



Learning music theory with Beat Saber – VEGA Teaching Scenario

Topic: Music theory with Beat Saber

Subject(s): Music

Age / Grade: 11+ / grade 5+

Short description of the VR game in this scenario:

Beat Saber is a unique VR rhythm game where your goal is to slash the beats (small cubes) as they are coming at you. Every beat indicates which saber you need to use and also the direction you need to match. All the music is composed to perfectly fit the hand made level. The rhythm game may motivate the students to learn music theory (pulse, rhythm and note values) in an interesting way.

Introduction to the scenario

In this scenario the students learn what pulse and rhythm are in music and the differences between them. In an active way they will practise to recognize the pulse and move to the rhythm. They will also learn about note values and rest values and how the note values are connected to the rhythm. By using the rhythm game Beat Saber they will get a possibility to use their knowledge of pulse and rhythm. The students will also practise keeping both the pulse and the rhythm at the same time by stomping and clapping.

Learning outcomes:

A student is able to

- get knowledge about what pulse and rhythm are in the music and the difference between them.
- feel, hear, stomp and clap the pulse and the rhythm in music
- learn about note values and rest values
- perceive pulse and melody rhythm in different melodies.
- know the concepts: Full note, half note, quarter note, eighth note, sixteenth note and corresponding breaks so that the student can use these when playing and singing.
- get familiar with the concepts of accelerando, ritardando and a tempo and with the use of [metronomes. \(Bpm = beats per minute\)](#)

A selection of learning outcomes from the Finnish Curriculum

- M1 encourage students to participate in joint music making and to contribute to creating a positive cohesion in their group
- M2 guide the student to a natural voice use and singing as well as to develop their skills to play in a group by using the body, rhythm, melody and chord instruments
- M3 encourage the student to physically express music, images, stories and emotions through movement
- M8 help the student to observe how music affects well-being and to ensure that the music and sound environment is safe
- M9 guide the student to develop their musical skills through practice, to be involved in setting goals and to evaluate their progress in relation to the goals

[Formative assessment](#)

Number of students: Duration (estimated time/number of lessons):

- 20 students (3 students in each group)
- lessons 45 min each

Prerequisites (necessary materials and online resources):

- Ipads with internet connection
- VR goggles with the application Beat Saber installed
- Check that the WiFi is working
- charge the Goggles in advance

Before the program begins (preparatory work for teacher):

- Search and collect information and material about the topic
- Prepare and collect all things needed for the scenario (e.g rhythm instruments)
- Get acquainted with the VR app Beat Saber.
- Watch the video: <https://youtu.be/3zamMltuhdc> and try Beat Saber by yourself
- Listen to the song Jaroslav Beck - Escape (ft. Summer Haze) [Escape \(ft Summer Haze\)](#)
- Divide students into groups of maximum three

The main part of the scenario (number of lessons):

Part one (two lessons 2 x 45 min)

Teacher preparation:

- Bring the VR goggles and check that they are charged.
- Search and open the Beat Saber tutorial
- Bring ipads to every student group
- Bring percussion instruments (e.g. Claves and Maracas)

Lesson 1 & 2 (two lessons x 45 min)

Lesson 1

- Introduce the rhythm game Beat Saber by showing a one minute tutorial [Beat Saber tutorial](#)
- The teacher divides the students into groups of three.
- Introduce the VR goggles to the class.
- The students get to know how the headset and controllers work
- Each group gets a VR headset and an ipad and casts the goggles to the ipad.
- The students may now get familiar with and, and take turns, start playing the game Beat Saber, with the music Escape.
- While one member of the group is playing, the others follow the cast.
- Tell the students that the following lessons are going to be about music theory and the game Beat Saber.

Debrief with the students in the end of the first lesson:

- How was the game going?
- What is their opinion about the game?
- Do they have hints and tactics to share?

Lesson 2:

- Start the lesson by singing a well-known short and easy song for example: “Happy Birthday” You can sing a capella or use the link [Happy Birthday intrumental](#)
- Repeat the song and ask the students to walk in the room to the pulse of the song.

- Sing through the song again and ask them to clap the rhythm of the words.
- Try if they can do both at the same time, walk the pulse, sing and clap the rhythm of the words.
- Ask the student what they think they are doing.
- Discuss the difference between pulse and rhythm
 - **Pulse** = a steady beat (like a ticking clock or your heartbeat.) Most music has a regular pulse and does not change throughout the song. The pulse can often be heard clearly. (*They walked to the pulse*).
 - **Rhythm** = the speed of individual notes of the melody. The rhythm normally changes throughout the song. (*They clapped the rhythm*).

- Watch the video [Pulse and Beats](#) (4:25)
- Give half the class percussion instruments which are tapped (e.g. Claves) and the other half instruments which are shaken (e.g. Maracas).
- Repeat the “Happy Birthday”. The students with the tapped instruments play the pulse and the students with the shaken instrument play the rhythm of the words. Change instruments and repeat.
- It can be fun to go on and sing and play “Happy Birthday” in various languages [Happy Birthday in six languages](#)

Debrief with students after lessons 2:

- What did you learn today that you didn’t know before?
- Are you ready to explore the pulse and the rhythm in the VR rhythm game Beat Saber following lessons?

Part two (two lessons 2 x 45 min)

Lesson 3:

- Repeat the terms pulse and rhythm
- Watch the video [Note Values and Rhythm](#) (5:25)
 - **Note values** = A musical notation that indicates the relative duration of a note

- *This should be familiar to the students, so repeat the note and pause values.*











- Show the student the Happy Birthday notes [Happy Birthday notes](#)

- Clap and count according to the note values.

- Listen to the Beat Saber melody and watch the video [Beat Saber Escape](#)

- Let the students walk around in the room and feel the pulse in the music

- Show the students this sheet part of Beat Saber Escape that you find from the beginning of the song from 0 to 12 seconds in the video

Whole Note 	4 Counts	Whole Rest 	4 Counts
Half Note 	2 Counts	Half Rest 	2 Counts
Quarter Note 	1 Count	Quarter Rest 	1 Count
Eighth Note 	½ Count	Eighth Rest 	½ Count
1/16 th Note 	¼ Count	1/16 th Rest 	¼ Count

Beat Saber "Escape" Rythm

♩ = 174



- look at the sheet and listen to the video [Escape](#) (rewind and repeat the beginning sequence many times)
- stomp the pulse to Escape, count to four each time
- Clap the rhythm with the students [Beat Saber Rhythm](#)
(If you want to write sheet music to more songs on Beat Saber use [MuseScore a free composition and notation software](#))
- Let the students (in the same groups as last time) practice to both stomp or walk the pulse and to clap the rhythm (you can also let, for example, two groups stomp the pulse and the rest of the groups can clap the rhythm, and then switch)

Lesson 4:

Teacher preparation:

- Bring the VR goggles and check that they are charged
- Bring ipads to every student group
- look at this sheet part that starts after 12 seconds of the video and listen to the video [Escape](#) (the teacher need to rewind a couple of times to play and show the right part on a big screen)
- stomp the pulse to Escape, count to four each time
- clap on the beat where the saber hits the box/boxes [You will find the audio file here!](#)
- try to both stomp the pulse and clap the rhythm of the saber

Escape (Beat Saber)

Verse, Box rhythm

♩ = 174

Two measures of music in 4/4 time. The first measure contains a quarter note followed by a quarter rest, with the label "Box R/B" below. The second measure contains a quarter rest followed by a quarter note, also with the label "Box R/B" below.

5

Two measures of music in 4/4 time. Each measure contains a quarter note followed by a quarter rest, with the label "Box R/B" below each measure.

9

Two measures of music in 4/4 time. The first measure contains a quarter note followed by two eighth notes, with the label "Box R/B" below. The second measure contains a quarter note followed by a quarter rest, with the label "Box R" below. The third measure contains a quarter note followed by a quarter rest, with the label "Box B" below. The fourth measure contains a quarter note followed by a quarter rest, with the label "Box R/B" below.

13

Two measures of music in 4/4 time. The first measure contains a quarter note followed by a quarter rest, with the label "Box R/B" below. The second measure contains a quarter note followed by a quarter rest, with the label "Box B" below. The third measure contains a quarter note followed by a quarter rest, with the label "Box B" below. The fourth measure contains a quarter note followed by a quarter rest, with the label "Box R/B" below. The fifth measure contains a quarter note followed by a quarter rest, with the label "Box R" below. The sixth measure contains a quarter note followed by a quarter rest, with the label "Box B" below. The seventh measure contains a quarter note followed by a quarter rest, with the label "Box R/B" below.

After this practise it is time to take turns playing Beat Saber in the same groups as before

- cast the game on the iPad to the rest of the students in the group
- ask them to stomp the pulse while one student is playing
- give them an option to change song to [Believer](#) or [High hopes](#)
- in the case they change song ask them to stomp the beat and count to eight and start over again keeping a steady pulse

Debrief with students after lessons 3 & 4:

- Did you find the pulse in the Escape melody? Was it easy/difficult?
- Were you able to stomp the pulse and clap the rhythm of the saber at the same time?
- Finish this last lesson by using the word wall evaluating their skills! Optional to have a little competition between the different groups. Who gets the answers right in the fastest time?



-  Volume How strong(loud)/weak the sound is.
-  BPM Beats Per Minute How many beats "pulsing" per minute.
-  Half rest 2 counts rest
-  Pulse A series of steady beats that recur at regular intervals. The "heartbeat" of the music
-  Quarter note 1 Count
-  Half note 2 counts
-  1/16th note 1/4 Count
-  Tempo How fast or slow the song/rhythm is.
-  1/16th rest 1/4 Count rest
-  Whole note 4 Counts
-  Chorus/refrain Repeating melody and lyrics several times, sometimes even with a Key change. .
-  Repeat signs Repeat one time the part between the symbols.
-  Accelerando A gradual tempo increase.
-  Allegro The original tempo.
-  Ritardando A gradually decreasing tempo.
-  Count in Showing the tempo before starting.
-  Whole rest 4 Counts rest
-  Timing When you sing and play exactly in the right time.
-  Rhythm A combination of various note values which fit between the bars.
-  Quarter rest 1 Count rest
-  Time signature How many beats which fits at each bar before changing to the next bar..
-  Eight rest 1/2 Count rest
-  Eight note 1/2 Count

Extra:

- You can continue with this for example:
- watch other Beat Saber videos and stomp the pulse: [Believer](#), [High hopes](#)
- use other songs in the Beat Saber app and practise the content in this scenario.
- teach other music terms (as e.g. tempo, ritardando, accelerando and a tempo)
- The students search for a tempo change in different Beat Saber songs
 - **Tempo** = tempo is how fast or slow a piece of music is performed
 - Watch the video: [Tempo \(4:35\)](#)
 - Introduce (or repeat) the tempo terms accelerando, ritardando and a tempo
 - **Accelerando** = a gradual tempo increase.
 - **Ritardando** = a gradually *decreasing* tempo.
 - **A tempo** = the original tempo
 - Watch the video: [accelerando -ritardando](#)
 - [Metronome- how to use it](#)

Assessment/Criteria:

Grades 5-10	5	6	7	8	9	10
Activity and engagement	The student had challenges with this assignment. The student hadn't shown signs of engagement.	The student had only occasionally shown interest in the work and had had difficulty finding motivation.	The student has mostly shown interest in the assignment	The student has shown interest and commitment to the assignment.	The student has shown great interest and commitment in the assignment.	The student has shown great interest, responsibility and commitment in the assignment
The overall picture of the work when completed.	The student missed and did not participate in several parts of the assignment.	The student lacked several parts of the assignment and participation.	The student lacked part of the assignments and participation.	The student had participated and done all the assignments.	The student had done all the assignments and you could see that the student had made an effort to participate in all the parts.	The student had participated and done all assignments in an exemplary way and it could be seen that the student had processed the content.
The students' ability to feel and learn the difference between pulse and rhythm and to keep the pulse and rhythm by clapping it.	The student could not keep the pulse nor the rhythm at all and didn't understand the difference between pulse and rhythm.	The student had challenges with keeping the pulse and rhythm on its own. The student had challenges knowing the difference between pulse and rhythm.	The student showed some understanding about the concept pulse and rhythm and could sometimes keep the pulse and rhythm without help.	The student could mostly keep the pulse and rhythm without help and knows the difference between them.	The student could always keep the pulse and the rhythm on its own (not both at the same time). The student could recognize and distinguish the pulse in a song.	The student mastered keeping the pulse and the rhythm on its own. The student could clap and stomp both the pulse and the rhythm at the same time. The student could recognize and distinguish the pulse in different songs.

<p>Showing responsibility for the completion of the work. Cooperation skills.</p>	<p>The student showed no responsibility and had difficulties cooperating with his group. The student did not listen to his classmates.</p>	<p>The student had some difficulties in taking responsibility and cooperating with his group and listening to his classmates.</p>	<p>The student took some responsibility and cooperated well with his group.</p>	<p>The student showed responsibility and mostly a good ability for cooperation.</p>	<p>The student showed evidence of good responsibility and a good ability for cooperation.</p>	<p>The student showed evidence of excellent responsibility and an excellent ability for cooperation. The student made efforts in order to help his group further in the assignment.</p>
<p>Skills</p>	<p>The student showed obvious shortcomings in the understanding of the subject.</p>	<p>The student showed some shortcomings in the understanding of the subject.</p>	<p>The student showed evidence of a certain understanding and some learned knowledge of the subject.</p>	<p>The student showed evidence of a good understanding and had assimilated the most important content in the subject.</p>	<p>The student showed evidence of an excellent understanding and had assimilated the most important content in the subject but lacks some knowledge.</p>	<p>The student showed evidence of an excellent understanding and fully mastered the content.</p>

<p>The VR part and the app use</p>	<p>The student presented obvious difficulties in understanding how the Beat Saber app works and did not follow the teacher's instruction at all. Showed a lack of interest and was careless in the use of equipment needed.</p>	<p>The student presented some difficulties in understanding how the Beat Saber app works. The student tried to do according to the instructions, but could not keep the interest up all the time. The student was sometimes careless in the use of equipment needed.</p>	<p>The student understood the main features of how the Beat Saber app works. Mostly followed the instructions, but sometimes lacked perseverance. Was usually careful with the equipment.</p>	<p>The student showed a good understanding of how the Beat Saber app works. The student always followed the teacher's instructions. Was careful with equipment.</p>	<p>The student showed an excellent understanding of how the Beat Saber app works. Always followed the teacher's instructions. Was very careful with the equipment.</p>	<p>The student mastered the use of the Beat Saber app. Always followed the teacher's instructions and helped classmates. Was always careful with equipment.</p>
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