The Why

- Controllers are often inexpensive
- App Culture is common-place
- Fairly easy to implement with a little research
- A modern sound that students often see and hear in their pop culture

The What

- MIDI = Musical Instrument Digital Interface
  - Communications protocol that connects devices
- MIDI signals carry notation, pitch, velocity, cues, and tempo
  - Tool versus Instrument
- Two ways to utilize controllers
  - Digital Audio Workstation (DAW)
  - DAW-less
- Information flows through one of 16 channels
- MIDI also allows for program and control changes
- Controllerism
  - Push, Turn, Slide
  - Proliferation of pad-style controllers

Advantages of Embracing Controllerism

- Reinforces timing skillset
- A modern approach to music that enhances the percussion curriculum
  - Additional benefit of learning music production
  - Visual creativity is a possible by-product of controllerism
- Tracks created through midi controllers can provide tracks for use with acoustic instruments
- Important to think of a controller as an instrument
- Limitations of learning a new instrument can help with creativity

Finger Drumming Pad Elements

- Drums
  - Bass
  - Snare
  - Hats or time-keeping triggers
- Bass Line
- Leads
- Pads
- Risers
- Effect
The How

- Controllers
  - DJ Tech Tools
    - Midi Fighter Line
  - Novation
    - Launchpad
    - Mini, Mk II, Pro
  - Ableton
    - Push 2
  - Native Instruments
    - Maschine MK3
- Audio Interfaces
  - To power or not to power?
    - Apple – Lightning to USB
    - Novation Audiohub
  - External Sound
  - Headphones
  - Laptop or Tablet
  - Apps or Software

Popular Apps/Software

- AUM – Mixer
- Beatmaker 3 – Fully-featured DAW
- Ampify
  - Groovebox – Fully-featured groovebox after IAP
  - Launchpad
  - Blocs
- Super Pads Lights
- Korg Gadget – Fully-featured DAW (offers IAP for more sounds)
- JamUp – Effects
- Ableton Live

Popular YouTube Channels

- Slice to MIDI
  - Kaskobi
  - M4SONIC
- Sample Based
  - Shawn Wasabi
  - Mad Zach – DJ Tech Tools
- Instrumentalist
  - Jnthon Stein
### Mad Zach 16-Pad Layout Suggestion

<table>
<thead>
<tr>
<th>Mellow Pad #1</th>
<th>Mellow Pad #2</th>
<th>Rhythm #1</th>
<th>Riser</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bass #1</td>
<td>Bass #2</td>
<td>Bass #3</td>
<td>Rhythm #2</td>
</tr>
<tr>
<td>Modifier/White Noise</td>
<td>Shaker</td>
<td>Attn. Grabber #2</td>
<td>Attn. Grabber #1</td>
</tr>
<tr>
<td>Kick</td>
<td>Dynamic Melody</td>
<td>Snare</td>
<td>Clap</td>
</tr>
</tbody>
</table>

### Shawn Wasabi 64-Pad Layout on Otterpop (find on YouTube)

<table>
<thead>
<tr>
<th>Piano Chord #1</th>
<th>Piano Chord #2</th>
<th>Piano Chord #3</th>
<th>Piano Chord E</th>
<th>SD</th>
<th>High Trill #1</th>
<th>Flute Melody G</th>
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</thead>
<tbody>
<tr>
<td>Piano Chord #4</td>
<td>Piano Chord #5</td>
<td>Piano Chord #6</td>
<td>Piano Chord #7</td>
<td>Piano Chord D</td>
<td>Piano Chord F</td>
<td>High Trill #2</td>
</tr>
<tr>
<td>Sub Bass F</td>
<td>Piano Chord #8</td>
<td>Piano Chord #9</td>
<td>Piano Chord #10</td>
<td>Piano Chord B</td>
<td>Piano Chord E</td>
<td>Flute Melody E</td>
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<tr>
<td>Bass F</td>
<td>Bass G</td>
<td>Bass Note</td>
<td>Timbale Roll</td>
<td>Piano Chord C</td>
<td>Piano Chord D</td>
<td>High Pitch Melody</td>
</tr>
<tr>
<td>Bass F</td>
<td>Bass G</td>
<td>Bass Note</td>
<td>Timbale Rimshot</td>
<td>Piano Chord C</td>
<td>Piano Chord D</td>
<td>Flute Melody C</td>
</tr>
<tr>
<td>Program Change</td>
<td>Program Change</td>
<td>Bass Note</td>
<td>Rocket Arp #1</td>
<td>Piano Chord #1</td>
<td>Piano Chord #2</td>
<td>Program Change</td>
</tr>
<tr>
<td>Program Change</td>
<td>Program Change</td>
<td>Bass Note</td>
<td>Rocket Arp #2</td>
<td>Piano Chord #2</td>
<td>Piano Chord #3</td>
<td>Program Change</td>
</tr>
<tr>
<td>Program Change</td>
<td>Program Change</td>
<td>Bass Note</td>
<td>Rocket Arp #1</td>
<td>Piano Chord #3</td>
<td>Piano Chord #4</td>
<td>Program Change</td>
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<tr>
<td>Rhythm Noise</td>
<td>Riser SD</td>
<td>SD</td>
<td>Bass Note C</td>
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<td>Piano Chord #2</td>
<td>Piano Chord #4</td>
</tr>
<tr>
<td>High Rhythm Noise</td>
<td>High Trill</td>
<td>High SD</td>
<td>Piano Chord #1</td>
<td>Piano Chord #2</td>
<td>Piano Chord #3</td>
<td>Piano Chord #4</td>
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<tr>
<td>Bass F / BD</td>
<td>Bass G / BD</td>
<td>High Pitch Drum</td>
<td>Bass C / BD</td>
<td>Piano Chord #5</td>
<td>Piano Chord #6</td>
<td>Piano Chord #7</td>
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<tr>
<td>Piano Chord #8</td>
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Finger Drumming Techniques through MIDI Controllers
Isomorphic Layout (in 4ths) of Notes

<table>
<thead>
<tr>
<th>B</th>
<th>C</th>
<th>Db</th>
<th>D</th>
<th>Eb</th>
<th>E</th>
<th>F</th>
<th>Gb</th>
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</thead>
<tbody>
<tr>
<td>Gb</td>
<td>G</td>
<td>Ab</td>
<td>A</td>
<td>Bb</td>
<td>B</td>
<td>C</td>
<td>Db</td>
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<tr>
<td>Db</td>
<td>D</td>
<td>Eb</td>
<td>E</td>
<td>F</td>
<td>Gb</td>
<td>G</td>
<td>Ab</td>
</tr>
<tr>
<td>Ab</td>
<td>A</td>
<td>Bb</td>
<td>B</td>
<td>C</td>
<td>Db</td>
<td>D</td>
<td>Eb</td>
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<tr>
<td>Eb</td>
<td>E</td>
<td>F</td>
<td>Gb</td>
<td>G</td>
<td>Ab</td>
<td>A</td>
<td>Bb</td>
</tr>
<tr>
<td>Bb</td>
<td>B</td>
<td>C</td>
<td>C#</td>
<td>D</td>
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</tr>
<tr>
<td>F</td>
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<td>G</td>
<td>G#</td>
<td>A</td>
<td>Bb</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>C</td>
<td>C#</td>
<td>D</td>
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<td>E</td>
<td>F</td>
<td>F#</td>
<td>G</td>
</tr>
</tbody>
</table>

Isomorphic Layout of a Major Scale
Helpful Websites

- Melodics
- Facebook Groups
- YouTube
- DJ Tech Tools
  - Especially Mad Zach Tutorials
- Splice

Final Thoughts

- It is intimidating knowing where to start. Find the simplest set-up and start anywhere with the learning process. Learning is doing.
- You will make mistakes at first.
- The answer is always yes.
- Your students will know more about this than you do.

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