



Music and the pursuit of happiness

A lesson plan overview

With the Beamz, the possibilities for learning, enjoyment, music appreciation and therapeutic interventions with children of all ages are endless. To facilitate the use of the Beamz in various educational environments, Beamz has created a series of lesson plans to provide educators with an outline of the potential approaches for using this innovative educational product. These suggestions can be augmented with the creativity and imagination of each individual educator.

Some of the lesson plans developed by Beamz may be used to address improvement in occupational therapy and fine motor coordination skills, appropriate for students with disabilities and special needs. Other lesson plans outline how the Beamz can be used successfully in small group or classroom environments. Sample applicable goals include rhythm pattern in songs, movements to music, identifying instruments sounds, identifying beats, identifying different music types and genres, reading music, improvement in attention skills and recognizing note values.

The greatest value of the Beamz is that every activity is interactive. Social skills are improved as children create music with the laser beams and classmates respond. Also, the Beamz may be successfully used in classrooms by teachers with little or no music background or training. Regular use of both relaxing and stimulating music in all types of classrooms will improve students' moods, promote laughter, increase concentration and develop the students' appreciation for the joys of music.

Implementing the Beamz will enhance the learning atmosphere of all school systems, from elementary school through high school. Including this innovative invention in a child's educational life would be an incomparable experience not only for children, but for teachers and administrators as well.

Play the Light...



Lesson Plan 1

Beginning Rhythmic Patterns

Grade Level: 1, 2 and 3

Most appropriate for primary grades, this would be an enjoyable activity for any elementary school grade.

Aim: To have the students understand the basic rhythm pattern of four beats to a measure by interacting with the song Old MacDonald.

Brief Description: This lesson introduces children to the concept of how syncopated rhythm sounds. The students will clap to the beat together as a class. This addresses the application of gross motor skills to music.

Materials: Beamz set up to play Old MacDonald. A voice will sing the words, omitting the animal sounds.

Procedure:

1. Teacher plays the song Old MacDonald and models clapping four beats to the measure in front of the class.
2. Teacher replays the song and directs the class to clap along with her to the beat.
3. Teacher asks for student volunteers to step to the front of the room and individually demonstrate the skill, praising them for their accomplishments in using syncopated rhythm.
4. Teacher replays the song from the beginning and again directs the children to clap together to the beat of the music. In addition, she asks them to interject the appropriate animal sound when the singer introduces pig, cow, chicks, dog and duck.
5. Teacher visually demonstrates to the class how to place the fingers and hand into the laser beams on the Beamz frame to create the animal sounds.
6. Teacher invites each individual student to the front of the room to activate the animal sounds on the Beamz in time with the rhythm pattern of the song, while classmates continue to sing and clap to the beat.

Further Applications: When working one-to-one with a student, the teacher may assign use of the Beamz independently. The teacher instructs the child on how to initiate the play of Old MacDonald by pressing the lower right button on the Beamz stand. The child then experiments with sound variations, using his fingers and hands on the laser beams to create both animal and instrument sounds to the beat of the music.

Assessment: This lesson may be assessed by observing the enjoyment and enthusiasm of the participants throughout the activities.



Lesson Plan 2

Yankee Doodle

Grade Level: K, 1 and 2

This lesson plan is appropriate within the classroom setting

Aim: Students will learn the words to the song Yankee Doodle and improve their gross motor skills by performing coordinated dance steps to their movements, directed by the teacher.

Background Information: Song and dance have been tradition in many cultures. A simple song such as Yankee Doodle is both mood lifting and enjoyable for children. They love to learn and perform actions to music.

Materials: Beamz set up to play Yankee Doodle.

Procedure:

1. The teacher presents the song Yankee Doodle on the Beamz, and asks the children to listen to the beat of the music and the words.
2. The teacher distributes song sheets with the three verses of the song, and asks the children to familiarize themselves with the words by singing along with the Beamz under his/her direction.
3. The teacher models to the class how to activate the Beamz using fingers and hands in various patterns.
4. The teacher selects a student to use the Beamz to play instrument sounds to enhance the song during the next activity.
5. The teacher instructs the class to walk to the back of the room, stand and form a circle facing the center.
6. The teacher stands in the center of the circle. The song begins again with the teacher directing hand, arm, foot and dance movements to the music while the children sing along.
7. The teacher encourages additional students to contribute to the lesson by experimenting with the instrument sounds of the Beamz while the song and activity are repeated.

Further Application: The teacher may wish to encourage creativity by asking students to make up their own hand and body movements to the words and tempo of the song, as classmates continue to take turns using the Beamz.

Historic Significance: Below are the words and actions to Yankee Doodle. In the first verse of the song, Yankee Doodle stuck a feather in his hat and called it “macaroni.” Children may think that “macaroni” means pasta, but historically, that is not the case. In Pre-Revolutionary America when Yankee Doodle was popular, “macaroni” meant a fancy style of Italian dress imitated in England at that time. In the next verse of the song, Yankee

Doodle referred to himself as “dandy,” a way of proclaiming that he was a gentleman of recognized social standing.

Assessment: When the students are asked, they can sing the song and perform the actions to it the way they learned it in class.

Yankee Doodle

Yankee Doodle went to town (march in a circle in time to the beat)
A-riding on a pony,
Stuck a feather in his hat (put imaginary feather in hat)
And called it macaroni. (stop marching, face center of circle, stretch arms above head)

Yankee Doodle keep it up, (continue to face center and clap)
Yankee Doodle dandy,
Mind the music and the step (continue to face center, raising left and right legs alternately
And with the girls be handy. to music, hands on hips)

Father and I went down to camp (march in a circle in time to the beat)
Along with Captain Gooding,
And there we saw the men and boys (stop marching, face center of circle, place outstretched
As thick as hasty pudding. hands above eyes)

Yankee Doodle keep it up (continue to face center and clap)
Yankee Doodle dandy,
Mind the music and the step (continue to face center, raising left and right legs alternately to
And with the girls be handy. music)
There was Captain Washington (children face classmate next to them and point
Upon a sleeping stallion,
Giving orders to his men (shake right hand index finger)
I guess there was a million. (shrug shoulders)

Yankee Doodle keep it up (continue to face center and clap)
Yankee Doodle Dandy,
Mind the music and the step (continue to face center, raising left and right legs alternately to
With the girls be handy. music)



Lesson Plan 3

Musical Instrument Appreciation

Grade Level: 2, 3, 4, 5 and 6

This lesson plan is appropriate for general music class instruction.

Description: In this lesson, students will learn the basic knowledge of musical instruments. They will also develop a deeper appreciation of music and the various instruments involved in its creation.

Background: This lesson plan is a productive tool for students who are preparing to choose an instrument they would like to play in the school band or orchestra.

Aim: Students will learn to identify the names, pictures, and sounds of 12 different musical instruments in the categories of string, brass, woodwinds, and percussion.

Materials: Pictures cards of the 12 musical instruments and the following songs from the Beamz song list: Classique, Picante, Bluegrass, Café Carnival, and Come Together. If available, the instruments themselves should be played in a presentation before the students.

Procedure:

1. The teacher writes the words string, brass, woodwinds and percussion in four columns at the top of the blackboard. She then asks the students what they think these words stand for, and what type of instrument would fall into each of these categories. A discussion follows.
2. The teacher places the 12 pictures on the blackboard ledge, and asks the students if they could identify each instrument by name. The instruments are: clarinet, double bass, French horn, trumpet, organ, cymbals, fiddle, saxophone, cello, piano, violin and flute.
3. The teacher involves the students by sending them to the blackboard to choose a picture card. Each student then tapes the selected picture card to the board under the correct category.
4. The teacher demonstrates to the class how to use the Beamz frame and laser beams to create variations of musical sounds.
5. The teacher implements the use of the five Beamz songs listed above, and plays the 12 instrument sounds, helping students to relate the sounds to the correct instrument.
6. The teacher reinforces the lesson by giving different students the opportunity to play the instrument sounds on the Beamz. As each sound is played, a classmate is selected to walk to the board and identify the instrument which made the sound.
7. The teacher provides individual time for all students to use and experiment with the Beamz throughout the week during class activity time, additional music classes and available lunch schedules.

Assessment:

1. The teacher plays games with the students, asking them specifics about each of the 12 instruments to see what they know about features and sounds.
2. The students write a report on their favorite instrument and present it to the rest of the class.

Instruments and Categories for the Lesson:

Categories: String, Brass, Woodwind and Percussion

Instruments: Cello, Trumpet, Clarinet, Organ, Violin, French Horn, Saxophone, Cymbals, Fiddle, Flute, Piano and Double Bass



Lesson Plan 4

Special Needs Lesson

This lesson plan is appropriate for special needs and autistic children. It can most successfully be applied in one-to-one, or small group, therapy sessions.

Background Information: Music therapy is often a service listed on the IEP for special education students. Music learning is used to strengthen nonmusical areas such as communication skills and physical coordination skills, which are important in everyday life.

Aim: To improve fine motor development in special needs students by introducing them to the small hand and finger movements used in manipulating the Beamz.

Materials: Beamz set up to play the Jungle song with the following six sounds: Wild Animals, Tribal Chant, Rain Forest, Birds, African Flute and Thunder Storm.

Procedure:

1. The teacher demonstrates how the six sounds are played by passing one finger through each of the six laser beams on the Beamz frame.
2. The teacher asks the student to observe how changing finger and hand movements produces variation in sound patterns in the following activities:
 - a. The student uses the Beamz and begins by moving one finger slowly up and down in each of the six laser beams.
 - b. The student changes the speed of the sound by keeping one hand steady, waving the index and middle fingers alternately through the laser beams.
 - c. The student waves the whole hand up and down through the beams, continuing to note how the jungle and instrument sounds vary with each change in movement.
 - d. The student experiments further by rotating one hand, alternating palm up, palm down, across the beams.
 - e. The student is directed to press the button on the left side of the Beamz frame to adjust the Jungle song to play six additional sounds. The new sounds are: Tribal Drum, Dark of Night, Djembes (skin covered hand drums), Field Drums, Babbling Brook and Burundi Drum (drum made from a piece of tree trunk).
3. The student is given the opportunity to apply the fine motor skills applied in the above activity to the additional jungle and instrument sounds.
4. The student performs this activity before the class, receiving praise and positive feedback from his peers for his musical presentation.

Assessment: The teacher observes improvement in eye-hand coordination with continued practice and use of the program. The child is provided with an opportunity to improve his self-esteem and communication skills by interacting positively with his typical classmates.



Lesson Plan 5

Bingo

Grade Level: K - 4

This lesson plan is most appropriate for children with disabilities, but may successfully be used and enjoyed in the general class population as well.

Background Information: The use of rhythmic auditory stimuli has been shown to assist in the improvement of muscular control in children with gross motor dysfunction. Interacting with rhythm patterns will increase independent, balanced control of arm and leg use in individuals with uneven patterns of movement.

Aim: To enable the students to sing the song Bingo, adhering to the beat and deleting each letter of the word Bingo at the appropriate place when indicated.

Materials: Classroom blackboard, five individual letter cards with the letters B, i, n, g and o imprinted on them, scotch tape and Beamz set up to play the song Bingo.

Procedure:

1. The teacher sits in a chair in the front of the class and plays the song Bingo on the Beamz, directing the students to listen and observe while she models clapping four music beats to each measure. (The song automatically plays, complete with the melody and singer.)
2. The teacher replays the song and changes the way in which she keeps time to the music. She now lifts and stomps her feet on the floor in time with the four music beats.
3. The teacher now instructs the students to interact with the music, first by hand clapping, then by feet stomping.
4. The teacher tapes each of the five letters of the word Bingo on the blackboard. She explains to the class that they are now ready to sing along with the song, and when each letter of the song is deleted, she will remove that letter card from the blackboard.

Example: Bingo, ingo, ngo, go, o, empty board

5. The teacher increases the students' level of interaction with the activity. Students take turns standing before the class and removing the letters of Bingo at the precise moment that the letter is eliminated in the song.
6. While the children are participating in the letter activity above, they continue to alternately clap hands and stomp feet in time with the music pattern.
7. The teacher further increases the level of interaction by choosing students to use the Beamz to play the song. She demonstrates how the students may enhance the sound of the song by placing fingers and hands in different patterns across the laser beams.

Further Application: When using the laser beams in Bingo, the children will be introduced to the basic concepts of reading music at the beginner level. This is because the sounds that are produced and the instruments played are heard in both eighth notes and sixteenth notes. Although there will continue to be four beats to each measure, when an instrument plays eighth notes, two notes will play to the sound of one beat. When an instrument plays sixteenth notes, four notes will play to the sound of one beat.

Students' knowledge of music, and ability to remain on task, will be increased by experimenting with the sounds and instruments provided in this lesson.

The following are the rhythmic auditory stimuli with which the students will interact in Bingo:

Bingo barking	1/8 notes	Cow Bellz	1/8 notes
Banjo	1/16 notes	Squeeze Box	1/16 notes
Fiddle	1/16 notes	Twang Guitar	1/8 notes
Claps	1/8 notes	Harmonica	1/16 notes

Assessment: The teacher observes the ability of each student to respond to rhythm patterns with the selected hand and leg movements. The teacher notes the skill of each student in interjecting and deleting the letters of the word Bingo in the song where designated. The teacher perceives how the students apply eighth and sixteenth notes in a music measure of four beats.



Lesson Plan 6

Introduction to Computers

Grade Levels: K – 8

(Most appropriate for children with special needs, but also applicable in the general education classroom.)

This lesson plan is especially useful for children with ADHD, attention deficit hyperactivity disorder. Children with this disorder often act without thinking, are hyperactive, and have trouble focusing. In this lesson, children will be highly motivated to concentrate on using the computer mouse, which will enable them to produce original and exciting music pieces.

Background Information: The therapeutic characteristics of music are that it captivates and maintains attention while stimulating and utilizing many parts of the brain. Music has been successful as a therapeutic intervention for children as well as adults of all ages with disabilities. Music provides a meaningful, enjoyable context for repetition.

Aim: To provide a motivating, delightful activity for distractible children by enabling them to successfully use the computer mouse on the computer screen to create music with the Beamz.

Materials: Computer screen, mouse and Beamz set up to play the song Hotel California.

Procedure:

1. The teacher shows the child how to place the right hand on the computer mouse, positioned so that the index finger rests on the upper left-hand corner of the mouse.
2. The teacher models the use of the computer mouse on a blank computer screen, moving the arrow up and down in various directions.
3. The teacher sets up the Beamz to play the song Hotel California, only using the visual Beamz frame that appears on the computer screen.
4. The teacher demonstrates activating the rhythm control by pressing her right index finger on the mouse with one click. When the rhythm begins, she shows the child how to move the arrow onto each of the red lines on the screen to initiate the different instrument sounds. She asks the child to observe how the red line turns to green when each instrument plays.
5. The child performs the activities, starting with a blank computer screen. He practices the skills of relocating the arrow with the mouse, activating the rhythm control of Hotel California with one click of the index finger, maintaining focus and attention while holding the arrow in the chosen place, turning the selected line green.
6. The child is given the opportunity to experience and experiment with the following 12 instrument sounds in the selected song: Acoustic Guitar, Rotor Guitar, Electric Guitar, Cymbals, Cabasa, Guitar Strums, Toms, Maracas Loop, Conga Loop, Timbales, Crash and Shaker Loop.

Further Application: The child may be encouraged to expand his use of the mouse on the Beamz by moving the arrow up and down across the red lines in time with the music beat, rather than holding it in one place. The child may perform his music for classmates while they respond to the song with dance and body movements.

Most importantly, after this initial introduction to computers, the child should be afforded the opportunity to use and apply learned computer skills in math, language arts, and other major areas of the curriculum for his grade.

Assessment: The teacher observes the degree of the child's enthusiasm, attention, and positive response to the aim of the lesson plan.



Lesson Plan 7

Therapeutic Exercise

Grade Levels: K – 8

This Lesson Plan is most successful in self-contained special education classrooms and inclusive classrooms, as well as general education classes. A self-contained special education classroom is a class for special needs students. An inclusion classroom is a class where special needs and general education students are integrated.

Background Information: Studies have been made about the benefits of exercise on troublesome brain disorders such as ADHD – a neurological, behavioral condition resulting in hyperactivity and the inability to focus on task. Active children who ran or exercised for 15 to 45 minutes before their school day began cut their uncontrollable behaviors by half once they entered their classroom. Also, the soothing, calming effects of the exercise usually lasted for two to four hours after the physical activity was completed. It has been shown that exercise affects many sites within the nervous system and sets off pleasure chemicals such as serotonin and dopamine that make the child feel calm, happy and euphoric.

Aim: To provide regularly scheduled five- or 10-minute exercise sessions after each standard 45-minute subject period throughout the school day, or as needed, to promote improved behaviors in hyperactive children.

Materials: Beamz set up in an easily accessible table near the front of the classroom and a chart listing rousing, stimulating song selections available from the Beamz song list.

Procedure:

1. The teacher has a visible chart hanging in the front of the classroom that lists the names of songs from the Beamz song list that have a rapid beat and are highly interactive.
2. The students complete a 45-minute, regularly scheduled academic subject class, during which they have been quiet, seated and attentive.
3. The school bell rings, indicating that the period has ended.
4. The teacher selects two students to lead the music activity with the Beamz.
5. The first student walks to the Beamz frame and selects the song he will play. He presses the start rhythm button on the right side of the Beamz frame, and initiates the beat of the song. He enhances the beat with rhythmic finger and hand motions across the laser beams.
6. The second student stands in front of the room before the class. When the music begins, he performs amusing, creative exercise and dance movements that his classmates will imitate and perform in time with the music beat.
7. The physical activity of the children promotes calmness and prepares them for improved concentration and attention to task for the upcoming academic class period.

8. The teacher implements additional exercise sessions throughout the school day. She may choose to do this after each 45-minute period, or as needed when the students begin to display inattentiveness and distraction.
9. With each additional session, two other students are given the opportunity to assume the class leadership roles of working the Beamz and choosing actions related to the music beat.

Assessment: The teacher will observe the improvements in student functioning and behavior, creating a classroom learning environment that is more positive and successful.

Beamz Action Songs with a Strong, Steady Beat:

Back In Her Coke
Billie Jean
Bingo
Bluegrass Song
Café Carnival
Celebration
Club Techno
Get'n Chilly
Green Onions

Hollaback Girl
It's a Small World
Mony Mony
Old MacDonald
Pharaoh's Remix
Picante
RipHop
Rock Your Body
Sleeping Giants



Lesson Plan 8

Developing Cognitive Skills

Grade Levels:

This lesson plan is most appropriate for children with autism spectrum disorders in all grades (also appropriate for primary grades K-3)

Background Information: Autism is a complex neurological and developmental disability that affects the functioning of the brain, impacting development in the areas of social interactions and communication skills. Autism Spectrum Disorders cause severe and pervasive impairment in thinking, feeling and language, which affects the ability to relate to others. These disorders are usually first diagnosed in early childhood as Asperger's syndrome, and range from milder forms to severe forms.

In particular, children on the autism spectrum show difficulties in verbal and non-verbal communication. It is difficult for them to talk with other people and express themselves using words. It has been shown that singing to music is a successful language goal for autistic children, and that singing to music will improve cognitive skills, those mental abilities that help us to process external stimuli from the environment.

Aim: To provide an enjoyable singing activity to music enabling autistic children to improve verbal and cognitive skills.

Materials: Beamz set up to play "If You're Happy." In this song, the sounds produced on the laser beams are the actions described in the words of the song.

Procedure:

1. The teacher reviews with the children how to produce sounds on the Beamz by using hand and finger movements that pass through the six laser beams.
2. The teacher presses the control on the right side of the Beamz to begin the song "If You're Happy." She instructs the children to listen to the words of the song and follow the directions that correspond to the words.
3. The teacher replays the song and asks the children to act along with her movements & sounds: clap your hands, stomp your feet, honk the horn, ring the bell, shout hooray, laugh out loud, whistle now.
4. The class is now ready for an interactive verbal experience. The teacher chooses one child to make the sounds on the laser beams as the music plays.
5. The teacher selects a second child to stand in front of the class and model the movements.
6. The children sing along with the music and follow the movements of the directing child in front of the room, while being motivated by the corresponding, enjoyable actions sounds of the Beamz.

7. The teacher uses this song activity repeatedly throughout the next few weeks, encouraging singing and giving other students the opportunities to assume the roles of leader and player.

Assessment: The teacher observes the oral participation of the students in this activity as it is repeated. She invites individual students to sing the song alone, to assess their improvement in verbally communicating through music.

Song Words:

If you're happy and you know it, clap your hands,
If you're happy and you know it, clap your hands,
If you're happy and you know it, and you really want to show it,
If you're happy and you know it, clap your hands.

If you're happy and you know it, stomp your feet,
If you're happy and you know it, stomp your feet,
If you're happy and you know it, and you really want to show it,
If you're happy and you know it, stomp your feet.

If you're happy and you know it, honk the horn,
If you're happy and you know it, honk the horn,
If you're happy and you know it, and you really want to show it,
If you're happy and you know it, honk the horn.

If you're happy and you know it, ring the bell,
If you're happy and you know it, ring the bell,
If you're happy and you know it, and you really want to show it,
If you're happy and you know it, ring the bell.

If you're happy and you know it, shout hooray,
If you're happy and you know it, shout hooray,
If you're happy and you know it, and you really want to show it,
If you're happy and you know it, shout hooray.

If you're happy and you know it, laugh out loud,
If you're happy and you know it, laugh out loud,
If you're happy and you know it, and you really want to show it,
If you're happy and you know it, laugh out loud.

If you're happy and you know it, whistle now,
If you're happy and you know it, whistle now,
If you're happy and you know it, and you really want to show it,
If you're happy and you know it, whistle now.



Lesson Plan 9

Interactive Social Games

Grade Levels: Grades K - 6, and all ages for children on the autism spectrum.

This lesson plan addresses the needs of autistic children and children diagnosed with disabilities. It is also appropriate as an enriching activity for children in the general education classroom.

Background Information: Children on the autism spectrum usually do not naturally acquire the ability to interact with others. They must learn these skills intellectually through deliberate treatments and interventions.

The process of teaching socially appropriate behavior can be broken down into small, achievable steps. Music is a wonderful tool that is perfect for teaching these small steps to address and improve social behaviors. Examples are circle time, marching to music and the game of hot potato.

Aim: To improve social skills by enabling children to follow directions and oral commands while responding interactively to music.

Materials: Beams set up to play the song Celebration for a circle game, followed by the Blue Grass Song used in the game of hot potato.

Procedure:

1. The teacher sets up the Beamz frame to play the song Celebration in visible view of the students.
2. The teacher chooses a student to use the Beamz to create music, selecting sounds from the 12 choices available with the 12 laser beams.
3. The teacher practices with the class the movements that they will use to coordinate with the music.
4. The children hold hands and form a circle. While the music plays on the Beamz, the teacher continues to give oral directions in a loud voice and counts the steps aloud.

Following are the movements to the song:

The children hold hands and walk:

16 beats to the left around the circle

16 beats to the right around the circle

8 steps to the center of the circle

8 steps out from the circle center

8 steps to the center of the circle

8 steps out from the circle center

The children release hands and:
Clap in place 16 times to music
Face left and march 16 steps to the beat around the circle
Face right and march 16 steps to the beat around the circle

5. This circle game is repeated, and another child is given the opportunity to play the Beamz.
6. The teacher changes the song on the Beamz to the Blue Grass Song to initiate the second activity of hot potato. The Blue Grass Song is a quick moving, highly stimulating tool that will immediately engage the children's interest and attention.
7. The teacher selects a third student to play the Beamz, and asks the remainder of the class to position themselves on the floor, and form a circle facing each other. She hands a light weight ball to a child, and indicates that this will symbolize the "hot potato."
8. As the Beamz is initiated, the children begin passing the ball to each other as quickly as possible. When the music stops, the child who is holding the ball will move to the Beamz frame and become the new player.
9. This procedure will continue, keeping children active, passing the ball, interacting with, and playing, the Beamz.

Assessment: The teacher observes improvement in the students' ability to obey oral commands and remain on task, both in the above described lesson plan and general classroom functioning as well.



Lesson Plan 10

Teaching Directionality: Students Learn Left and Right

Grades levels: Pre-K to Grade 3, and most beneficial for children of all ages with dyslexia

Background: Recent studies have shown that dyslexia is a disability located in the brain. It is estimated that between 5% and 17% of the population are affected by dyslexia. Some of the well-known symptoms of dyslexia are confusion over the direction that letters face (b/d, p/q), difficulties in reading and organization and difficulties identifying the difference between left and right.

Directionality is an important factor in reading and learning, because we read and write from left to right. Activities that reinforce left and right are especially beneficial to the child with dyslexia, and are known to improve cognitive skills, reading, and academic functioning.

Aim: To enable children to identify left from right by using the laser beams on the Beamz.

Materials: Beamz set up to play a variety of songs chosen by individual students, and word cards with the following words imprinted on them: Left, Right, Upper Left, Middle Left, Lower Left, Upper Right, Middle Right, Lower Right.

Procedure:

1. The teacher seats the students in class facing the blackboard at the front of the room. She tapes a word card on the left side of the board that says "Left." She tapes a word card on the right side of the board that says "Right."
2. The teacher instructs the children to refer to the left and right word cards throughout the lesson when needed.
3. The Beamz frame is set up in front of the room. The teacher selects a child to sit behind the Beamz frame while still facing the blackboard. The remainder of the class remains seated behind the child, so they can see and observe the child's movements of hands and fingers as he manipulates them through the laser beams. All of the children's left hands are on the left side of the room, and all right hands are on the right side of the room.
4. The teacher reviews with the class how the six laser beams are used.
5. The chosen child selects a song to play from the Beamz play list, and the beat is initiated.
6. All eyes remain focused on the teacher as she holds up the first card, "Middle Left."
7. The child working the Beamz uses his left hand and fingers across the laser beam on the middle left side of the frame.

8. The teacher holds up the other five cards in mixed order, allowing the child time to process the information and locate the correct laser beam. He/she proceeds to create music variations in his song by using his left or right hand and fingers across the beams to find upper, middle and lower left, and upper, middle and lower right.
9. The teacher invites the other students to participate and practice using left and right hands by copying the movements of the child seated at the Beamz in the air.
10. The activity becomes more interactive as the teacher assigns additional students to play the Beamz, and asks for volunteers to hold up the cards and guide the class.

Assessment: After the lesson is concluded, the teacher will spontaneously point to a child and ask him to raise his left or right hand at various intervals throughout the school day. When the child responds correctly, he is given a sticker or a star as a reward to keep him interested and motivated in the importance of directionality in both school and life.



Lesson Plan 11

Response to Classical Music

Grades: All grades from Kindergarten through high school.

Background: Classical music strictly defined means music produced in the western world between 1750 and 1820. It is characterized by simple music, defined harmony and balanced themes. Some of the most famous classical composers include Beethoven, Mozart, Bach, Brahms and Tchaikovsky.

The initial response of most children to classical music is that it is boring and not interesting or fun. However, after listening to classical music pieces during quiet class periods and playtime, children have been known to respond with great enthusiasm.

A 1993 study revealed that college students' scores improved on spatial-temporal reasoning tests after listening to Mozart. This inspiring study was named the "Mozart Effect," and has motivated parents and educators to reintroduce classical music into children's lives and education.

It has also been found that classical background music played in the classroom helps to improve a child's memory.

Aim: To introduce classical music into the classroom, and integrate it into age-appropriate art and dance activities.

Materials: The Beamz set up to play ChambrConcerto and Classique, and Shadows Art paper, crayons and markers.

Procedure:

1. The teacher sets up the Beamz to play the classical piece, ChambrConcerto.
2. The teacher discusses the primary instruments of classical music. They are the bowed strings (violin, viola, cello and double bass), woodwinds (flute, clarinet, oboe and bassoon), brass (trumpet, French horn, trombone and tuba), percussion (tambourine, cymbal, triangle and drum), keyboard (piano and organ) and guitar.
3. The teacher selects a child to perform on the Beamz, and advises the child to swap sounds while he plays, so that all 12 primary instruments will be incorporated into his presentation to the class.
4. The teacher distributes drawing paper, crayons and markers to the other seated students. She instructs them to listen to the music for a time then create a picture that describes how the music makes them feel. She gives examples with the words: excited, sad, happy, calm.

5. The chosen child plays ChambrConcerto while the other students use their art work to express their emotional reactions on paper.
6. Once everyone is finished with their drawings, each child is invited to the front of the classroom to share their pictures and explain their reactions to the music.
7. The teacher selects a second child to play the next classical piece, Classique. She reminds the child to swap sounds while playing, so that all 12 instrument sounds will contribute to the mood and emotional stimulation of the music.
8. The teacher changes the instructions for the seated students. This time they will listen as the music plays, and visualize in their minds how they could communicate their response by dance.
9. Students are invited to perform their interpretive dancing before the class.
10. The activity becomes more interactive as students share turns dancing and creating classical music on the Beamz.

Further Application: The teacher uses the Beamz classical music pieces to provide calming background music during appropriate times throughout the school day. Students chosen to play the Beamz during this time may earn the privilege as a reward for good behavior or progress in achieving their academic goals.

Assessment: The teacher observes the students' enjoyment of the activities as they come to understand that classical music can be fun and, in reality, is not a boring experience.



Lesson Plan 12

The Basics of Reading Music in 4/4 Time

Grades: This lesson plan is appropriate for grades 3 and higher in the general music class.

Background: In 4/4 time, there are four beats to the measure and the quarter note is one beat. Therefore, one measure of music will have four quarter notes in it. The symbol of a quarter note is a black dot on a line or space with a straight stem coming up from the side.

4 beats to a measure
1 beat for each quarter note



Eighth notes have half the durational value of quarter notes. One eighth note is half as long as a quarter note, so two eighth notes are played in the same length of time as one quarter note. Therefore, when listening to a song with eighth notes in it, the music seems faster. Here is one measure with eighth notes. So now there are eight notes being played in the same length of time as the four quarter notes illustrated above.

The symbol for an eighth note is a black dot on a line or space with a straight stem coming up, topped with a flag. Two eighth notes making one beat may be joined together at the top.

4 beats to a measure
 $\frac{1}{2}$ beat for each eighth note



Aim: To identify quarter notes and eighth notes in a musical selection written in 4/4 time.

Materials: Beamz set to play Twinkle, Twinkle Little Star and Quiet Times along with music staff with illustrations of quarter notes, music staff with illustrations of eighth notes and a drum, tambourine and triangle (percussion instruments).

Procedure:

1. The teacher sets up the Beamz to play Twinkle Twinkle Little Star, which has an easily recognizable 4/4 beat.
2. The teacher picks an instrument from the song with a slow, clear beat. She selects a child to put his fingers through that laser beam and the beat begins. (The choices of instruments are Hand Drums, Baby Bellz or Steel Drums.)
3. The teacher points to the quarter note chart on the board. She begins to count aloud in time with the music, and asks the students to join her. The counting is 1 - 2 - 3 - 4, 1 - 2 - 3 - 4, repeatedly.
4. The teacher gives out a drum, a tambourine and a triangle to three additional students.

- The teacher asks the child on the Beamz to repeat playing the song. The drum, the tambourine and the triangle join in and syncopate with the Beamz as the teacher and the rest of the class count 1 - 2 - 3 - 4, 1 - 2 - 3 - 4, etc. At this point, all children are participating together in the lesson, as this becomes an extremely interactive experience.

Counting quarter notes



- The teacher shows the students how to count eighth notes aloud by using the eighth note chart on the board. Each eighth note that falls on a beat will get a number and the eighth notes that fall in between will be counted as "and".

Counting eighth notes



- The teacher gives four other students the opportunity to play the Beamz, the drum, the tambourine and the triangle.
- The teacher sets up the Beamz to play Quiet Times, and instructs the child to use the laser beam for the Piano or Nylon Guitar, both of which will play to the beat of eighth notes in 4/4 time.
- The four children play together to the beat of the eighth note, while the teacher and the class count 1 and 2 and 3 and 4 and, 1 and 2 and 3 and 4 and ... etc.

Further Application: The teacher enters notes on a staff on the blackboard, mixing quarter notes and eighth notes. She asks the students to count the beats aloud as demonstrated in the lesson.



Assessment: The teacher uses the further application exercise above to evaluate the students' comprehension of quarter notes and eighth notes.



Lesson Plan 13

Combining Art and Music

Grades: This lesson is appropriate for elementary and junior high school grades, as well as for special education students in need of improvement in coordination skills.

Background: Children can respond greatly to music and art through engaging art projects. Since children love music as much as they enjoy making things, it is a joyful experience for them to combine these two creative forces and make simple musical instruments that they may play to music. Combining activities of both art and music together affords children the opportunity to express themselves in both areas.

Aim: To improve self-esteem by having a child play the role of a conductor as classmates play the Beamz, sing along to the music and keep the beat on their hand-made musical instruments.

Materials: Beamz set up to play *It's a Small World*, art materials for children to make drums and guitars and a classroom chart with the words of the song, "It's a Small World."

Procedure:

1. The children choose to make either a drum or guitar with art materials provided. (Please refer to the instructions on how to make these instruments at the end of this lesson plan.)
2. The teacher hangs up a chart on the blackboard with the words of "It's a Small World" on it.

It's a Small World

It's a world of laughter, a world of tears,
It's a world of hopes, and a world of fears.
There's so much that we share
That it's time we're aware,
It's a small world after all

Chorus

It's a small world after all,
It's a small world after all,
It's a small world after all,
It's a small, small world.

3. A student is selected to play the song on the Beamz before the class, using his hands and fingers, providing flourishes of his own.

4. The children practice singing “It’s a Small World” along with the Beams. They listen and repeat the song accurately and expressively, using the correct pitch.
5. After practicing the song, the students are directed to clap their hands in coordination with the rhythm of the song.
6. The teacher advises the students that they are now ready to use their handmade instruments to play along with the song.
7. The teacher plays the role of a band conductor. She sways her hands and arms before the class as the student on the Beamz plays “It’s a Small World,” the class sings the words and the drums and guitars coordinate with the rhythm of the song.
8. Next, the teacher chooses a child to be the conductor. The child follows the example of the teacher, using hand and arm movements, leading the singing and the playing of the instruments.
9. Other children are given turns to be conductor, as the thrill of this interactive activity brings joy and smiles to the faces of the participants.

Creating Instruments

Coffee Can Drum

Clean an empty coffee can and keep the lid on it

Decorate the can by gluing colorful construction paper around the can

Add pictures and designs to the paper with markers or crayons

Children conclude by making drum music using their hands or sticks, and beating the coffee can lid in time with the music from the chosen song

Shoobox Guitar

For this, you will need a shoobox with a lid

Cut a round hole in the lid of the shoobox, making it 3 – 4 inches in diameter

Return the lid to the top of the box, then color and decorate both pieces

Stretch a few thick rubber bands around the hole in the box (thick rubber bands will be less likely to break)

Children pluck the rubber bands in time with beat from “It’s a Small World”

Further Application: The students should keep their handmade instruments available for classroom use over the next several weeks, expanding their use with songs in various genres of music.

Assessment: The teacher invites individual students to play their instruments in time with the song, and evaluates their ability to coordinate their hand movements appropriately.