Universal Design Learning (UDL) Questionnaire
2015-2016 Instructional Material

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Title of Materials: Quaver's General Music Florida Curriculum - Grade 2
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Note from the Publisher:

Quaver's General Music Florida Curriculum seeks to enable teachers to lead lessons that are appropriate and accessible for students with disabilities.

Below, you'll find direct answers to the UDL Questionnaire, including a more in-depth description of our accessibility goals.

Presentation Features

1. **How are both flexibility and student choices provided for the following presentation features in the instructional materials:**
   - Fonts:
     - » *Type and size.*
     - » *Colors and background colors can be adjusted.*
   - Background: High contrast color settings are available.
   - Text-to-speech tools
   - All images have alt tags.
   - All videos are captioned.
   - Text, image tags, and captioning sent to refreshable Braille displays.

Quaver's General Music Florida Curriculum complies with web-based accessibility requirements by adopting the following conventions in developing our teaching resources. These improvements either exist or are in process:

> **Note:** *Quaver's Florida Curriculum is intended to be led by a teacher who explains the screen content to the students. It is not intended to be studied independently by the student in absence of a teacher.*

Quaver Video Episodes/Animations
- All videos with speaking audio have closed captioning
- Key words are also highlighted in text in video episodes
- Animations that need explaining are also described in text

Audio/Music Tracks
- Lyrics in the Music Venues are provided karaoke style
- Lyrics are highlighted and synchronized in ClassPlay™ songs
- The notes in scores are highlighted in ClassPlay™ songs as the song is played
- Visual Animations are provided in ClassPlay™ songs for playing the recorder
- Transcripts of audio instruction or other information are provided

Textual Materials in Venue Books
All venue book text in Kid's Website includes an audio option

Answer Notifications in Assessments/Activities
- All notifications of correct or incorrect answers are provided both aurally and textually
- Our design minimizes unintentional actions by the user

Flashing Objects
No buttons or other objects will flash at a rate between 2 Hz and 55 Hz, other than the metronome, which has an option to show or not show a pulsing light at the selected tempo

Navigation Features

2. **How are the following navigation features provided in the instructional materals:**
   - **Non-text navigation elements (buttons, icons, etc.) can be adjusted in size.**
   - **All navigation elements and menu items have keyboard shortcuts.**
   - **All navigation information can be sent to refreshable Braille displays.**

The navigation features in Quaver's Florida Curriculum are intended for the teacher to deploy, and designed for ease of access and use both from a computer or an interactive whiteboard:

Screen Controls
- Zoom *(enlargement)* features are available from the browser
- Brightness/contrast controls are available from the system settings and will not be overridden by the program
- Start/Pause/Stop buttons are available for all time sensitive content

- Volume controls are provided to increase audio amplitude of different tracks where necessary, otherwise the system volume setting can suffice
- Functionality controls are consistently named and in the same location
- Keyboard controls will be available for all core functions, such as navigating between screens or returning to the home page
- Flash provides for the tab and arrow keys being used to be able to cycle through the active objects on the screen in more complex interfaces
- When a control is activated, there are visual and audio indications the action is being taken

Screen Layouts
- Plain language text is used throughout the program
- Layouts are logically and consistently arranged
- Context and orientation language for the curriculum is provided in the lesson notes
- User interface and maps are designed to ease navigation through the site
- All icons and actionable buttons are large and accompanied by text, unless the control is a commonly-used standard, such as a triangle for a play button
- Screen images without text descriptions or captions can be explained by the teacher
- Color is not the sole determinant of required information

Study Tools

3. How are the following study tools provided in the instructional materials:
- Highlighters are provided in the four standard colors *(yellow, rose, green, blue)*.
- Highlighted text can be automatically extracted into another document.
- Note taking tools are available for students to write ideas online; as they are processing curriculum content.

Our Major Tool of Instruction is a teacher-led curriculum, and does not require student access to a computing device. Highlighters are provided in many interactive classroom screens in the standard colors *(yellow, rose, green, and blue)*, and an adaptable Draw Tool is included in every teacher-led screen for students to interact with the instructional materials as the teacher sees fit. Printable materials are available for download within the teacher's account and can be used with a third-party PDF editor for online note taking or printed and distributed by hand.

Assistive Technologies For Web-Based Programs

4. **Which of the following assistive technology supports, by product name, have you tested for use with the instructional materials:**

- **Assistive technology software that can be run in the background. Examples include:**
    1. **Magnification**
    2. **Text-to-speech**
    3. **Text-to-American Sign Language**
    4. **On-screen keyboards**
    5. **Switch scanning controls**
    6. **Speech-to-text**

There are various approaches to making web-based programs more accessible for students with disabilities. The UDL guidelines provide a number of suggestions with which we agree. To develop a web-based program that is truly accessible by persons who are impaired either visually, by hearing, by physical movement, or mentally requires considerable thought.

As the guidelines point out, QuaverMusic.com cannot develop a website that will be accessible by all combinations of impairments. We can, however, address significant populations through website design by being cognizant of available assistive technologies. Let's consider the major disabilities one by one.

Visually Impaired

For the visually impaired, there are screen readers that can read screen text aloud in multiple languages. Often these readers are application-specific and therefore not all apply directly to QuaverMusic.com. There are also screen magnifiers as well as large keyboards and Braille displays. The use of these devices is school-specific and we can only meet general requirements to help these devices perform their functions. Of course, a sighted student can also help as a partner.

Clearly though, text is required on the screen for all critical functions so that the functions can be identified and accessed. Icons, for example, require accompanying text so the student can tell where he/she is being directed. In addition, arrow keys are important so the student can navigate around the screen more easily. Using a mouse is more difficult because the student cannot always judge the extent of movement of the mouse to the corresponding movement of the cursor on the screen.

For the less severely visually impaired, there are other actions that can be taken. For example, some students may be color blind, so we cannot use color alone as an indicator of functionality. Some students may require enlarged text or benefit from simplified screen layouts that are easier to comprehend. There are various degrees of visual impairment, all requiring the consideration of different solutions.

Hearing Impaired

For the hearing impaired, text needs to accompany all audio/visual media. For example, QuaverMusic.com includes closed captioning on all our Quaver video episodes. Assessments that rely on questions posed verbally must also have accompanying text. For pure audio media, including music, text or even musical scores are required to assist the student.

Since Quaver's Florida Curriculum is about general music, "audiation" is desired, a term coined by Edwin Gordon in 1975. Audiation refers to the phenomena that allow a student to mentally hear and comprehend music without there being any sound. This is enhanced by students being able to read or even compose a musical score, much as Beethoven did while he was deaf.

The Kodály method, which is related, suggests different practice techniques to develop inner hearing. A student can sing or play a piece of music alternating measures between singing out loud and performing only with inner hearing. For example, a student could sing some measures out loud and other measures using inner hearing. Quaver fully supports the Kodály method of teaching music.

We have also found that hearing impaired students can easily feel and move to the beat of a piece of music. These students can also see song scores with lyrics and karaoke lyrics that move in animation with the songs in Quaver's Florida Curriculum.

Hearing aids or headphones may be worn. Students must have access to volume controls on the audio so that it can be amplified for the hard of hearing. Teachers may have speakers in their classrooms that can be fed from computer output ports.

Obviously, the quality and clarity of our audio materials need to be very high for the hearing impaired.

Mentally Impaired

There is an entire spectrum of mental impairments, just as there is for visual and hearing impairments. Making a web-based program for the mentally impaired is challenging. Having a teacher available to interpret and explain our teaching resources to these students is obviously extremely important and the key to success.

Recall that there are no textbooks in Quaver's Florida Curriculum. The student interacts with the teaching resources primarily at the interactive whiteboard in front of the class. Optionally, students can also use mobile devices to take very simple assessments in class, which are automatically graded and placed in the teacher's grade book.

To facilitate the teacher's job in teaching mentally impaired and other students, we make our teaching resources clear, concise, graphically enhanced, and fun. Videos are also very helpful. Of course, the teacher is encouraged to use any other resources she/he might have to work with the mentally impaired and can customize his/her Quaver Lessons to integrate this material.

Physically Impaired

Physically impaired students have motor mobility problems. They may have difficulty or an inability to use their hands, for example. This impairment might be temporary such as having an arm or hand in a cast for a broken bone, or more permanent such as from amputation, or a series of motor diseases such as muscular dystrophy, cerebral palsy, and the like.

There are a number of assisted technologies or devices for students who are physically impaired. These include:

- Mouths sticks, head sticks or other pointing devices
- Modified keyboards – expanded or one handed
- Keyboard Macros which include multiple keystrokes combined into one
- Speech input devices to control the computer

Again in Quaver's program, each individual student is not usually using a personal computer. He/she is watching a teacher at the front of the room and interacting on a whiteboard. Students in wheelchairs should be able to reach any whiteboard activity with assistive devices.

As with the other impairments, students can be assigned a partner who is not impaired to help him/her interact with the program.

Paper Materials

5. For students with special needs who require paper materials based upon the IEP, how are the materials provided for students currently not able to access digital materials?

Worksheets, assessments, and other activities are available for download and unlimited printing in the teacher's account.

Committed to Accessibility

In addition to curriculum screens, the teacher alone will have lesson notes associated with each screen to explain how to teach the content shown. The students will have lesson worksheets and optional access to the Quaver students website at QuaverMusic.com, which has functionality the teacher can use in his/her music classes.

Thus, our multimedia curriculum has many dimensions that must be addressed to be in compliance with common accessibility guidelines. The commonality is that they are all presented over the inter-net in web-based programs. QuaverMusic.com, LLC is fully committed to providing online instruc-tional materials that are in compliance with common accessibility standards. We will comply with the accessibility guidelines of both the Federal government, as described in Federal Rehabilitation Act, Section 508, and the World Wide Web Consortium guidelines as described in W3C Web Content Accessibility Guidelines (WCAG2.0).

In addition, as new guidelines are issued we will comply with those as well to the extent applicable to our product. Our intent is to be accessible to all persons with disabilities. In many respects, we already are in compliance. Consider the following sample of unsolicited comments received from teachers using Quaver materials for students with disabilities or special needs. (Emphasis added.)

"Thank you so much for the time you all spent with me yesterday, answering my questions as I search for highly visual music materials for my Deaf and Hard of Hearing students. My mind was truly blown yesterday as I saw how rich the Quaver program is. I'm still thinking about what I saw, and how I could make it work for my kids, with very little additional effort!"

Pam McInerney
Rochester School For The Deaf, Rochester, NY

"I really love the Essentials Program, it suits my kids perfectly as many have learning issues that make it hard for them to learn the conventional classroom way. I try to apply the concepts outside of the lesson, referring to something Quaver did specifically. The kids are really in love with the program and are retaining a lot more than they did in the past!"

Marci Shegogue
Mclean School Of Maryland, Potomac, MD

"In my 30 years of teaching I have never seen a more well thought out curriculum. What really impacted me most was the fact that the curriculum meets the needs of my special learners/ autism students - watching them want to get up and manipulate the music on the Smart-Board was a 30-year dream come true. Without a doubt ALL learners are completely engaged from class start to class end."

Drew Osborn
Elm Tree Elementary School, Bentonville, AR

And this, sent in to Quaver HQ along with a detailed pencil drawing of the homepage of QuaverMusic.com:

"I wanted you to see this. It was drawn by an autistic student. He sent this by another teacher down to me and said, 'Give this to music teacher, she will know what it is. I need a password to go to this!' This is how awesome Quaver is to my students! Y'all really make a difference!"

Amanda Ezell
Holiday Elementary School, Hopkinsville, KY