a Native American flute in the key of A minor (i.e., the A minor *pentatonic* scale). Here is the A minor pentatonic scale on the keyboard, followed by the familiar flute diagram showing hole closures for each note. Beneath each note is the interval between that note and the root, in this case A.

![A minor pentatonic scale](image)

Notes played with fingering as shown:

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>G</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interval Number:</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>7</td>
<td>8</td>
</tr>
</tbody>
</table>

**Interval Naming**

*Possible Confusion Alert!* The order that a note is played in a given scale, and its interval number, may not be the same. Intervals are based on the distance from the root.

A is the first note or root; the root is always numbered 1.
C is the second note played, but is the 3rd note up from A, so it is an interval of a third, and is numbered 3.
D is the third note played, but is the 4th note up from A, so it is an interval of a fourth, and is numbered 4.
E is the fourth note played, but is the 5th note up from A, so it is an interval of a fifth, and is numbered 5.
G is the fifth note played, but is the 7th note up from A, so it is an interval of a seventh, and is numbered 7.
A is the sixth note played, but is the 8th note up from A, so it is an interval of an octave, and is numbered 8.

Here is another example of interval naming, for the E minor pentatonic scale. The keyboard is followed by the familiar flute diagram showing hole closures for each note. Beneath each note is the interval between that note and the root, in this case E.
Reminder: The order that a note is played in a given scale, and its interval number, may not be the same. Intervals are based on the distance from the root.)

![E minor pentatonic scale diagram]

**Interval Naming**

- **E** is the first note or root; the root is always numbered 1.
- **G** is the second note played, but is the 3\(^{rd}\) note up from E, so it is an interval of a third, and is numbered 3.
- **A** is the third note played, but is the 4\(^{th}\) note up from E, so it is an interval of a fourth, and is numbered 4.
- **B** is the fourth note played, but is the 5\(^{th}\) note up from E, so it is an interval of a fifth, and is numbered 5.
- **D** is the fifth note played, but is the 7\(^{th}\) note up from E, so it is an interval of a seventh, and is numbered 7.
- **E** is the sixth note played, but is the 8\(^{th}\) note up from E, so it is an interval of an octave, and is numbered 8.

I will now show one more example of interval naming, one that involves a black key – the G minor pentatonic scale.

Reminder: The order that a note is played in a given scale, and its interval number, may not be the same. Intervals are based on the distance from the root.)
Notes played with fingering as shown:

<table>
<thead>
<tr>
<th>Interval Number</th>
<th>G</th>
<th>Bb</th>
<th>C</th>
<th>D</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>4</td>
<td>2</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>8</td>
</tr>
</tbody>
</table>

**Interval Naming**

G is the first note or root; the root is always numbered 1.

Bb is the second note played, but is the 3rd note up from G, so it is an interval of a third, and is numbered 3.

At the beginning of Step 9, I wrote: “…it’s best to think of intervals without the modifiers; doing so allows us to consider only the white keys in naming the intervals.” But Bb is a black key; why is the interval G-Bb a third? Because we go by the letter name; as long as it’s the third letter up from the root, it is a third, regardless of the modifier (in this case the modifier would be “minor” third, but again, that’s not important for our purposes). The reason this G minor pentatonic scale has Bb instead of B is because it is based on the G minor diatonic scale (7 notes, shown below), from which the 2nd [A] and 6th [Eb] notes are removed to give the 5-note pentatonic scale.

Compare the 7-note and 5-note G minor scales. You’ll see that the 2nd note (A) and the 6th note (Eb) of the G minor diatonic scale are removed to give the G minor pentatonic scale. The interval G-Bb was a third in the 7-note diatonic scale and remains a third in the 5-note pentatonic scale, even though the Bb is now the second note played.
(Continuing the interval naming)

C is the third note played, but is the 4\textsuperscript{th} note up from G, so it is an interval of a fourth, and is numbered 4.

D is the fourth note played, but is the 5\textsuperscript{th} note up from G, so it is an interval of a fifth, and is numbered 5.

F is the fifth note played, but is the 7\textsuperscript{th} note up from G, so it is an interval of a seventh, and is numbered 7.

G is the sixth note played, but is the 8\textsuperscript{th} note up from G, so it is an interval of an octave, and is numbered 8.
PART 4 – NAF TABLATURE

STEP 10. Play a song using finger tablature, i.e., tablature that shows just the hole closings.

Below are two versions of Amazing Grace, one for the 5-hole NAF and one for the 6-hole NAF. They are printed with both NAF tablature (the treble clef) and finger tablature (hole closings). For the moment ignore the NAF tablature and play one or the other versions (for 5- or 6-hole flute) using just the finger tablature.

http://www.flutopedia.com/song_amazing_grace_sheet.htm

Amazing Grace
Low Register Version

[Tablature and finger positions with lyrics]

* These notes are substitutes for notes that cannot be played easily on Native American flutes.

From www.Flutopedia.com
Updated February 19, 2011
In Step 4 I mentioned additional notations you will see in the treble clef, including “ties.” Amazing Grace shows two ties, the curved lines linking measures 8-9 and 16-17. A tie means to hold the first note over for the length of the tie, but not play the second note. Thus the note played in measure 9 of the 6-hole version of Amazing Grace (fourth hole covered) is held for 5 beats. Likewise, the note played in measure 16 (bottom two holes uncovered) is held for 5 beats. Without this treble clef notation, you wouldn’t know how long to hold these notes.
STEP 11. Learn NAF tablature.

Now we come to NAF tablature – perhaps the most confusing part about NAF printed music. Here again is the first line of Amazing Grace, in NAF tab, with the fingering for each note below.

http://www.flutopedia.com/song_amazing_grace_sheet.htm

NAF tab was introduced by R. Carlos Nakai and James DeMars in the 1990s, after extensive research on many extant Native American flutes. Prior to that time there was no accepted NAF tablature in universal use. In their 1996 book *The Art of the Native American Flute*, Nakai and DeMars give a detailed explanation of how they came to choose E major for the tab. Unfortunately, for non-musicians the explanation is rather esoteric and not intuitive. Basically, to paraphrase, it seems that the intervals of most flutes they evaluated could best be displayed using the key of E major (4 sharps), rather than another key.

About NAF tab, Flutopedia states: “The use of the term “tablature” can be a bit confusing. In other settings, particularly for the guitar, the term “tablature” is used for systems that show a pictorial representation of where to place your fingers. In a remote sense, Nakai tablature does the same thing, but it’s a bit more cryptic.” (For further discussion of NAF tab, see http://flutopedia.com/nakai_tablature.htm.)

Thus, though clearly musical notation, NAF tab is not to be used to read notes, but only the fingering for your flute. Nakai and DeMars make this point clearly, writing: “In other words, this [NAF tab] now becomes a fingering tablature and is not related to actual pitches in any way.”

While there are other tablature methods, NAF is clearly the standard. You will find it in every book and web site that contains NAF music, including the songs in Flutopedia (http://flutopedia.com/), so you should know something about it.

Refer again to the first music line of *Amazing Grace*, shown above for the 6-hole flute. The key is E major (4 sharps) and it’s in 3/4 time. The very first note is a quarter note. In standard musical notation this would be F#. Below that note is the finger tablature, showing the note is played by covering all the holes of your flute. Now look at the table
of flute keys on the next page. Which flute plays F# when all the holes are covered? Only one – the F# minor flute! None of the other flutes play this note when all the holes are covered.

![Pentatonic Minor](image)

<table>
<thead>
<tr>
<th>Your Flute’s Key</th>
<th>Notes played with fingering as shown:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>A C D E G A</td>
</tr>
<tr>
<td>B</td>
<td>B D E F# A B</td>
</tr>
<tr>
<td>Bb</td>
<td>Bb C# Eb F G# Bb</td>
</tr>
<tr>
<td>C</td>
<td>C D# F G A# C</td>
</tr>
<tr>
<td>C#</td>
<td>C# E F# G# B C#</td>
</tr>
<tr>
<td>D</td>
<td>D F G A C D</td>
</tr>
<tr>
<td>E</td>
<td>E G A B D E</td>
</tr>
<tr>
<td>Eb</td>
<td>Eb F# G# Bb C# Eb</td>
</tr>
<tr>
<td>F</td>
<td>F G# Bb C Eb F</td>
</tr>
<tr>
<td>F#</td>
<td>F# A B C# E F#</td>
</tr>
<tr>
<td>G</td>
<td>G A# C D F G</td>
</tr>
<tr>
<td>G#</td>
<td>G# B C# Eb F# G#</td>
</tr>
</tbody>
</table>

So in NAF tab, this quarter note in the first space of the treble clef of Amazing Grace is not meant to represent F#; it is only meant to represent the note played when all the holes are covered.

![NAF Tab](image)

The second note in Amazing Grace is a half note that in standard musical notation is B, because it sits on the B line (remember: E-G-B-D-F). The finger tab below the note shows it is played with the bottom two holes of the flute uncovered. Which flute plays B with this fingering? Only one – the F# minor flute! None of the others play this note when the bottom two holes are uncovered.

![NAF Tab](image)

**NAF Tab**

*In real music this quarter note would represent F#. In NAF tab it only represents closure of all the flute’s holes. The actual note played will depend on the key of your flute.*

**NAF Tab**

*In real music this half note in the 2nd measure would represent the note B. In NAF tab it only represents closure of the top 4 holes of the NAF. The actual note played will depend on the key of your flute.*
So now you get the picture. If you want to play the actual notes shown in NAF tab, get an F# minor flute; it’s the only one that plays the pitches as shown in NAF tab. If you have any other flute, you will not be playing the actual pitches shown on the treble clef of NAF tab. That is why NAF tab is not true musical notation but is instead tablature.

OK, so why bother with NAF tab? Why use it instead of the far simpler finger tablature? The reason should by now be apparent. NAF tab is capable of showing a lot more information than is found in finger tablature – namely rhythm or the beat of the music, the specific duration of notes, musical dynamics (loud, soft, etc.).

For example, the second note in Amazing Grace is a half note, which means it is held twice as long as the preceding quarter note. The third and fourth notes are eighth notes, which means they are held half as long as the quarter note. This important “musical” information is not available in finger tablature, but is available in NAF tab. In other words, NAF tab is standard music for some things (rhythm, note duration, dynamics) but not standard music for the actual notes played!

In summary, NAF tab gives much more information than obtainable from finger tablature, and that’s why it has gained traction and is so ubiquitous. To further demonstrate this point, I will go over the first few measures of three songs in Flutopedia, including the by-now familiar Amazing Grace.

http://www.flutopedia.com/song_amazing_grace_sheet.htm

![Amazing Grace NAF Tab](image)

The song is in 3/4 time, meaning 3 beats to a measure, and the quarter note gets one beat. Though in 3/4 time, the first measure of Amazing Grace shows only a single quarter note, called a “pickup note.” The 2nd measure shows a half note followed by two eighth notes. The next measure shows a half note and a quarter note. The last measure on this line shows another half note and quarter note. SUMMARY: The finger tab does not display the beat of the song, nor the change in length of the notes played. This information is clearly shown in the NAF tab.
The song is in 4/4 time, meaning 4 beats to a measure. The first measure of *Sunshine* shows a quarter note rest, followed by 3 quarter notes. The second measure shows two half notes. The third measure shows a quarter rest, followed by 3 quarter notes. The second of these quarter notes is preceded by a “natural” sign, which means not to play it as a C sharp (if this was real music), but as a C. The next quarter note restores the sharp, which means to play it as C#. The difference is shown in the finger tab below the notes. The last measure of this line shows two half notes. SUMMARY: The finger tab does not display the change in types of notes or the rests, information that is clearly shown in the NAF tab.

This arrangement of *Zuni Sunrise* shows no time signature and no bar lines. Instead, it starts with a quarter note, whole note, breath hold (the apostrophe), followed by quarter note, half note, breath hold. More breath holds are inserted, and near the end of the line we come to a “triplet”, three eighth notes connected by a bar at the top; these are to be played in quick succession, taking the same amount of time as one quarter note. The line ends with a whole note and another breath hold. SUMMARY: The finger tab does not display the change in types of notes, nor the breath holds, nor the fact that the three eighth notes are to be played as a triplet. All this is clearly shown in NAF tab.
STEP 12. Compare the Treble Clef, NAF Tablature and Interval Tablature.

We now come back to intervals. They provide another system of tablature, one that has been promoted by Scott August in his website and book (see References and Resources). His reasoning is that finger tablature is cumbersome, and since it represents only the intervals between notes, why not replace it with just the interval numbers?

In Step 9 I went over intervals for the minor pentatonic scale, and showed how the numbers are derived. Here are the interval numbers for A minor.

<table>
<thead>
<tr>
<th>Key: A Minor</th>
<th>Interval Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1</td>
</tr>
<tr>
<td>C</td>
<td>3</td>
</tr>
<tr>
<td>D</td>
<td>4</td>
</tr>
<tr>
<td>E</td>
<td>5</td>
</tr>
<tr>
<td>G</td>
<td>7</td>
</tr>
<tr>
<td>A</td>
<td>8</td>
</tr>
</tbody>
</table>

Below is the pentatonic minor scale on NAF Tab, with the intervals labeled by their number. These numbers correspond to the finger diagrams regardless of the key.
In this tab system, all you have to remember are the hole closures that go with the intervals. Thus when you see “1” you know it is and when you see you “3” you know it is.

It’s not that simple, however, since there are other notes besides the basic five pentatonic scale notes. The blog post, http://cedarmesa.com/blogfiles/numbertab.html, gives a table of the full extended scale with number tab.

For example,

is a 6th and on the NAF Tab (treble clef) is the note on the fourth line up from the bottom. In number tab it is just “6”.

Here is the first line of Amazing Grace with NAF Tab (treble clef), finger tab, and interval tab. Your choice!

The three tab systems give the same information. If you have an F# minor flute you can read and play the actual notes shown on the treble clef. For any other flute key, you have to learn which finger pattern goes with which note on the treble clef. And for interval tab, you have to learn which finger pattern goes with which number. So there is a learning curve for any of the three systems. Basic music theory allows you to understand why any of the three systems will work for the Native American flute.
FINAL WORDS

If you completed all the steps in the syllabus, I trust you have gained a good appreciation of NAF basic music theory. Now take the Multiple Choice Quiz to test your understanding. It should reinforce what you read in the syllabus. First, try answering each question without referring back to the syllabus. Then, revise your answers (if needed) after reviewing sections that pertain to the question. Lastly, grade your quiz from the answers on page 40.

Be sure to check out the References and Resources. As you’ll find if you peruse any of the books or web sites listed, there is so much more to the NAF than what I’ve presented, including scales other than the minor pentatonic, embellishments, alternate fingerings, etc.

Email me with any suggestions or comments. I am open to any ideas that might improve the syllabus and make it more useful for beginning NAF players.

Lawrence Martin
drlarry437@gmail.com
1. The lowest note on your flute is played with:
   a. all holes open
   b. all holes closed
   c. hole closures that depend on the flute’s key

2. The lowest note played on the A minor flute is:
   a. A
   b. B
   c. C

3. If your flute is an F# minor flute, the third note played in the pentatonic minor scale is:
   a. A
   b. B
   c. C#

4. If your flute is a C minor flute, the 4th note played in the pentatonic minor scale is:
   a. D#
   b. F
   c. G

5. A chromatic scale has:
   a. 5 notes
   b. 7 notes
   c. 12 notes

6. A minor pentatonic scale is the minor diatonic scale minus:
   a. the 2nd and 6th notes
   b. the 2nd and 4th notes
   c. the 4th and 7th notes

7. A major pentatonic scale is the major diatonic scale minus:
   a. the 3rd and 5th notes
   b. the 3rd and 6th notes
   c. the 4th and 7th notes

8. The interval between the 1st and 2nd note played in the minor pentatonic scale is a
   a. third
   b. fourth
   c. fifth
9. The interval between the 1\textsuperscript{st} and 4\textsuperscript{th} note played in the minor pentatonic scale is a:
   a. third
   b. fourth
   c. fifth

10. If the only hole \textit{closed} on an A minor 6-hole flute is the 4\textsuperscript{th} from the bottom, the note played will be:
    a. A
    b. C
    c. D

11. If the only hole \textit{open} on an F# minor 6-hole flute is the bottom hole, the note played will be:
    a. F#
    b. A
    c. B

12. A black piano key can be labeled both a sharp and a flat; this property is known as:
    a. harmonic
    b. enharmonic
    c. bi-tonal

13. The maximum number of \textit{eighth notes} per measure of music in 3/4 is:
    a. three
    b. five
    c. six

14. The maximum number of \textit{half notes} per measure of music in 4/4 time is:
    a. one
    b. two
    c. four

15. NAF tab is written in the key of:
    a. C major
    b. E major
    c. A minor

16. Interval number tablature replaces:
    a. NAF tab
    b. Finger tablature
    c. Neither one

Using the finger tab and intervals for the minor pentatonic scale, as shown below, answer questions 17-20.
17. For an F# minor flute, interval 3 is
   a. F#
   b. A
   c. B

18. For an G minor flute, interval 4 is
   a. A#
   b. C
   c. D

19. For an Bb minor flute, interval 5 is
   a. C#
   b. Eb
   c. F

20. For an E minor flute, interval 7 is
   a. A
   b. B
   c. D

******
NAF MUSIC THEORY – MULTIPLE CHOICE QUIZ ANSWERS

1. b. all holes closed
2. a. A
3. b. B
4. c. G
5. c. 12 notes
6. a. the 2nd and 6th notes
7. c. the 4th and 7th notes
8. a. third
9. c. fifth
10. a. A
11. b. A
12. b. enharmonic
13. c. six
14. b. two
15. b. E major
16. b. Finger tablature
17. b. A
18. b. C
19. c. F
20. c. D
REFERENCES AND RESOURCES

Web sites
http://flutopedia.com
Covers every conceivable aspect of the NAF. In particular, check out these sections of Flutopedia:
http://www.flutopedia.com/faq.htm#Music_Theory_Basics
http://www.flutopedia.com/glossary.htm#Primary_Scale
http://www.flutopedia.com/scale_PentatonicMinor.htm

https://en.wikipedia.org/wiki/Native_American_flute
Discusses all aspects of the NAF

http://www.flutetree.org/songbook/index.html
Catalogues hundreds of songs for the NAF.

http://flutecraft.org/12-scales-to-play-on-native-american-flute/342
Demonstrates 12 scales to play on the NAF, and presents some basic information useful for beginners.

http://www.cedarmesa.com/
Contains much information about the NAF, including tablature discussed in Part 4 of this syllabus (see http://cedarmesa.com/blogfiles/numbertab.html).

www.basicmusictheory.com
An excellent web site for finding any scale, along with a description, keyboard diagram and treble clef notation.

Instructional videos
https://www.youtube.com/watch?v=D7tCU5CQ_Os&list=PLD72967DD3931DBF8&index=1
A 6-part series by Odell Borg on flute basics

https://www.youtube.com/watch?v=TR3KCifuGLI
A 5-part series by Kevin Village-Stone on flute basics

https://www.youtube.com/watch?v=dqIwczesD6k
A 26 minute video titled Getting Started: The Beginner’s Guide to the Native American Style Flute

https://www.youtube.com/watch?v=1RPlVL-qaOg
https://www.youtube.com/watch?v=jAfBYYwQr50
These two videos demonstrate playing the pentatonic minor scale

https://www.youtube.com/watch?v=EdG1yeHfGuk&list=RDEdG1yeHfGuk#t=98
An instructional video on playing Amazing Grace using alternate fingering, embellishments and other advanced techniques.
Books (with links to Amazon)


John Vames. *The Native American Flute: Understanding the Gift*  

R. Carlos Nakai and James DeMars. *The Art of the Native American Flute*  
Tim R. Crawford. *Flute Magic: An Introduction to the Native American Flute*
https://www.amazon.com/Mel-Bay-Flute-Magic-Introduction/dp/0786658169/

Ami Sarasvati. *Learn to Play the Native American Style Flute: Level 1*
https://www.amazon.com/Learn-Native-American-Style-Flute/dp/1517059747/

Wojciech Usarzewicz. *Calm Forest: Native American Flute Songbook*
https://www.amazon.com/Calm-Forest-Native-American-Songbook/dp/8364699148/
The following book is not on Amazon, but can be ordered directly from Bing Futch at https://bingfutch-com.myshopify.com/collections/bing-futch-instructional-books/products/bing-futch-discovering-native-american-flute. It contains excellent discussion of basic music theory and comes with over 3 hours of recorded demos and backing tracks that you can download. Futch is an amazingly multi-talented musician, who teaches not only NAF but mountain dulcimer.

End of NAF Music Theory Syllabus