



Chromebooks and Music Education

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**This isn't a discussion
about the best platform
for music education**

**This is a discussion based around the
fact that your district DID or WILL choose
Chromebooks, and you need to know
how to use them in your classroom.**

Why do schools choose Chromebooks?

- Cost:** Two for the price of one 64GB iPad; it almost costs less to buy a Chromebook than to fix a broken iPad screen; in many cases it is cheaper to replace a Chromebook rather than replace a broken Chromebook screen (literally disposable)
- Perfect interaction with Google Apps for Education (GAFE)**
- GAFE unlimited storage for education**
- Automatic updates and easy central control**
- Limited hard drive space, everything is in the (Google's) cloud**
- Web apps (interestingly, the iPhone originally only had web apps)**
- QWERTY Keyboard**



iPad



iPad



iPad



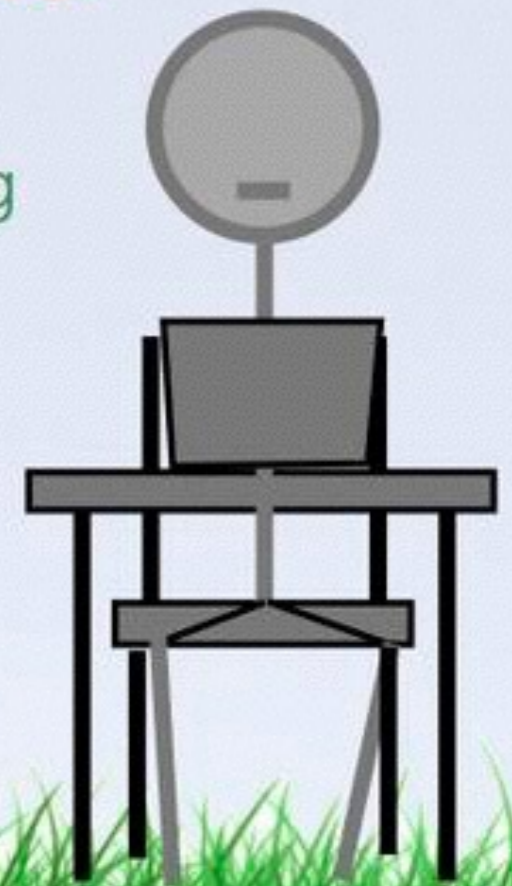
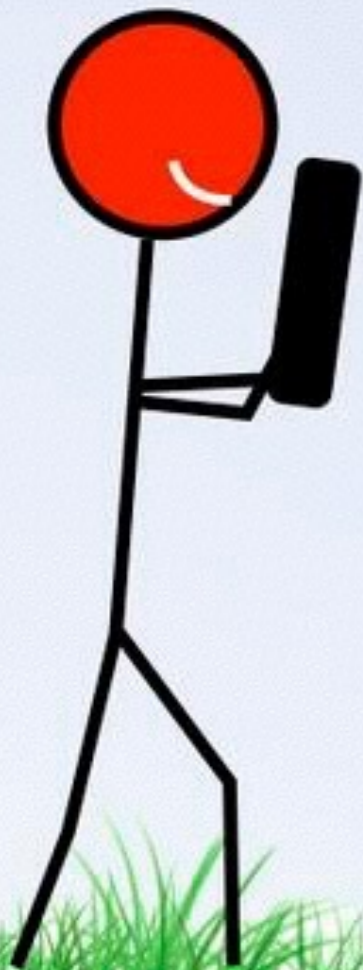
iPad



Laptop?
Chromebook?
Got desk?

iPad 4 Schools

No Desk required
No restrictions to learning



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Produced by @iPawWells more at iPaw4schools.org





iPads FIT in Music Education

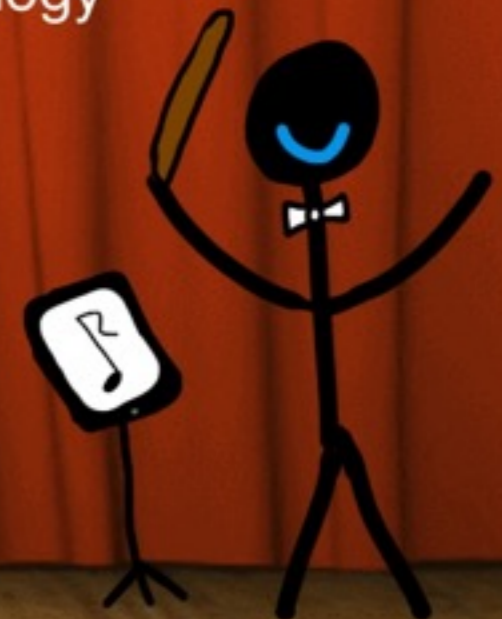


Notebook?
Chromebook?
Do you have desks?

- Band
- Choir
- Orchestra

- General Music
- Music Theory

- Guitar
- Music History
- Music Technology





Notebooks in Elementary General Music (Today's Meet)

Photo Courtesy of Ronda Armstrong, Metro Nashville Public Schools



Notebooks in Elementary General Music (Incredibox)

Photo Courtesy of Kandi Stellin, Glenwood Elementary School, Kearney, Nebraska

From an actual conversation I had with a technology director for a large Minnesota school district...

“What will music do with the Chromebooks?”

“Oh, that will be technology-free time.”

A better response...

The “wonderful instructional tool” will be more versatile for more types of programs and be accessible to the staff. They will be used for 90 percent of the teaching, with full computers still being used for computer assisted design, art and music and iPads still in use for other things and Macs for art and music.

<http://www.nancyonnorwalk.com/2013/10/chromebooks-to-be-the-next-big-thing-at-norwalk-public-schools/>

**How do you make a
Chromebook "fit" into a
music classroom?**

The "No's"

- No SmartMusic**
- No music scanning/recognition (NeoScores will have a scanned music to MusicXML converter)**
- No PDF music readers (NeoScores can handle PDF, MusicXML is better)**
- No bluetooth headphones (at least on my Samsung Chromebook)**
- No handwritten annotation**
- No external MIDI**
- Limited non-guitar instrument tuners (MANY guitar tuners)**

SAMIR

**In a traditional class, Chromebooks
focus on these...**



SAMIR

SAMIR



And rarely make it to these.

**In music, Chromebooks
remove (or lessen) these...**



SAMIR

SAMIR



And force you to move to these.

SAMR “SWIMMING POOL”

Enhancement Shallow End

Transformative Deep End


SUBSTITUTION

AUGMENTATION

MODIFICATION

REDEFINITION

Teaching and learning with technology always happens in this pool. You have to be comfortable wading in the shallow end before you pass the safety rope and venture into the deep.

Created by Carl Hooker 

Created by Carl Hooker, hookedoninnovation.com

- It is crucial that music educators be able to express that certain devices are hard to integrate INTO our classrooms**
- Teacher evaluators need to be aware of these challenges as the use of technology can be a factor in teacher evaluations**
- Administrators and tech coaches should be putting an emphasis of “getting into the pool” rather than reaching the deep end—especially when giving music teachers a device that causes you to jump right in!**

If your district/school is “Chromebook”

- Ask for the ability to have other devices in your classroom as well**
 - iPad for personal use**
 - Small group of iPads for sectional/small group activities**
 - Classroom cart of iPads**
- The worst thing that can happen is that you will be told, “No.”**

- All that said... **The Chromebook has “won”**
- The winning is in education more than any other area of the market.
- Major educational apps (even in music education) are going to have to adapt for these devices.
- Schools will still adopt other technology (iPad, as well as Windows tablets)
- Near (or literally) disposable nature of the Chromebook alone is the winning aspect
- I continue to hold our hope for a Chromebook “Transformer”



The only problem with a Chromebook tablet is that Google is already committed to a tablet device, via Android, and although some Android apps are showing up on Chromebooks (and they have the same Senior Vice President), and apps running on a clamshell device “does not a tablet make.”

The "Yes-es"

Web-based apps and sites to help you make better use of a Chromebook in music education

These are generally representative of "outegration" versus "integration"

**Almost all of these tools are
available on other platforms
(or they have a tool that is nearly
the same)**

GAFE

Drive (unlimited)

Docs

Spreadsheets

Slides

Drive

Research

Forms

Sites

G-mail

Google Classroom

And of course, Chrome

Composition

Noteflight

UJam

Soundation

Notessimo

Soda Synth

BeatLab

Incredibox (Web Site)

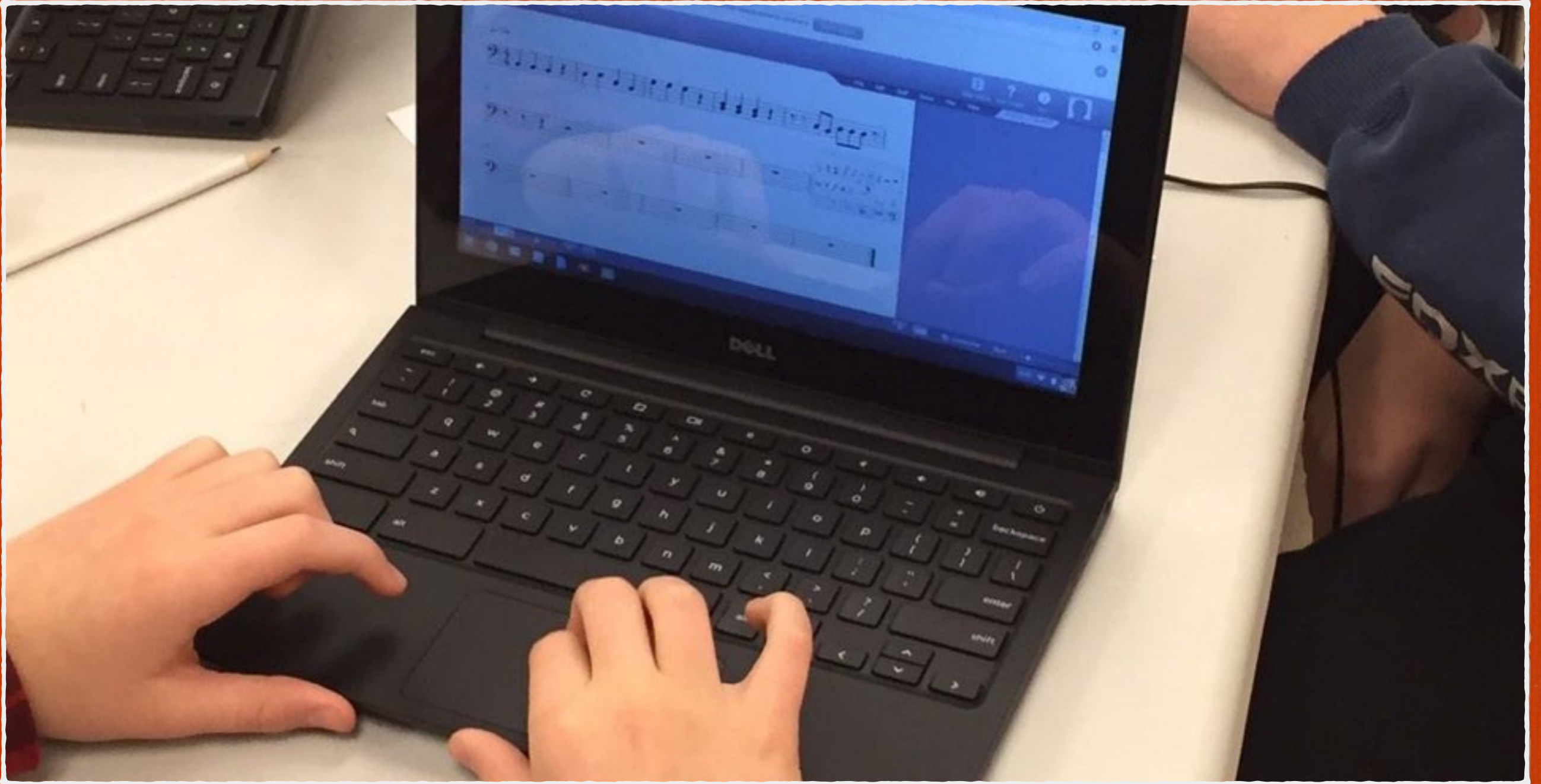
No...

MuseScore

Finale

Sibelius

Notion



“Another Chromebook day in general music class.”

**Twitter - December 2, 2014 - @RCMaharBand - Mahar Band, Orange, MA
Web App: Noteflight**



“iPad Day in General Music.”

Twitter - January 15, 2015 - @RCMaharBand - Mahar Band, Orange, MA
iOS App: GarageBand

Audio Playback

- Music Player for Google Drive**
- Google Play**
- SoundCloud**
- Pandora**
- Spotify**

Audio Recorder

- Voice Recorder**
- AudioRecorder**
- Mic Note (recording lectures)**

Screen Casting

- Screencastify**
- Snagit for Chrome**
- Hangouts on Air**

Presentations

- Be aware of how to get video out of your Chromebook**
- Google Slides**
- Prezi**
- PowToon**
- Haiku Deck**
- PowerPoint Online**
- For “Flipping” learning: EdPuzzle and Move Note**

Assessment

- Google Forms (and Flubaroo Script)**
- Kahoot**
- Socrative**
- Poll Everywhere**
- Edmodo**
- Schoology**
- Moodle**

Audio Editing

- Twisted Wave**
- Audiotool**
- HTML 5 Audio Editor (<http://plucked.de>)**

Ear Training

- Chords Free
- DoReMi Free
- Music Notation Training
- Absolute Pitch
- Sight Reading Factory (website)
- Also: musictheory.net and teoria.com

Guitar

- Guitar Tuner**
- Guitar Tab Viewer**
- Guitar Chords Chart**
- Adam's Virtual Guitar**
- Guitarist's Reference**
- Chordify (songs to chords)**
- Free Guitar Tuner (and about 100 additional tuners)**
- Chord Finder**
- Guitar Notes**
- Fretboard Trainer Plus**

Metronomes

- Cool Metronome**
- Metronome**
- Dr. Beat**

Tuners

- CifraClub Tuner
- LeshyLabs Tuner (www.leshylabs.com)

Sheet Music

- NeoScores**
- Chromatik**
- Stock PDF reader**



CTRL & SHIFT & REFRESH

Photo Courtesy of Mark Bjorklund, Vocal Music at Miller Middle School and Lenihan Intermediate School, Marshalltown, IA

Video Recording

We Video

Video Playback

- YouTube
- Vimeo
- Google Drive

Piano

Color Piano

Virtual Piano

Piano Master

Real Piano

Stuning Piano (sic)

Piano Crumbs

Piano Player

Virtual Color Piano

Virtual Piano Black

Online Pianist

Music Theory

- musictheory.net
- teoria.com
- Interactive Staff (Chrome Web App)**
- Music Notation Training (Chrome Web App)**
- Knock Free (rhythmic training)**

Classroom Management

- Class Dojo**
- Class Charts**
- Schoology**
- Edmodo**

Communication

- Google Sites**
- G-mail**
- Remind**
- Any web-based blogging service (Blogger, Wordpress, Weebly)**

Backchannel Discussions

- Feedback, exit tickets, etc.
- Today's Meet
- Padlet

Mirroring?



Chromecast (only on the Pixel)

Web Pages & Services

- Music First**
- Noteflight**
- Soundation**
- Focus On Sound**
- Quaver Music**
- Charanga Music World**
- Music Delta**
- Inside Music**
- Naxos Music Library**

Music Games

- Jam with Chrome
- Isle of Tune
- Pug's Notation Training
- Piano Games at Duckie Deck
- Joy of Music
- Music Games for Kids -
Dancing Cows
- ABC Mouse Kids Learning
- Musical Kittens

With the exception of GAFE, all of the other 22 categories are just as good (usually better) on iOS.

When all you have is a hammer...



How I see Chromebooks (in 2015)



How I see the iPad (in 2015)

I am looking forward to better hammers in the future from all companies.



It is important to show music teachers who love their Chromebooks and went to great lengths to get them.

Two case studies

A Case Study

- www.donorschoose.org/project/choir-chromebooks-for-21st-century-music/1408257 (November 2014)
- Choir Chromebooks for 21st Century Music Education
- Donors Choose \$2100 project: 10 Acer Chromebooks
- Goals: use musictheory.net, GAFE/Goobric, Audacity... authentic and engaging instruction”

A Case Study

- Report: November 11, 2014**
- PDF Sight Reading Exercises (Small Groups) with Kodály hand signs and solfège (Sight Reading Factory with audio assessments)**
- Recording audio tests of repertoire**
- Continued research for music theory, sight reading, ear training, and repertoire study**

A Case Study

- Major factor: cost (10 devices for \$2000), teacher has their own iPad
- GAFE surveys provide instant data to administrator
- Use of Remind
- Use of Move Note for video instruction (embed video lesson with existing slides)



Another Case Study

- www.donorschoose.org/project/modernizing-music-makes-musicians-merry/933643 (May 2013)
- 12 Samsung Series 5 Chromebooks to develop enriching composition and history projects
- \$1200 (12 devices for the price of less than 3 iPads)

Another Case Study

- Subscription to Noteflight which is used for composition
- musictheory.net for music theory
- Chrome is used to research music history—three minutes about a given topic, then share
- Recording audio for assessment
- Guitar classes use Chromebooks for lyrics and chord websites for learning songs
- YouTube and demonstration videos
- Strong use of GAFE



Summary

Summary

- The Chromebook doesn't quite fit into most music classroom**
- When a district chooses Chromebooks, it does so at the cost of integration (particularly S of the SAMR Model) in music classes (and many other classes without desks)**
- You CAN use Chromebooks, and they are particularly powerful when used in conjunction with GAFE and Internet based projects**
- In music, the Chromebook excels at tasks that students can take home, rather than tasks that can be easily integrated directly in class**

Ideas from Previous Chromebook Presentation Participants

- YouTube is powerful (and multi-platform). You can send a list of links to a YouTube videos to send to your students**
- Share music, videos, and large files via Google Drive**
- Weebly: an easy website creator to simply add content and get classes going**
- You can embed Google Docs and Slides directly into a Google Sites; this can be a huge time saver**

Some additional thoughts:

- I have used Google Spreadsheets (embedded in my choir Google Site) to have students sign up for choir lessons, students use that as pass, and then later I fill their cell red or green depending on whether they attend the lesson or not; you can now lock specific cells (introduced mid-January 2015)
- Google Classroom is a nice way to share and collect student work if you have Chromebooks; correcting can be complicated as assignments have to open into another Google web app (e.g. Docs) to be corrected
- In GAFE, check out the wonderful add-ons that can make your life easier.
 - VexTab in Google Docs

techinmusiced.com

**please e-mail me with additional ideas and uses for
Chromebooks in music education!**



- In the iBookstore:
- Practical Technology for Music Education