Chromebooks and Music Education

Christopher J. Russell, Ph.D.
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 32GB iPad
- They interact perfectly with Google Apps for Education (GAFE)
- 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)
- Battery life (?)
- Keyboard
<table>
<thead>
<tr>
<th></th>
<th>iPad 2</th>
<th>Samsung Chromebook</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size</strong></td>
<td>9.7 inch screen</td>
<td>11.6 inch screen</td>
</tr>
<tr>
<td></td>
<td>1.44 lbs.</td>
<td>2.2 lbs.</td>
</tr>
<tr>
<td><strong>Battery Life</strong></td>
<td>9 hours of light usage (less with intense usage)</td>
<td>65 hours</td>
</tr>
<tr>
<td><strong>Storage</strong></td>
<td>16GB - 64GB</td>
<td>16GB + 100GB Google Drive</td>
</tr>
<tr>
<td><strong>Keyboard</strong></td>
<td>On-screen virtual</td>
<td>Full-sized</td>
</tr>
<tr>
<td><strong>Price</strong></td>
<td>$499-$699</td>
<td>$249-$329</td>
</tr>
<tr>
<td><strong>Support</strong></td>
<td>90 days telephone support (option to buy AppleCare)</td>
<td>24/7 support from Google</td>
</tr>
<tr>
<td><strong>Warranty</strong></td>
<td>1 year limited</td>
<td>3 year extended</td>
</tr>
<tr>
<td><strong>Media Input</strong></td>
<td>Microphone</td>
<td>Microphone</td>
</tr>
<tr>
<td></td>
<td>Headphone jack</td>
<td>Headphone jack</td>
</tr>
<tr>
<td></td>
<td>Apple Dock connector</td>
<td>2 USB ports</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4-in-1 memory card slot</td>
</tr>
<tr>
<td><strong>Camera</strong></td>
<td>2-way webcam with rear HD</td>
<td>Webcam</td>
</tr>
<tr>
<td><strong>Flash-Based Media</strong></td>
<td>Cannot access/display</td>
<td>Can access/display</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>Difficult (iPads are meant to be personal devices) Up to 5 apps and updates can be pushed out to devices</td>
<td>Easy, web-based admin panel Unlimited apps/updates can be pushed out to devices</td>
</tr>
<tr>
<td><strong>Software Updates</strong></td>
<td>Manual</td>
<td>Automatic</td>
</tr>
<tr>
<td><strong>Apps</strong></td>
<td>Over 150,000 in store</td>
<td>Limited choice but growing daily</td>
</tr>
<tr>
<td><strong>Customize</strong></td>
<td>Customizations stuck to each individual device</td>
<td>Customizations linked to accounts</td>
</tr>
</tbody>
</table>
Device Comparison Chart

Scott McLeod

bit.ly/1blBczf
iPad 4 Schools
No Desk required
No restrictions to learning

Used with permission

Produced by @iPadWells more at iPad4schools.org
iPads FIT in Music Education

- Band
- Choir
- Orchestra
- General Music
- Music Theory
- Guitar
- Music History
- Music Technology

Notebook? Chromebook? Do you have desks?

by Christopher J. Russell, Ph.D. techinmusiced.com
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.

How do you make a Chromebook "fit" into a music classroom?
This is hard to do until a Chromebook tablet is released. If that happens, Chromebooks will have a much greater appeal for music education.

The only problem with a Chromebook tablet is that Google is already committed to a tablet device, the Android Tablet, and apps are not interchangeable between those devices.
The "No's"

- No SmartMusic
- No music scanning/recognition
- No PDF music readers*
- No bluetooth headphones (at least on my Samsung Chromebook)
- No handwritten annotation
- No external piano keyboards or foot pedals
- No instrument tuners (MANY guitar tuners)
SAMR
In a traditional class, Chromebooks focus on these...
SAMR
And rarely make it to these.
In music, Chromebooks remove (or lessen) these... SAMR
And force you to move to these.
The "Yes-es"

These require making exceptions to your normal teaching, whether in General Music or a Performance-Based Ensemble.
And almost all of these tools are available on other platforms (or they have a tool that is nearly the same)
Use #1: GAFE
GAFE

- Docs
- Spreadsheets
- Slides
- Drive
- Research
- Forms
- Sites
- Mail
- And of course, Chrome
Use #2: Composition
Composition

- Noteflight
- UJام
- Soundation
Use #3: Audio Playback
Audio Playback

- Google Play
- SoundCloud
- Pandora
- Spotify
Use #4: Presentations
Presentations

- Google Presentations/Slides
- Prezi
Use #5: Assessment
Assessment

- Google Forms (and Flubaroo Script)
- Edmodo
Use #6: Audio Editing
Audio Editing

- Twisted Wave
- Audiotool
Use #7: Ear Training
Ear Training Chrome Apps

- Chords Free
- DoReMi Free
- Music Notation Training
- Audiotool
Use #8: Guitar Class
Guitar Chrome Apps

- Guitar Tuner
- Guitar Tab Viewer
- Guitar Chords Chart
- Adam's Virtual Guitar
- Music Pug Guitar
- Guitarist's Reference
Use #9: Metronome
Chrome Apps

- Cool Metronome
- Metronome
- Dr. Beat
Use #10: Sheet Music*
Sheet Music*

- Chromatik (works but screen is NOT ideal for music)
Use #11: Video Recording
Video Recording

□ We Video
Use #12: Pianos
Chrome Apps

- Color Piano
- Virtual Piano Black
- Piano Master
- Real Piano
Use #13: Music Theory
Music Theory

☐ musictheory.net

☐ teoria.com
Use #14: Classroom Management
Classroom Management

- Class Dojo
- Class Charts
- Schoology
- Edmodo
Use #15: Communication
Communication

- Google Sites
- G-mail?
- Remind 101
Use #16: Mirroring?
Use #17: Internet Access
<table>
<thead>
<tr>
<th>Web Pages &amp; Services</th>
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</thead>
<tbody>
<tr>
<td>□ Music First</td>
</tr>
<tr>
<td>□ Noteflight</td>
</tr>
<tr>
<td>□ Soundation</td>
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<tr>
<td>□ Focus On Sound</td>
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<tr>
<td>□ Charanga Music World</td>
</tr>
<tr>
<td>□ Music Delta</td>
</tr>
<tr>
<td>□ Inside Music</td>
</tr>
<tr>
<td>□ Naxos Music Library</td>
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Web Pages & Services

- Quaver Music
Use #18: Music Games
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
- You CAN use Chromebooks, and they are particularly powerful when used in conjunction with GAFE and Internet based projects
- You can do some exciting projects with Noteflight (composition)
Ideas from Session 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 use 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.

- I use a Google Drive Folder to share with all students, view only, to share materials with them. You need every student GAFE e-mail to do this.

- I have them create a folder and share it with me, and they need my correct e-mail to do this (this can be more complicated that it seems). I can then organize these folders into classes, and anything they put in their folders does not reduce my Google Drive a space.
More additional thoughts:

I found a video that explains how to make submission of student assignments in their Google Drive much easier. See http://www.youtube.com/watch?v=VwgTRHXA2Mw

You can see how I am using Google Sites at www.oltmansings.com. I have daily updates by class level, videos of the day, and lessons represented on the page, along with my school contact information.
In the iBookstore:

Practical Technology for Music Education

Christopher John Russell, Ph.D.