



## **JAM STUDIO VR EDUCATION & HEALTH CARE EDITION**

### **Education & Life Skill Lesson Plans**

#### **OVERVIEW**

The following lesson plans outline fully immersive VR experiences that have been developed for use with Jam Studio VR's Education & Health Care Edition. They include detailed instructions which are provided below and by video, voice over, and/or 3D ICONS in the various Education & Health Care Edition songs and games. The lessons, songs and games are targeted for a wide variety of individuals, including grammar & middle school children of various ages, individuals with a broad range of special needs and disabilities (such as down syndrome, autism, muscular dystrophy, cerebral palsy, spinal cord injuries, intellectual impairment, physical impairment, traumatic brain injury, and much more), individuals undergoing physical rehab, memory, and other health related therapies, and in some cases such as in the "Music Education Series" it is suitable for individuals of any age. A complete list of the songs & games that come with the App are provided separately. This guide and the corresponding songs and games can be used by families, teachers, educators, therapists, professionals, and the like.

#### **APP SETUP**

When using the HTC Vive or Vive Pro, there are a variety of setup choices for the App that can be tailored to the capabilities, goals, and individual circumstances of the user, as well as the planned interaction with a professional, family member, and/or friends. First, the audio can be linked to an external speaker so everyone can hear the music that is being played. Second, a mirror image of the App can be set up on the computer screen, allowing observers to watch what the user is seeing in the VR environment. Next, the App generally includes up to twelve 3D instrument ICON choices for each song. The number of 3D ICONS displayed can be reduced and their location in the VR environment can be reconfigured thus providing the opportunity to tailor the number of ICON choices and their location as deemed best for each individual user. Each song is set with a specific background or, the user can choose from a variety of background environments – a simple black background, a Skydome, a Cityscape, a Music Studio, and a Stage Craft. Each has different sensory, cognitive, stimulation and other effects, so again, the background deemed best for each individual can be chosen. Finally, there is a wide variety of music, music genres, and lesson plans to choose from, and there is a master song list as well as a number of more targeted playlist to choose from (including different Genres, a Music Education Series, a Math Series, a Life Skill & learning Series , a Disney Series, a Story Book Series, Favorites, and Games). After experimenting with the different options, any Playlist may be easily modified, or new Playlist may be created that work best for each individual user.

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## MUSIC EDUCATION SERIES

The Music Education series of lessons include music instrument, music fundamentals, and music appreciation interactive learning songs and games that help individuals work on various skills while learning about music instruments, genres, and principles. These skills include music education as well as a variety of physical (fine & gross motor skills), cognitive (including cause & effect), memory, eye hand coordination, word association, and sensory (including audio & hand vibration) skills.

### MUSIC INSTRUMENT TUTORIALS & GAMES

**Objective:** To learn and identify the sounds of various guitar, percussion, string, keyboard, and wind instruments.

**Overview:** There are separate lessons and games for guitar, percussion, string, keyboard, and wind instruments. In the tutorial portion of the lesson, a voice over and 3D object prompt takes the user through eight different guitar, percussion, string, keyboard, or wind instruments. The instructions interactively encourage the user to trigger each of the instrument sounds by instructing the user to touch each instrument ICON at select times. At the end of the tutorial an ICON will appear for the different types of instruments and the user will be able to play at will.

After completing the initial guitar, percussion, string, keyboard, and/or wind tutorial for the various types of instruments, the user can proceed to the corresponding game. In the game, each guitar, percussion, string, keyboard, or wind sound is played, one at a time, and the user is asked to identify that instrument by choosing and playing it from a scramble of eight instrument types (i.e. multiple choice). Visible and audio feedback is provided noting the correct answers, and a “Buzzer” will sound for the wrong answer. At the end, an ICON will appear for the various instruments and the user will be able to practice and play at will.

### Instructor Guidance

- Step 1 Assist the user with voice prompts to choose desired instrument tutorial from the song playlist.
- Step 2 Prompt the user to touch the icons until they have proceeded through all instruments and have heard all of the sounds for that tutorial.
- Step 3 Prompt the user to touch the Rhythm/Play button on the right side of the screen to start the tutorial, and then to follow the instructions.
- Step 4 After completing the tutorial, load the corresponding game. Prompt the user to touch the Rhythm/Play button on the right side of the screen to start the game, and then to follow the instructions.

- Step 5 Have the user touch the instrument icon they believe represents the instrument that was played. If necessary, assist the user in deciding which sound goes with which corresponding instrument ICON.
- Step 6 Note how many the user got right on the first try. Repeat until the user can connect all eight instruments with their sounds, or as long as desired and/or their attention span will allow.

## **INSTRUMENTS OF THE WORLD TUTORIAL & GAME**

**Objective:** To learn about various instruments of the world and independently identify them.

**Overview:** In the tutorial portion of the lesson, a voice over and 3D object prompt takes the user through eight different instruments of the world. The instructions interactively encourage the user to trigger each of the instrument sounds by instructing the user to touch each instrument ICON at selected times. At the end of the tutorial an ICON will appear for the different types of world instruments and the user will be able to play at will.

After completing the initial tutorial for the various world instruments, the user can proceed to the “Instruments of the World Game”. In the game, each world instrument sound is played, one at a time, and the user is asked to identify that instrument by choosing and playing it from a scramble of eight different instrument types (i.e. multiple choice). Visible and audio feedback is provided noting the correct answers, and a “buzzer” will sound for the wrong answer. At the end an ICON will appear for all of the world instruments and the user will be able to play at will.

### **Instructor Guidance**

- Step 1 Assist the user with voice prompts to choose “Instruments of the World Tutorial” from the song playlist.
- Step 2 Prompt the user to press the icons until they have proceeded through all instruments and have heard all of the sounds.
- Step 3 Prompt the user to press the Rhythm/Play button on the right side of the screen to start the tutorial, and then follow the instructions.
- Step 4 After completing the tutorial, load the Instruments of the World Game. Prompt the user to touch the Rhythm/Play button on the right side of the screen to start the game, and then follow the instructions.
- Step 5 Have the user touch the ICON they believe represents the instrument that was played. Assist the user as necessary in deciding which sound goes with which corresponding world instrument ICON.

Step 6 Note how many the user got right on the first try. Repeat until the user can connect all eight instruments with their sounds, or as long as desired and/or their attention span will allow.

### **INSTRUMENT QUIZ GAMES**

**Objective:** To use what has been learned in the various instrument tutorials & games to independently identify the look and sounds of different instruments.

**Overview:** In these two Quiz games, there will be twelve ICONS for 12 different instruments. The instructions will then play different instruments from different instrument games. The user needs to trigger the correct instrument ICON for each sound that is played. Visible/audio feedback will be provided noting the correct answers, and a “buzzer” will be sound for the wrong answer. The instrument ICONS presented will change to cover all the instruments presented in the previous games.

#### **Instructor Guidance**

- Step 1 Assist the user with voice prompts to choose “Instrument Quiz Game” or “Instrument Quiz Game 2” from the song bank on the left side of the screen.
- Step 2 Prompt the user to touch the icons until they have proceeded through all instruments and have heard all of the sounds.
- Step 3 Prompt the user to touch the Rhythm/Play button on the right side of the screen to start the game.
- Step 4 The instructions will then play a series of audio samples, one at a time, and the User must choose the correct instrument ICON for each audio sample. The user will have about six seconds to choose a correct answer, at which point the correct answer will appear.
- Step 6 Note how many the user got right on the first try. Repeat until the user can connect all twelve instruments with their sounds, or as long as desired and their attention span will allow.

### **MUSIC FUNDAMENTALS SERIES**

**Objective:** An interactive introduction to the principles of music theory.

**Overview:** The Music Fundamental Series includes six interactives lessons: Notes, Major Scales, Minor Scales, Melody, Cords, a Combo, and a Quiz.

### **Instructor Guidance**

- Step 1 Assist the user with voice prompts to choose the desired “Music Fundamentals” lesson from the Playlist.
- Step 2 Prompt the user to press the Rhythm/Play button on the right side of the screen to start the lesson.
- Step 3 Prompt the user to follow the lesson, interacting with and listening to all the learning items in the song.
- Step 4 Discuss the items covered in the lesson.
- Step 5 Repeat for each lesson and the Quiz as appropriate.

### **MUSIC APPRECIATION SERIES**

**Objective:** An interactive introduction to a variety of music genres.

**Overview:** The Music Appreciation Series includes six interactive lessons that introduce the user to the Rock, Classical, Jazz, Country, Hip Hop, and DJ music genres.

### **Instructor Guidance**

- Step 1 Assist the user with voice prompts to choose the desired Music Appreciation lesson from the Playlist.
- Step 2 Prompt the user to press the Rhythm/Play button on the right side of the screen to start the lesson.
- Step 3 Prompt the user to follow the lesson, interacting with and listening to all the learning items in the song.
- Step 4 Discuss the items covered in the lesson.
- Step 5 Repeat for each lesson as appropriate.

## MATH LESSONS

The Math Series lessons provide a range of counting, addition & subtraction (within 20 and within 100), and multiplication lessons and skills. These lessons progress from simple to more complex, so choose the appropriate lessons for each individual. They also provide physical and cognitive (including cause & effect), memory, eye-hand coordination, word association, and sensory (including audio & hand vibration) skills, as well as language and math skills.

### COUNTING TO 10

**Objective:** Learn to count to 10.

**Overview:** This song includes a more extensive video and interactive lesson teaching the user how to count to 10.

#### Instructor Guidance

- Step 1 Assist the user with voice prompts to choose the “Counting to 10” song from the playlist on the left side of the screen, or from the Math playlist.
- Step 2 Prompt the user to press the Rhythm/Play button on the right side of the screen to start the song.
- Step 3 Prompt the user to follow the counting lesson and video instruction in the song.
- Step 4 Follow the voice prompts and assist the user with learning to count.
- Step 5 Discuss the numbers and counting after the song is completed.

## TIMES TABLE GAMES

**Objective:** To learn and practice the 2 to 12 times tables.

**Overview-** In this exercise a series of multiplication problems pop up with four possible answers (3D ICONS), along with a voice over stating the problem and a number of answers to choose from below. The user must tap the correct answer. Visible/audio scoring will be provided noting the correct answers, and a “buzzer” will be sound for the wrong answer.

#### Instructor Guidance

- Step 1 Prompt the user to choose the desired times table game from the playlist on the left side of the screen, or from the Math playlist.
- Step 2 Prompt the user to press the Rhythm/Play button on the right side of the screen to start the game.

- Step 3 If necessary, assist the user with following the voice prompts from the song, and when to press the icon to indicate their choice.
- Step 4 Continue this activity until the user can score 100% for the respective times tables game, or as long as desired and/or their attention span will allow.

### **ADDITION & SUBTRACTION GAMES**

**Objective:** To learn and practice Addition & Subtraction Within 20 and Within 100.

**Overview-** In this exercise a series of addition and subtraction problems pop up with four possible answers (3D ICONS), along with a voice over stating the problem and a number of answers to choose from below. The user must tap the correct answer. Visible/audio scoring will be provided noting the correct answers, and a “buzzer” will be sound for the wrong answer. There are five separate games: addition within 20, subtraction within 20, a combo of addition and subtraction within 20, addition within 100, and subtraction within 100. In aggregate there are 115 problems that progress from simple to more complex, ultimately including up to four different numbers in each addition or subtraction question. Each game is about 6.5 minutes and has 20-25 problems, and the game repeats automatically after a brief ending if desired or can be terminated at the instructor or users option.

#### **Instructor Guidance**

- Step 1 Prompt the user to choose the desired addition or subtraction game from the playlist on the left side of the screen, or from the Math playlist.
- Step 2 Prompt the user to press the Rhythm/Play button on the right side of the screen to start the game.
- Step 3 If necessary, assist the user with following the voice prompts from the song, and when to press the icon to indicate their choice.
- Step 4 Continue this activity until the user can score 100% for the respective questions, or as long as desired and/or their attention span will allow.

## LIFE SKILL & LEARNING LESSONS

Life Skill & Learning lessons focus on different common sounds and items – such as the alphabet, safety signs, animals, railroads, buses, opposites, days of the week, and the like. This provides cognitive (including cause & effect), memory, eye-hand coordination, word association, and sensory (including audio & hand vibration) skills, as well as knowledge of the various topics such as signs, autos, ABC's, animals, etc. These lessons progress from simple early learning to more advanced, so choose the appropriate lessons for each individual.

## SAFETY SIGNS TUTORIAL & GAME

**Objective:** To understand and acquire an awareness of a variety of safety signs.

**Overview:** In the tutorial, safety sign pictures will be displayed on 3D ICONS. The user touches the icons to trigger the corresponding sound for each respective safety sign. A 3D ICON and a voice over will instruct the user as to what each of the symbols represent (ex. stop sign, railroad crossing, ambulance, etc.) and the user will be able to trigger the appropriate Icon sound. Next, choose the “Safety Sign” game. The song will play various sounds and instruct the user to choose the appropriate sign by touching the 3D ICON for that sign. Visible/audio scoring will be provided noting the correct answers, and a “buzzer” will sound for the wrong answer. At the end of the game twelve 3D ICONS with different signs will be displayed, and the user can try out the sounds themselves by touching the various 3D ICONS of the safety signs.

### Instructor Guidance

- Step 1 Prompt the user to choose “Safety Signs Tutorial” from the song bank on the left side of the screen.
- Step 2 Prompt the user to press the Rhythm/Play button on the right side of the screen to start the game.
- Step 3 Follow the voice prompts and as necessary assist the user with selecting the 3D icon which resembles the sign of the sound heard. (Ex. Car breaks indicate stop sign icon)
- Step 4 Note how many sounds and icons the user was able to match.
- Step 5 As the game ends, the twelve 3D icons will be displayed. At their own pace, assist the user practicing & remembering which sounds go with which icons, and what the signs represent.
- Step 6 Once the user feels comfortable, replay the game and see if their scores increase.

## THE LEARNING STATION MEDLEY TUTORIAL & GAME

**Objective:** An introduction to the Phonetic Alphabet, Opposites, and Basic Counting.

**Overview:** In the tutorial, a video will play along with two sets of ICONS that change with the song information, as well as a number of other instrument 3D ICONS that go with the song. For example, the left 3D objects will display various letters of the alphabet, all in one color. The right 3D ICONS will be an example of an entire word or item that corresponds to the letter displayed – i.e. “A” (red) = “Apple” (blue). After the video finishes, the user should play the “Learning Station Medley Game”. In this game twelve ICONS will appear with the first letters of the alphabet and the user will be asked to try the different letters. When the ICON is pushed the phonic sound will trigger. Similar displays will be provided for counting and opposites.

### Instructor Guidance

- Step 1 Assist the user with voice prompts to choose “The Learning Station Medley” from the playlist.
- Step 2 Prompt the user to press the Rhythm/Play button on the right side of the screen to start the Song.
- Step 3 Prompt the user to follow the video and listen for all the learning items in the song. You can let the video play a couple of times if desired – it will loop automatically.
- Step 4 Choose the Learning Station Medley Game from the Playlist. Touch the green arrow to start the game, and then assist the user in choosing the correct alphabet letter or icon when the video indicates.
- Step 6 Assist the user as necessary with the Quiz where the user needs to identify a phonetic sound, number, or opposite and choose the correct answer.

## GIGGLEBELLIES MEDLEY TUTORIAL

**Objective:** An introduction to the Railroad, Animals, and a Bus.

**Overview:** In the tutorial, a video plays along with two sets of ICONS that change with the song information, as well as a number of other instrument 3D ICONS that go with the song. This includes excerpts from the songs “I’ve Been Working on the Railroad”, “Old McDonald Had a Farm”, and “Wheels on the Bus” – providing a variety of learning opportunities.

### Instructor Guidance

- Step 1 Assist the user with voice prompts to choose “Gigglebellies Song Medley” from the song bank on the left side of the screen.

- Step 2 Prompt the user to press the Rhythm/Play button on the right side of the screen to start the song.
- Step 3 Prompt the user to follow the video and listen for all the learning items in the song. You can let the video play a couple of times if desired – it will loop automatically.
- Step 4 Assist the user as necessary with the song where the user can identify various items associated with different sounds and trigger the appropriate icons.

### **STORY BOOK SERIES**

**Objective:** An introduction to fun Interactive classic Story Books with a musical twist.

**Overview:** These lessons provide creative stories for the Big Bad Jazz Wolf, Goldilocks & The Three Musical Bears, Hey Diddle Diddle, Hickory Dickory Dock, Little Boy Blue, and Old King Cole. They also support basic reading skills as the story is displayed in print on the video as well as with a voice over.

#### **Instructor Guidance**

- Step 1 Assist the user with voice prompts to choose the desired interactive story from the Playlist.
- Step 2 Prompt the user to press the Rhythm/Play button on the right side of the screen to start the song.
- Step 3 Prompt the user to follow the story and listen for all the learning items in the song, as well as to read along with the story.
- Step 4 Follow the voice prompts and assist the user with selecting the 3D icon which resembles the instrument of the sound heard. (i.e. Press the fiddle when its mentioned in the story.)
- Step 5 Discuss the story and the items covered in the story.

### **EARLY LEARNING SERIES**

**Objective:** To learn and practice a variety of early learning topics.

**Overview:** This series includes video and interactive song lessons that cover such topics as ABC's, the days of the week, animals, oceans, and space as well as a variety of fun songs.

#### **Instructor Guidance**

- Step 1 Assist the user with voice prompts to choose the desired song from the Playlist.

- Step 2 Prompt the user to press the Rhythm/Play button on the right side of the screen to start the song or game.
- Step 3 Prompt the user to follow the information and instructions in the song.
- Step 4 Follow the voice prompts and assist the user with the appropriate topic.
- Step 5 Discuss the lesson once the song or game is completed is completed.