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| **Topic /**  **Duration** | Genres, Sequencer grid, & Variables / 1 Class Period /  35 minutes |
| **Priority Standards** | **Georgia Music Technology**:   1. [**MSMTC6.CN.2**](https://case.georgiastandards.org/f3b94c72-9c0d-11e8-b85c-3b1a3079ae6e/6bed3ddc-fc12-11ea-912f-0242ac150004/1929)Relate musical ideas to varied contexts and daily life to deepen understanding   a. Demonstrate understanding of relationships between music and the other arts, other disciplines, varied contexts, and daily life.  **Foundations of Computer Programming Standards**   1. [**MS-CS-FCP-** 3.2](https://case.georgiastandards.org/00fcf0e2-b9c3-11e7-a4ad-47f36833e889/731f5cab-5d1e-46f4-bba0-c26268b93022/565) Develop a working vocabulary of computational thinking including sequences. 2. [**MS-CS-FCP-** 4.1](https://case.georgiastandards.org/00fcf0e2-b9c3-11e7-a4ad-47f36833e889/ac4b16a7-8293-41d0-b699-3bcc99695fd0/569) Develop a working vocabulary of programming including[…], variables. 3. [**MS-CS-FCP-** 4.3](https://case.georgiastandards.org/00fcf0e2-b9c3-11e7-a4ad-47f36833e889/9a8b042d-2d57-4df4-9540-1eb36b200672/571) Cite evidence on how computers represent data and media (sounds, images, video, etc.). |
| **Supporting Standards** | **Foundations of Computer Programming Standards**   1. [**MS-CS-FCP-3**](https://case.georgiastandards.org/00fcf0e2-b9c3-11e7-a4ad-47f36833e889/35695273-4888-4f59-89a5-45ef323b432f/563)Utilize computational thinking to solve problems. |
| **Student Facing Goals** | Students will be able to...   * classify music based on genre and use variables while coding music in EarSketch. |
| **Essential Question & Enduring Understanding** | **Why are variables useful in computing?**  *Variables can be used to store and make changes in code while it runs.* |
| **Evidence of Learning** | **Formative**: Pairs of students will modify a given script to include variables and evaluate their classmates’ code. **Summative**: Unit project |
| **Materials** | Computer or Laptop  EarSketch |
| **Vocabulary** | * **Genre (as it relates to tempo/bpm):** A category of music based on similarities in style. * **Constant:** Stores values that never change. * **Variable:** Stored information that can be referenced and/or manipulated in a computer program. |

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| **Resources** | |
| * Unit 2 Lesson 2A PPT * Link 1: Name that Tune   [https://www.youtube.com/watch?v=SZG\_jmGvZH](https://www.youtube.com/watch?v=SZG_jmGvZHg)g   * Link 2: Name that Genre song1: <https://www.youtube.com/watch?v=-tJYN-eG1zk&t=5s> * Link 3: Name that Genre song2: <https://www.youtube.com/watch?v=4m1EFMoRFvY> * Link 4: Ableton Site Making Beats: <https://learningmusic.ableton.com/index.html> | EarSketch Curriculum Panel (Links)   * 3.1 Variables |

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| **Teacher Preparation** |
| 1. Review the U2L3B2W - Evaluate Python Code and U2L3B2W - Evaluate Sequencer Grids worksheets. |

Lesson Implementation

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| **Engage / Explore: Name that Genre in X measures Time: *10 Minutes*** | |
| **Section Goal:** Students will learn about how tempo is related to different genres of music. | |
| **Student Activities**   * Ask any questions they may have about the tempo/bpm graphic. * Confirm that they know how to play the game by stating how many measures they can name a genre in. * Attempt to name the genre in the X number of measures that the teacher plays. | **Teacher Activities**   * Introduce tempo/bpm (Slide 5). * Show the Name that Tune video and explain how the game works (Link 1). Explain to students that they must predict how long it will take them (in measures) to guess the genre of a song. Feel free to practice with a few songs of your choosing. * Play each one of the genres for the number of measures that students predict they can name the genre (Links 3-4). |
| **Coding Connections: N/A** | |

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| **Explain: Adding rhythm sounds as Variables Time: *15 minutes*** | |
| **Section Goal:** Students will learn about utilizing variables in EarSketch. | |
| **Student Activities**   * Create a new script in EarSketch in Python and title it Genre Remix. * Listen to the rhythm sounds on the Ableton website (Link 4). * Write the definition for constant in their Design Notebooks. * Find their favorite MAKEBEAT sounds in the sound browser. * Assign at least 4 makeBeat sound constants to variables in their Genre Remix script. | **Teacher Activities**   * Instruct students to create a new script in EarSketch and title it Genre Remix. * Introduce Ableton’s Getting Started with Making Music (Kink 4). Explain that different combinations of kick, snare, open, and closed hat rhythm sounds can create beats of many different genres. Encourage students to select their favorite beats and make mini songs with accompanying bass, chords, and melodies. * Explain sound constants (values that never change, such as the file path to different sounds in EarSketch) (Slide 9). Notice that all of the stems in the content manager are ALL\_CAPS - In EarSketch, that means they are constants. * Explain how to locate MAKEBEAT in the sound browser.   + To find MAKEBEAT, select the GENRES tab. * Explain the importance of variables and model how to assign a variable to a sound constant (Slides 12-15).   + Select a sound that you like.   + Create a unique name for that sound (OS\_SNARE02 may become mySnare).   + Underneath setTempo(), define your variables by writing your\_variable\_name = SOUND\_CONSTANT. Ex: mySnare = OS\_SNARE02.   + Define as many variables as you like. * Explain the rock, reggaeton, R&B, and house step sequencer examples (Slides 17-21). If time allows, instruct students to recreate each sequence in a DAW of your choice. |
| **Coding Connections: N/A** | |

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| **Elaborate: Apply your Skills Time: *10 minutes*** | |
| **Section Goal:** Students willmodify a 16-step sequence to make it their own. | |
| **Student Activities**   * Select one of the step sequencer genre examples and modify it to make it their own in the Soundtrap pattern beat maker or create their own from scratch in the Soundtrap pattern beat maker. | **Teacher Activities**   * Modify the house example and model a few possible modifications to make the sequence/beat your own. * Afterward, instruct students to do the same with one of the previously learned sequences. |
| **Coding Connections: N/A** | |

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| **Evaluate:** Assessment / Wrapping Up  **Time:  *0 minutes*** | |
| **Section Goal:** Evaluation for this lesson will be done in part B2. | |
| **Student Activities** | **Student Activities** |
| **Coding Connections: N/A** | |