

**Ages 3-6**

**TRACK 3**  
**MUSIC**

**Body Percussion - 1 and 2 Beat Cycles**  
**#T3-1**

**Track 3: Music**  
**Category: Rhythm**

**Age:** 3 - 4 years

**Group/Individual:** Group

**Materials:** Syllable Chart \* Body Percussion Chart \* Metronome (if necessary)

**Prerequisites:** n/a

**Guide Preparation:**

- Practice doing a steady rhythm. If necessary, use a metronome.
- Practice each of the exercises in advance until completely comfortable.

**Repetition and Duration:** 4 times, over 2 months

**Presentation:**

**Counting Numbers and Body Percussion**

1. Have everyone sit in a circle.
2. Repeat “1, 1, 1, 1” on a slow rhythm. Invite the children to count with you, encouraging them to say the numbers exactly on the beat.
3. Now on each beat, slap your chest softly with your hand. Invite the children to slap their chest on the beat. Make sure you are going slow enough so that everyone can do it.
4. Without stopping the chest tap and rhythm, start counting “1, 2, 1, 2”. Invite the children to join in counting.
5. Now begin alternating left and right hands on each beat (which hand starts is not important):

Beat 1 – Left Hand Chest Slap

Beat 2 – Right Hand Chest Slap

Repeat.

In this and the following exercises, demonstrate the pattern first and have everyone join in. Always go slow enough so everyone gets it and then speed up to a comfortable tempo.

6. After everyone is comfortable with the exercise, try different tempos:
  - Fast, Really Fast, Slow, Really Slow
  - Gradually speeding up until no one can do it
  - Gradually slowing down until you stop and are still for at least 1 minute

### **Counting with Syllables and Body Percussion**

1. Start counting a slow comfortable rhythm, “1, 2, 1, 2” etc. without the Chest Slaps. Have the children join in.
2. Now begin saying “Ho” on beat 1 and “Two” on beat 2. Invite the children to join in.
3. Once everyone has it down, change beat 2 to “Hey” (i.e. “Ho, Hey”) and have the children join in.
4. Keep the rhythm going with the syllables and add a chest slap on beat 1. Continue until everyone has the pattern down.
5. Now add a clap on beat 2:

Beat 1 – Chest Slap - Ho  
 Beat 2 – Clap - Hey  
 Repeat.

7. After everyone is comfortable with the exercise, try different tempos:
  - Fast, Really Fast, Slow, Really Slow
  - Gradually speeding up until no one can do it
  - Gradually slowing down until you stop and are still for at least 1 minute

**Language:** Syllables \* Tempo \* Body Percussion

POINTS OF INTEREST	DEVELOPMENTAL VALUE
Watch for the responsiveness of the children and adjust the tempo accordingly. Try and find the right tempo that feels right for the most children – not too fast so that they can’t do it, and not too slow so that it is hard to keep the rhythm.	The more involved the child the more they receive the benefits of the rhythm entrainment.

Watch everyone's performance closely to determine how long to do the exercise and when to move on to the next step in the exercise. Ideally, you want everyone to get the sounds and movement down. However, some children may not be able to get parts down. Once most of the children have the exercise step down, continue for a bit so they get entrained into the rhythm, get it in their body, feel confident and are not getting bored. Then move on to the next step. It takes a lot of concentration to do the exercise with everyone and watch everyone at the same time. It will become easier over time.	It is not good when a child feels left behind. It is also not good when a child is bored and loses interest.
The children may not follow very well. This is just fine. They will learn by just watching and will get it over time.	
Make all the movements very pronounced in order to help entrain the children into the movement.	The more involved the child the more they receive the benefits of the rhythm entrainment.
Provide very close eye contact to help entrain them into the exercise.	The more involved the child the more they receive the benefits of the rhythm entrainment.
Let the children get excited when you speed up the tempo. They will calm down when you slow down the tempo.	
The peace that is experienced at the end of the exercise when the tempo is slowed down to a peaceful ending is very important.	It is important to get the children into a peaceful state so that becomes the norm in their lives.
	Left and Right movement synchronizes the left and right brains – the ideal state for development.

PURPOSE	RESEARCH AND ASSUMPTIONS
Overall Connection	Awareness in the moment of frequency,

<p>➤ <b>Presence</b></p>	<p>timbre, rhythm, melody, music, light, the body, feelings, emotions and thoughts makes a person healthier and ready to deal with any challenges and conflicts.</p>
<p>Overall Connection</p> <p>➤ <b>Consistency</b></p>	<p>Consistent rhythms entrain the child into peace, creating physical and emotional stability through the development of steady brainwaves, thought patterns, and focus. This stability strengthens immunity and overall health, while also generating a sense of bonding. In addition, the development of in sync timing is foundational for cognitive thought, movement, sensory response, and vital functions.</p> <p>Repetitive speak catalyzes a parasympathetic response of the nervous system and increased vagal tone by stimulating the vagus nerve.</p>
<p>Overall Connection</p> <p>➤ <b>Interpersonal Synchrony</b></p>	<p>Synchronous non-verbal communication, movements and sound trigger mirror neurons, which create the foundation for whole brain development.</p>
<p>Overall Connection</p> <p>➤ <b>Musicality</b></p>	<p>Pitch perception and the use of rhythm enhance musicality. Developing musical abilities aids in left and right brain synchronization, speech and language skills, creative expression, emotional awareness, and improving mental functions such as memory, focus, problem solving. Additionally, toning develops the ear-voice connection, which supports the natural development of musical expression.</p>
<p>Overall Connection</p> <p>➤ <b>Smooth Flow</b></p>	<p>A smooth flow of sounds and music entrain all systems in a human being into a consistent flow, which is the basis of peace and harmony. Physical, mental, and emotional</p>

	flow with minimal blockages is the essence of health.
Physical Connection ➤ <b>Body Awareness</b>	Movement aids in the development of body awareness, improving gross and fine motor skills, spatial awareness, right brain functioning, balance, and muscle tone.
Physical Connection ➤ <b>Vestibular Stimulation</b>	Working with rhythm stimulates the vestibular system, which plays an important role in maintaining stable blood pressure while moving, balance, motor coordination, spatial memory, and spatial navigation.
Physical Connection ➤ <b>Motor Coordination</b>	Combining rhythm and movement stimulates the vestibular system, which plays an important role in motor coordination. Motor Coordination helps with socio-cognitive skills and cognition. <ul style="list-style-type: none"> <li>• The National Association for Music Education says “playing instruments or moving to music helps develop motor skills.”</li> </ul>
Physical Connection ➤ <b>Auditory – Motor Coordination</b>	Matching sound and movement increases auditory-motor coordination, which helps with preverbal communication, socio-cognitive skills, and cognition. It also builds strong and robust neural networks between voice and movement.
Physical Connection ➤ <b>Auditory – Visual – Motor Coordination</b>	Multisensory learning supports multisensory integration. This is refined through Call and Response where a person sees a person do a sound and/or movement and then repeats it.
Emotional Connection ➤ <b>Emotional Stability</b>	Consistent rhythms and tones entrain the brain into a coherent state that supports emotional stability. When consistent tones or

	<p>harmonious melodic intervals are listened to or produced by the voice they create emotional and physical harmony. Emotional stability contributes to overall well-being, self-confidence, sense of security, emotional intelligence, and positive social behavior.</p>
<p>Emotional Connection</p> <p>➤ <b>Empathy</b></p>	<p>Nonverbal communication develops emotional intelligence and empathy, as the children learn to perceive and express emotions. Engaging with music, sound, and rhythm in a group setting gives children a healthy outlet for their expression and an opportunity to observe their classmate's emotional expression, cultivating a greater sense of empathy. Empathy plays a key role in developing social connection, pro-social behavior, and conflict resolution skills.</p> <ul style="list-style-type: none"> <li>• The National Association for Music Education states that the study of music develops an “understanding of different emotions.”</li> </ul>
<p>Emotional Connection</p> <p>➤ <b>Healthy Emotional Expression</b></p>	<p>Healthy emotional expression and interaction with the world develops healthy intellectual functioning contributing to a healthier, more productive, and creative individual. Using nonverbal and gestural communication promotes growth in a child's brain, enhancing their ability to experience and understand their environment.</p> <ul style="list-style-type: none"> <li>• The National Association for Music Education states that that music can be used “as a tool for expressing and releasing difficult and beautiful emotions.”</li> </ul>
<p>Mental Connection</p> <p>➤ <b>Brainwave Entrainment</b></p>	<p>Consistent tones and rhythms create brainwave entrainment, a process whereby the brain synchronizes to the frequency of the external stimuli. This allows the brain to</p>

	<p>entrain into certain brainwave states, such as delta, theta, alpha, and beta. These brainwave states have been proven to enhance sleep, meditation, creativity, presence, focus, learning and mental processing.</p>
<p>Mental Connection</p> <p>➤ <b>Focus and Concentration</b></p>	<p>Sufficient focus and concentration on something will fire neurons in new patterns, creating neural pathways that support cognition. Call and Response exercises activate the reticular activating system (RAS), which controls the ability to become mentally focused and alert, a necessary foundation for optimal learning.</p> <ul style="list-style-type: none"> <li>• The National Association for Music Education lists “memory and focus of the mind” as one of the key benefits of music.</li> </ul>
<p>Mental Connection</p> <p>➤ <b>Memory</b></p>	<p>Call and response exercises develop memory, which plays a critical role in learning. Ear to voice imitation activates the firing and wiring of the mirror neurons responsible for creating the neural pathways that are the beginning of new memories, supporting effortless learning.</p>
<p>Mental Connection</p> <p>➤ <b>Whole Brain Synchronization</b></p>	<p>Music, rhythm, and geometry engage both sides of your brain and help them work together, creating whole brain synchronization. This stimulates the corpus callosum, strengthening the bridge between the two brain hemispheres. Whole brain functioning improves cognition, focus, memory, creative thinking, problem solving, overall mental health, and the ability to perceive connections between seemingly contradictory concepts.</p>
<p>Mental Connection</p> <p>➤ <b>Speech and Language Skills</b></p>	<p>Rhythm exercises support future language learning, as similar to music, language has strong rhythmic patterns. The timing of</p>



	<p>syllables in language helps define one speech sound from another and it's the ability to identify these differences that helps babies learn to speak.</p>
<p>Spiritual Connection</p> <p>➤ <b>Group Synchrony</b></p>	<p>Group synchrony supports attention, social connection, pro-social behavior, and stress reduction. Call and response exercises promote group synchrony; as the children respond in unison they can learn and correct their sounds from hearing the sounds of the other children. This is a result of mirror neurons firing in response to the observed activity of another.</p>
<p>Sensory Refinement</p> <p>➤ <b>Temporal Awareness</b></p>	<p>Differentiating between short and long sounds is important for auditory processing and the optimal development of temporal awareness. The ability to differentiate short and long sounds involves the awareness of time, which serves as an important aspect of language learning and the development of social intelligence. It also contributes to speech and language skills.</p>
<p>Sensory Refinement</p> <p>➤ <b>Novelty</b></p>	<p>The auditory system adapts in response to novel stimuli, allowing for neural plasticity, a key feature of development throughout the nervous system.</p>

**Future Learning:** Learning stable rhythms. Language learning.

**Body Percussion - 3 Beat Cycles**  
**#T3-2**

**Track 3: Music**  
**Category: Rhythm**

**Age:** 3 - 4 years

**Group/Individual:** Group

**Materials:** Syllable Chart \* Body Percussion Chart \* Metronome (if necessary)

**Prerequisites:**

- “Body Percussion - 1 and 2 Beat Cycles”

**Guide Preparation:**

- Practice doing a steady rhythm. If necessary, use a metronome
- Practice each of the exercises in advance until completely comfortable

**Repetition and Duration:** 5 times, over 1 month

**Presentation:**

**Counting Numbers and Body Percussion**

1. Have everyone sit in a circle.
2. Repeat “1, 2, 3, 1, 2, 3” at a slow rhythm. Have everyone count with you, encouraging the children to count right on the beat.
3. Now, continue counting and on beat 1 softly slap your chest with your hand. Invite the children to join you. Go slow enough so that everyone can do it.
4. Now add alternating Finger Snaps on beats 2 and 3:

Beat 1 – Left Hand Chest Slap – “1”

Beat 2 – Right Hand Finger Snap – “2”

Beat 3 – Left Hand Finger Snap – “3”

Repeat

In this and the following exercises, demonstrate the pattern first and have everyone join in. Always go slow enough so everyone gets it and then speed up to a comfortable

tempo.

Note: If a child can't finger snap and is getting frustrated, have them slap their leg softly instead. Let them know it is fine to do the finger snap even if it makes no sound.

5. Have everyone count softer and softer until everyone is silent and just doing the body percussion. Then, have them add the counting again. Go back and forth.
8. After everyone is comfortable with the exercise, try different tempos:
  - Fast, Really Fast, Slow, Really Slow
  - Gradually speeding up until no one can do it
  - Gradually slowing down until you stop and are still for at least 1 minute

### **Counting with Syllables and Body Percussion**

#### 2 Syllables Only – First syllable on beat 1; Second syllable on all other beats

1. Continue with the body percussion at a comfortable tempo counting “1, 2, 3, 1, 2, 3”:

Beat 1 - Left Hand Chest Slap – “1”

Beat 2 - Right Hand Finger Snap – “2”

Beat 3 - Left Hand Finger Snap – “3”

Repeat.

2. Now instruct everyone to say “Ho” on beat 1, “Two” on beat 2, and “Three” on beat 3.
3. Once everyone has it down, change the second beat to “Hey” (i.e. “Ho, Hey, Three”).
4. Once everyone has it down have everyone say “Hey” on beat 3:

Beat 1 - Chest Slap – Ho

Beat 2 - Left Finger Snap – Hey

Beat 3 - Right Finger Snap – Hey

Repeat.

Now have everyone begin alternating hands on every beat:

Beat 1 – Right Chest Slap – Ho

Beat 2 – Left Finger Snap – Hey

Beat 3 – Right Finger Snap – Hey

Beat 1 – Left Chest Slap – Ho

Beat 2 – Right Finger Snap – Hey

Beat 3 – Left Finger Snap – Hey

Repeat

Matches Beat Cycle – Number of Syllables Equals Number of Beats

5. Continue counting “1, 2, 3, 1, 2, 3” and change the body percussion to:

Beat 1 – Left Hand Chest Slap  
Beat 2 – Right Hand Chest Slap  
Beat 3 – Clap  
Repeat

6. Now instruct everyone to say “Ho” on beat 1, “Two” on beat 2, and “Three” on beat 3.
7. Once everyone has it down, change beat 2 to “Hey” (i.e. “Ho, Hey, Three”).
8. Once everyone has it down have everyone say “Hum” on beat 3:

Beat 1 - Left Hand Chest Slap – Ho  
Beat 2 - Right Hand Chest Slap – Hey  
Beat 3 - Clap – Hum  
Repeat.

9. After everyone is comfortable with the exercise, try different tempos:
  - Fast, Really Fast, Slow, Really Slow
  - Gradually speeding up until no one can do it
  - Gradually slowing down until you stop and are still for at least 1 minute

## **Dropping Beats**

Note: This exercise is more advanced, only introduce it after they are very comfortable with the first exercises. Suggested to try it on the first day and play with it more on subsequent days.

1. Continue with body percussion and syllables from above:

Beat 1 - Left Hand Chest Slap – Ho  
Beat 2 - Right Hand Chest Slap – Hey  
Beat 3 - Clap – Hum  
Repeat.

2. Now have them whisper “Hey” on beat 2:

Beat 1 -Left Hand Chest Slap – Ho  
Beat 2 - Right Hand Chest Slap – Whisper Hey  
Beat 3 - Clap – Hum  
Repeat.

3. Now have them drop out the “Hey” and Right Hand Chest Slap altogether on beat 2:

Beat 1 - Left Hand Chest Slap – Ho  
Beat 2 - No Body Percussion – Silence  
Beat 3 - Clap – Hum  
Repeat.

Instruct them to still count beat 2 in their heads.

4. Now add beat 2 back in and drop out “Hum” and Clap on beat 3:

Beat 1 - Left Hand Chest Slap – Ho  
Beat 2 - Right Hand Chest Slap – Hey  
Beat 3 – No Body Percussion – Silence  
Repeat.

Instruct them to still count beat 3 in their heads.

5. Now add beat 3 back in and drop out “Ho” and Left Hand Chest Slap on beat 1:

Beat 1 - No Body Percussion – Silence  
Beat 2 - Right Hand Chest Slap – Hey  
Beat 3 - Clap – Hum  
Repeat.

Instruct them to still count beat 1 in their heads.

6. After everyone is comfortable with the exercise, try different tempos:

- Fast, Really Fast, Slow, Really Slow
- Gradually speeding up until no one can do it
- Gradually slowing down until you stop and are still for at least 1 minute

## **Body Percussion Variations**

1. Continue with these body percussion and syllables:

Beat 1 - Left Hand Chest Slap – Ho

Beat 2 - Right Hand Chest Slap – Hey  
Beat 3 - Clap – Hum  
Repeat.

2. Now change the body percussion to:

Beat 1 – Left Hand Chest Slap - Ho  
Beat 2 – Right Hand Finger Snap - Hey  
Beat 3 – Clap – Hum  
Repeat.

1. Now change the body percussion to:

Beat 1 – Left Hand Chest Slap - Ho  
Beat 2 – Right Hand Finger Snap - Hey  
Beat 3 – Clap – Hum  
Beat 1 – Right Hand Chest Slap - Ho  
Beat 2 – Left Hand Finger Snap - Hey  
Beat 3 – Clap – Hum  
Repeat.

2. Now change the body percussion to:

Beat 1 – Both Hand Chest Slap - Ho  
Beat 2 – Clap - Hey  
Beat 3 – Both Hands Leg Slap - Hum  
Repeat.

3. Feel free to come up with your own variations. Ask the children to come up with variations.
4. Drop out different beats on each of the exercises above. Always drop out both the body percussion and syllable.
5. After everyone is comfortable with the exercise, try different tempos:
  - Fast, Really Fast, Slow, Really Slow
  - Gradually speeding up until no one can do it
  - Gradually slowing down until you stop and are still for at least 1 minute

## **Syllable Variations**

1. Try the exercises above with different syllables. Come up with different ones (see “Syllable Chart”). You can also use children’s names, animals, fruits and vegetables.

2. Have the children come up with syllables of their own.

**Language:** \* Variations \* Beats

<b>POINTS OF INTEREST</b>	<b>DEVELOPMENTAL VALUE</b>
Watch for the responsiveness of the children and adjust the tempo accordingly. Try and find the right tempo that feels right for the most children – not too fast so that they can't do it, and not too slow so that it is hard to keep the rhythm.	The more involved the child the more they receive the benefits of the rhythm entrainment.
Watch everyone's performance closely to determine how long to do the exercise and when to move on to the next step in the exercise. Ideally, you want everyone to get the sounds and movement down. However, some children may not be able to get parts down. Once most of the children have the exercise step down, continue for a bit so they get entrained into the rhythm, get it in their body, feel confident and are not getting bored. Then move on to the next step. It takes a lot of concentration to do the exercise with everyone and watch everyone at the same time. It will become easier over time.	It is not good when a child feels left behind. It is also not good when a child is bored and loses interest.
The children may not follow very well. This is just fine. They will learn by just watching and will get it over time.	
Make all the movements very pronounced in order to help entrain the children into the movement.	The more involved the child the more they receive the benefits of the rhythm entrainment.
Provide very close eye contact to help entrain them into the exercise.	The more involved the child the more they receive the benefits of the rhythm entrainment.
Let the children get excited when you speed up the tempo. They will calm down when you	

slow down the tempo.	
The peace that is experienced at the end of the exercise when the tempo is slowed down to a peaceful ending is very important.	It is important to get the children into a peaceful state so that becomes the norm in their lives.
	Left and Right movement synchronizes the left and right brains – the ideal state for development.
When dropping beats at first you may have to point your hand in the air to help everyone keep track and count the missing beat.	

PURPOSE	RESEARCH AND ASSUMPTIONS
<p>Overall Connection</p> <p>➤ <b>Presence</b></p>	<p>Awareness in the moment of frequency, timbre, rhythm, melody, music, light, the body, feelings, emotions and thoughts makes a person healthier and ready to deal with any challenges and conflicts.</p>
<p>Overall Connection</p> <p>➤ <b>Consistency</b></p>	<p>Consistent rhythms entrain the child into peace, creating physical and emotional stability through the development of steady brainwaves, thought patterns, and focus. This stability strengthens immunity and overall health, while also generating a sense of bonding. In addition, the development of in sync timing is foundational for cognitive thought, movement, sensory response, and vital functions.</p> <p>Repetitive speak catalyzes a parasympathetic response of the nervous system and increased vagal tone by stimulating the vagus nerve.</p>



<p>Overall Connection</p> <p>➤ <b>Interpersonal Synchrony</b></p>	<p>Synchronous non-verbal communication, movements and sound trigger mirror neurons, which create the foundation for whole brain development.</p>
<p>Overall Connection</p> <p>➤ <b>Musicality</b></p>	<p>Pitch perception and the use of rhythm enhance musicality. Developing musical abilities aids in left and right brain synchronization, speech and language skills, creative expression, emotional awareness, and improving mental functions such as memory, focus, problem solving. Additionally, toning develops the ear-voice connection, which supports the natural development of musical expression.</p>
<p>Overall Connection</p> <p>➤ <b>Smooth Flow</b></p>	<p>A smooth flow of sounds and music entrain all systems in a human being into a consistent flow, which is the basis of peace and harmony. Physical, mental, and emotional flow with minimal blockages is the essence of health.</p>
<p>Physical Connection</p> <p>➤ <b>Body Awareness</b></p>	<p>Movement aids in the development of body awareness, improving gross and fine motor skills, spatial awareness, right brain functioning, balance, and muscle tone.</p>
<p>Physical Connection</p> <p>➤ <b>Vestibular Stimulation</b></p>	<p>Working with rhythm stimulates the vestibular system, which plays an important role in maintaining stable blood pressure while moving, balance, motor coordination, spatial memory, and spatial navigation.</p>
<p>Physical Connection</p> <p>➤ <b>Motor Coordination</b></p>	<p>Combining rhythm and movement stimulates the vestibular system, which plays an important role in motor coordination. Motor Coordination helps with socio-cognitive skills and cognition.</p>

	<ul style="list-style-type: none"> <li>The National Association for Music Education says “playing instruments or moving to music helps develop motor skills.”</li> </ul>
Physical Connection ➤ <b>Auditory – Motor Coordination</b>	Matching sound and movement increases auditory-motor coordination, which helps with preverbal communication, socio-cognitive skills, and cognition. It also builds strong and robust neural networks between voice and movement.
Physical Connection ➤ <b>Auditory – Visual – Motor Coordination</b>	Multisensory learning supports multisensory integration. This is refined through Call and Response where a person sees a person do a sound and/or movement and then repeats it.
Emotional Connection ➤ <b>Emotional Stability</b>	Consistent rhythms and tones entrain the brain into a coherent state that supports emotional stability. When consistent tones or harmonious melodic intervals are listened to or produced by the voice they create emotional and physical harmony. Emotional stability contributes to overall well-being, self-confidence, sense of security, emotional intelligence, and positive social behavior.
Emotional Connection ➤ <b>Empathy</b>	Nonverbal communication develops emotional intelligence and empathy, as the children learn to perceive and express emotions. Engaging with music, sound, and rhythm in a group setting gives children a healthy outlet for their expression and an opportunity to observe their classmate’s emotional expression, cultivating a greater sense of empathy. Empathy plays a key role in developing social connection, pro-social behavior, and conflict resolution skills. <ul style="list-style-type: none"> <li>The National Association for Music Education states that the study of</li> </ul>

	music develops an “understanding of different emotions.”
<p>Emotional Connection</p> <p>➤ <b>Healthy Emotional Expression</b></p>	<p>Healthy emotional expression and interaction with the world develops healthy intellectual functioning contributing to a healthier, more productive, and creative individual. Using nonverbal and gestural communication promotes growth in a child’s brain, enhancing their ability to experience and understand their environment.</p> <ul style="list-style-type: none"> <li>• The National Association for Music Education states that that music can be used “as a tool for expressing and releasing difficult and beautiful emotions.”</li> </ul>
<p>Mental Connection</p> <p>➤ <b>Brainwave Entrainment</b></p>	<p>Consistent tones and rhythms create brainwave entrainment, a process whereby the brain synchronizes to the frequency of the external stimuli. This allows the brain to entrain into certain brainwave states, such as delta, theta, alpha, and beta. These brainwave states have been proven to enhance sleep, meditation, creativity, presence, focus, learning and mental processing.</p>
<p>Mental Connection</p> <p>➤ <b>Focus and Concentration</b></p>	<p>Sufficient focus and concentration on something will fire neurons in new patterns, creating neural pathways that support cognition. Call and Response exercises activate the reticular activating system (RAS), which controls the ability to become mentally focused and alert, a necessary foundation for optimal learning.</p> <ul style="list-style-type: none"> <li>• The National Association for Music Education lists “memory and focus of the mind” as one of the key benefits of music.</li> </ul>
Mental Connection	Call and response exercises develop memory,

<p>➤ <b>Memory</b></p>	<p>which plays a critical role in learning. Ear to voice imitation activates the firing and wiring of the mirror neurons responsible for creating the neural pathways that are the beginning of new memories, supporting effortless learning.</p>
<p>Mental Connection</p> <p>➤ <b>Whole Brain Synchronization</b></p>	<p>Music, rhythm, and geometry engage both sides of your brain and help them work together, creating whole brain synchronization. This stimulates the corpus callosum, strengthening the bridge between the two brain hemispheres. Whole brain functioning improves cognition, focus, memory, creative thinking, problem solving, overall mental health, and the ability to perceive connections between seemingly contradictory concepts.</p>
<p>Mental Connection</p> <p>➤ <b>Speech and Language Skills</b></p>	<p>Rhythm exercises support future language learning, as similar to music, language has strong rhythmic patterns. The timing of syllables in language helps define one speech sound from another and it's the ability to identify these differences that helps babies learn to speak.</p>
<p>Spiritual Connection</p> <p>➤ <b>Group Synchrony</b></p>	<p>Group synchrony supports attention, social connection, pro-social behavior, and stress reduction. Call and response exercises promote group synchrony; as the children respond in unison they can learn and correct their sounds from hearing the sounds of the other children. This is a result of mirror neurons firing in response to the observed activity of another.</p>
<p>Sensory Refinement</p> <p>➤ <b>Temporal Awareness</b></p>	<p>Differentiating between short and long sounds is important for auditory processing and the optimal development of temporal awareness. The ability to differentiate short and long</p>

	sounds involves the awareness of time, which serves as an important aspect of language learning and the development of social intelligence. It also contributes to speech and language skills.
Sensory Refinement ➤ <b>Novelty</b>	The auditory system adapts in response to novel stimuli, allowing for neural plasticity, a key feature of development throughout the nervous system.

**Future Learning:** Learning stable rhythms. Language learning. Musicality. Creative music composition.

**Body Percussion - 4 Beat Cycles**  
**#T3-3**

**Track 3: Music**  
**Category: Rhythm**

**Age:** 3 - 6 years

**Group/Individual:** Group

**Materials:** Syllable Chart \* Body Percussion Chart \* Metronome (if necessary)

**Prerequisites:**

- “Body Percussion - 3 Beat Cycles”

**Guide Preparation:**

- Practice doing a steady rhythm. If necessary, use a metronome.
- Practice each of the exercises in advance until completely comfortable.

**Repetition and Duration:** 4 times, over 2 months

**Presentation:**

**Counting Numbers and Body Percussion**

1. Have everyone sit in a circle.
2. Repeat “1, 2, 3, 4” at a slow rhythm. Invite the children to join in, encouraging them to count on the beat. Continue until everyone is comfortable.

2 Syllables Only – First syllable on beat 1; Second syllable on all other beats

3. Add in body percussion. As in the previous exercises, add one body part at a time:

Beat 1 – Right Hand Chest Slap  
Beat 2 – Left Hand Finger Snap  
Beat 3 – Right Hand Finger Snap  
Beat 4 – Left Hand Finger Snap  
Repeat.

In this and the following exercises, demonstrate the pattern first and have everyone join in. Always go slow enough so everyone gets it and then speed up to a comfortable tempo.

Note: If a child can't do a finger snap and is getting frustrated, have them do a soft Leg Slap instead. Assure them it is fine to do the finger snap even if it makes no sound.

### **Counting with Syllables and Body Percussion**

1. Now instead of “1” have everyone say “Ho” on beat 1. Repeat a few times.
2. Now instead of “2” have everyone say “Hey” on beat 2. Repeat a few times.
3. Now instead of “3” have everyone say “Hey” on beat 3. Repeat a few times.
4. Now instead of “4” have everyone say “Hey” on beat 4. Repeat a few times.
5. Add the following body percussion:

Beat 1 – Right Hand Chest Slap – Ho  
Beat 2 – Left Hand Finger Snap – Hey  
Beat 3 – Right Hand Finger Snap – Hey  
Beat 4 – Left Hand Finger Snap – Hey  
Repeat.

### Repeating Syllables - Symmetrical Subdivisions

6. Continue the body percussion and change the syllables to “Ho, Hey, Ho, Hey”:

Beat 1 - Right Hand Chest Slap – Ho  
Beat 2 - Left Hand Finger Snap – Hey  
Beat 3 - Right Hand Finger Snap – Ho  
Beat 4 - Left Hand Finger Snap – Hey  
Repeat.

7. Now change the same body percussion to match the syllables like this:

Beat 1 – Right Hand Chest Slap – Ho  
Beat 2 – Clap – Hey  
Beat 3 – Left Hand Chest Slap – Ho  
Beat 4 – Clap – Hey  
Repeat.

### Number of Syllables Equals Number of Beats

8. Continue the same body percussion and change the syllables to “Ho, Ha, Hey and Hum”:

Beat 1 - Right Hand Chest Slap – Ho  
Beat 2 - Clap – Ha  
Beat 3 - Left Hand Chest Slap – Hey  
Beat 4 - Clap – Hum  
Repeat.

9. Now change the body percussion to match the syllables like this:

Beat 1 – Both Hands Chest Slap – Ho  
Beat 2 – Both Hands Leg Slap – Ha  
Beat 3 – Both Hands Finger Snap – Hey  
Beat 4 – Clap – Hum  
Repeat.

#### Hybrid – Less Syllables, Some Repeat

10. Continue with same body percussion. Change the syllables to “Ho, Ti, Hey, Ti”:

Beat 1 - Both Hands Chest Slap – Ho  
Beat 2 - Both Hands Leg Slap – Ti  
Beat 3 - Both Hands Finger Snap – Hey  
Beat 4 - Clap – Ti  
Repeat.

11. Now change the body percussion to match the syllables like this:

Beat 1 – Both Hands Chest Slap – Ho  
Beat 2 – Clap – Ti  
Beat 3 – Both Hands Leg Slap – Hey  
Beat 4 – Clap – Ti  
Repeat.

6. After everyone is comfortable with the exercise, try different tempos:

- Fast, Really Fast, Slow, Really Slow
- Gradually speeding up until no one can do it
- Gradually slowing down until you stop and are still for at least 1 minute

#### **Dropping Beats**

1. Continue with the syllables “Ho, Ti, Hey, Ti” and drop the body percussion.
2. Now drop out beat 2 (“Ha”):



Beat 1 – Ho  
Beat 2 – Silence  
Beat 3 – Hey  
Beat 4 – Ti  
Repeat.

Have them still count beat 2 in their heads.

3. Now add beat 2 (“Ha”) back in and drop out beat 3 (“Hey”).
4. Now add beat 3 (“Hey”) back in and drop out beat 4 (“Ti”).
5. Now add beat 4 (“Ti”) back in and drop out beat 1 (“Ho”).
6. Now add beat 1 (“Ho”) back in, add in the body percussion one by one:

Beat 1 – Both Hands Chest Slap - Ho  
Beat 2 – Clap - Ti  
Beat 3 – Both Hands Leg Slap - Hey  
Beat 4 – Clap - Ti  
Repeat.

7. Now drop out beat 2 (“Ti” and Clap):

Beat 1 – Both Hands Chest Slap - Ho  
Beat 2 – No Body Percussion - Silence  
Beat 3 – Both Hands Leg Slap - Hey  
Beat 4 – Clap - Ti  
Repeat.

8. Now add beat 2 (“Ti” and Claps) back in and drop out beat 3 (“Hey” and Both Hands Leg Slaps).
9. Now add beat 3 (“Hey” and Both Hands Leg Slaps) back in and drop out beat 4 (“Ti” and Clap).
10. Now add beat 4 (“Ti” and Clap) back in and drop out beat 1 (“Ho” and Both Hands Chest Slaps).
11. Now have them drop out beat 2 (“Ti” and Claps) and beat 4 (“Ti” and Clap):

Beat 1 – Both Hands Chest Slap - Ho  
Beat 2 – No Body Percussion - Silence  
Beat 3 – Both Hands Leg Slap - Hey  
Beat 4 – No Body Percussion – Silence  
Repeat.

12. Now have them add beat 2 and beat 4 back in, and drop out beat 1 (“Ho” and Both Hands Chest Slaps) and beat 3 (“Hey” and Both Hands Leg Slaps):

Beat 1 – No Body Percussion - Silence  
Beat 2 – Clap - Ti  
Beat 3 – No Body Percussion - Silence  
Beat 4 – Clap - Ti  
Repeat.

13. Now add beat 1 and beat 3 back in and drop out 2 beats. Choose whichever one you like. For example, if you drop out 1, 3, and 4 it would be:

Beat 1 – No Body Percussion - Silence  
Beat 2 – Clap - Ti  
Beat 3 – No Body Percussion - Silence  
Beat 4 – No Body Percussion - Silence  
Repeat.

14. Now drop out all four beats, then bring them back in on every other round, alternating between 4 beats of silence and 4 beats of syllables and body percussion.

15. After everyone is comfortable with the exercise, try different tempos:

- Fast, Really Fast, Slow, Really Slow
- Gradually speeding up until no one can do it
- Gradually slowing down until you stop and are still for at least 1 minute

### **Body Percussion Variations**

1. Try this body percussion:

Beat 1 – Left Hand Chest Slap – Ho  
Beat 2 – Right Hand Chest Slap – Ha  
Beat 3 – Clap – Hey  
Beat 4 – Both Hands Leg Slap – Hum  
Repeat.

2. Once everyone has it down, change the body percussion to:

Beat 1 – Left or Right Hand Chest Slap – Ho  
Beat 2 – Clap – Ha  
Beat 3 – Left or Right Hand Chest Slap – Hey  
Beat 4 – Clap – Hum  
Repeat

3. Once everyone has it down, have them switch hands on each Chest Slap:

Beat 1 – Left Hand Chest Slap – Ho  
Beat 2 – Clap – Ha  
Beat 3 – Right Hand Chest Slap – Hey  
Beat 4 – Clap – Hum  
Repeat.

4. Once everyone has it down, now change the body percussion to:

Beat 1 – Both Hands Chest Slaps – Ho  
Beat 2 – Clap – Ha  
Beat 3 – Both Hands Leg Slaps – Hey  
Beat 4 – Clap – Hum  
Repeat.

5. Come up with your own body percussion variations (see “Body Percussion Chart”).
6. Ask the children to come up with variations.
7. Drop out different beats on each of the exercises above. Always drop out both the body percussion and syllable.
8. After everyone is comfortable with the exercise, try different tempos:
  - Fast, Really Fast, Slow, Really Slow
  - Gradually speeding up until no one can do it
  - Gradually slowing down until you stop and are still for at least 1 minute

### **Syllable Variations**

1. Try the exercises above with different syllables. Come up with different ones (see “Syllable Chart”). You can also use children’s names, animals, fruits and vegetables etc.
2. Have the children come up with different syllables.

### **Language:**

<b>POINTS OF INTEREST</b>	<b>DEVELOPMENTAL VALUE</b>
Watch for the responsiveness of the children and adjust the tempo accordingly. Try and find the right tempo that feels right for the most children – not too fast so that they can’t do it, and not too slow so that it is hard to keep the	The more involved the child the more they receive the benefits of the rhythm entrainment.

rhythm.	
<p>Watch everyone's performance closely to determine how long to do the exercise and when to move on to the next step in the exercise. Ideally, you want everyone to get the sounds and movement down. However, some children may not be able to get parts down. Once most of the children have the exercise step down, continue for a bit so they get entrained into the rhythm, get it in their body, feel confident and are not getting bored. Then move on to the next step.</p> <p>It takes a lot of concentration to do the exercise with everyone and watch everyone at the same time. It will become easier over time.</p>	<p>It is not good when a child feels left behind. It is also not good when a child is bored and loses interest.</p>
<p>The children may not follow very well. This is just fine. They will learn by just watching and will get it over time.</p>	
<p>Make all the movements very pronounced in order to help entrain the children into the movement.</p>	<p>The more involved the child the more they receive the benefits of the rhythm entrainment.</p>
<p>Provide very close eye contact to help entrain them into the exercise.</p>	<p>The more involved the child the more they receive the benefits of the rhythm entrainment.</p>
<p>Let the children get excited when you speed up the tempo. They will calm down when you slow down the tempo.</p>	
<p>The peace that is experienced at the end of the exercise when the tempo is slowed down to a peaceful ending is very important.</p>	<p>It is important to get the children into a peaceful state so that becomes the norm in their lives.</p>
	<p>Left and Right movement synchronizes the left and right brains – the ideal state for development.</p>

When dropping beats at first you may have to point your hand in the air to help everyone keep track and count the missing beat.	
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PURPOSE	RESEARCH AND ASSUMPTIONS
<p>Overall Connection</p> <p>➤ <b>Presence</b></p>	<p>Awareness in the moment of frequency, timbre, rhythm, melody, music, light, the body, feelings, emotions and thoughts makes a person healthier and ready to deal with any challenges and conflicts.</p>
<p>Overall Connection</p> <p>➤ <b>Consistency</b></p>	<p>Consistent rhythms entrain the child into peace, creating physical and emotional stability through the development of steady brainwaves, thought patterns, and focus. This stability strengthens immunity and overall health, while also generating a sense of bonding. In addition, the development of in sync timing is foundational for cognitive thought, movement, sensory response, and vital functions.</p> <p>Repetitive speak catalyzes a parasympathetic response of the nervous system and increased vagal tone by stimulating the vagus nerve.</p>
<p>Overall Connection</p> <p>➤ <b>Interpersonal Synchrony</b></p>	<p>Synchronous non-verbal communication, movements and sound trigger mirror neurons, which create the foundation for whole brain development.</p>
<p>Overall Connection</p> <p>➤ <b>Musicality</b></p>	<p>Pitch perception and the use of rhythm enhance musicality. Developing musical abilities aids in left and right brain synchronization, speech and language skills, creative expression, emotional awareness, and improving mental functions such as memory,</p>

	focus, problem solving. Additionally, toning develops the ear-voice connection, which supports the natural development of musical expression.
Overall Connection ➤ <b>Smooth Flow</b>	A smooth flow of sounds and music entrain all systems in a human being into a consistent flow, which is the basis of peace and harmony. Physical, mental, and emotional flow with minimal blockages is the essence of health.
Physical Connection ➤ <b>Body Awareness</b>	Movement aids in the development of body awareness, improving gross and fine motor skills, spatial awareness, right brain functioning, balance, and muscle tone.
Physical Connection ➤ <b>Vestibular Stimulation</b>	Working with rhythm stimulates the vestibular system, which plays an important role in maintaining stable blood pressure while moving, balance, motor coordination, spatial memory, and spatial navigation.
Physical Connection ➤ <b>Motor Coordination</b>	Combining rhythm and movement stimulates the vestibular system, which plays an important role in motor coordination. Motor Coordination helps with socio-cognitive skills and cognition. <ul style="list-style-type: none"> <li>• The National Association for Music Education says “playing instruments or moving to music helps develop motor skills.”</li> </ul>
Physical Connection ➤ <b>Auditory – Motor Coordination</b>	Matching sound and movement increases auditory-motor coordination, which helps with preverbal communication, socio-cognitive skills, and cognition. It also builds strong and robust neural networks between voice and movement.
Physical Connection	Multisensory learning supports multisensory

<p>➤ <b>Auditory – Visual – Motor Coordination</b></p>	<p>integration. This is refined through Call and Response where a person sees a person do a sound and/or movement and then repeats it.</p>
<p>Emotional Connection</p> <p>➤ <b>Emotional Stability</b></p>	<p>Consistent rhythms and tones entrain the brain into a coherent state that supports emotional stability. When consistent tones or harmonious melodic intervals are listened to or produced by the voice they create emotional and physical harmony. Emotional stability contributes to overall well-being, self-confidence, sense of security, emotional intelligence, and positive social behavior.</p>
<p>Emotional Connection</p> <p>➤ <b>Empathy</b></p>	<p>Nonverbal communication develops emotional intelligence and empathy, as the children learn to perceive and express emotions. Engaging with music, sound, and rhythm in a group setting gives children a healthy outlet for their expression and an opportunity to observe their classmate's emotional expression, cultivating a greater sense of empathy. Empathy plays a key role in developing social connection, pro-social behavior, and conflict resolution skills.</p> <ul style="list-style-type: none"> <li>• The National Association for Music Education states that the study of music develops an “understanding of different emotions.”</li> </ul>
<p>Emotional Connection</p> <p>➤ <b>Healthy Emotional Expression</b></p>	<p>Healthy emotional expression and interaction with the world develops healthy intellectual functioning contributing to a healthier, more productive, and creative individual. Using nonverbal and gestural communication promotes growth in a child's brain, enhancing their ability to experience and understand their environment.</p> <ul style="list-style-type: none"> <li>• The National Association for Music Education states that that music can be</li> </ul>

	used “as a tool for expressing and releasing difficult and beautiful emotions.”
Mental Connection ➤ <b>Brainwave Entrainment</b>	Consistent tones and rhythms create brainwave entrainment, a process whereby the brain synchronizes to the frequency of the external stimuli. This allows the brain to entrain into certain brainwave states, such as delta, theta, alpha, and beta. These brainwave states have been proven to enhance sleep, meditation, creativity, presence, focus, learning and mental processing.
Mental Connection ➤ <b>Focus and Concentration</b>	Sufficient focus and concentration on something will fire neurons in new patterns, creating neural pathways that support cognition. Call and Response exercises activate the reticular activating system (RAS), which controls the ability to become mentally focused and alert, a necessary foundation for optimal learning. <ul style="list-style-type: none"> <li>• The National Association for Music Education lists “memory and focus of the mind” as one of the key benefits of music.</li> </ul>
Mental Connection ➤ <b>Memory</b>	Call and response exercises develop memory, which plays a critical role in learning. Ear to voice imitation activates the firing and wiring of the mirror neurons responsible for creating the neural pathways that are the beginning of new memories, supporting effortless learning.
Mental Connection ➤ <b>Whole Brain Synchronization</b>	Music, rhythm, and geometry engage both sides of your brain and help them work together, creating whole brain synchronization. This stimulates the corpus callosum, strengthening the bridge between the two brain hemispheres. Whole brain functioning improves cognition, focus,



	memory, creative thinking, problem solving, overall mental health, and the ability to perceive connections between seemingly contradictory concepts.
Mental Connection ➤ <b>Speech and Language Skills</b>	Rhythm exercises support future language learning, as similar to music, language has strong rhythmic patterns. The timing of syllables in language helps define one speech sound from another and it's the ability to identify these differences that helps babies learn to speak.
Spiritual Connection ➤ <b>Group Synchrony</b>	Group synchrony supports attention, social connection, pro-social behavior, and stress reduction. Call and response exercises promote group synchrony; as the children respond in unison they can learn and correct their sounds from hearing the sounds of the other children. This is a result of mirror neurons firing in response to the observed activity of another.
Sensory Refinement ➤ <b>Temporal Awareness</b>	Differentiating between short and long sounds is important for auditory processing and the optimal development of temporal awareness. The ability to differentiate short and long sounds involves the awareness of time, which serves as an important aspect of language learning and the development of social intelligence. It also contributes to speech and language skills.
Sensory Refinement ➤ <b>Novelty</b>	The auditory system adapts in response to novel stimuli, allowing for neural plasticity, a key feature of development throughout the nervous system.

**Future Learning:** Learning stable rhythms. Language learning. Musicality. Creative music composition.

## **Circle Space – Sense of Place & Sense of Self**

### **#T4-7**

### **Track 4: Geometry**

### **Category: Personal Space**

**Age:** 3-6 years

**Group/Individual:** Group / Pairs

**Materials:** Chalk

**Prerequisites:** n/a

#### **Teacher Preparation:**

- Practice the exercise

**Repetition and Duration:** 2 times, over 2 months (then once a year)

#### **Presentation:**

#### **Size of Your Space**

1. Have all the children stand approximately their own height in distance from each other. Have them swing their arms around themselves slowly to test if they are far apart enough to not touch anyone else. Move farther apart if they need to, to be in his or her own space.

#### **Creating Your Own Personal Space**

1. Have one volunteer draw a circle at arm's length. If sitting on carpeted floor, have the child mark a visible circle by pressing fingers into the carpet and making a groove. If on tile or other hard surface, they can use a piece of chalk. Tell the child that this is his or her own personal space.
2. Have the child step out of the circle then step back in and sit in the middle of the circle. Have them do this a couple times and talk about if they feel different inside and outside the circle.
3. Have the child sit in their circle have another child cross the boundaries. Ask if and how it feels different having someone in their circle.
4. Now have the child invite the same person into his or her circle. Ask how that feels different.

## Multiple Spaces

1. Have everyone sit down on floor and ask each child to mark a circle around themselves.
2. Have half of the children leave their personal circle and approach another child sitting in their personal circle. Have them ask if they can come inside the other child's circle. Let the child in their circle know they can say yes or no.
3. Switch and have the children who were in their circle now approach the other children's circle.
4. Have everyone come back into a circle and discuss if anyone has ever felt like their space has been invaded in real life. Ask if anyone has ever been bullied. Talk about how they can deal with it in the future.

### Control of Error:

**Language:** Personal Space

POINTS OF INTEREST	DEVELOPMENTAL VALUE
In the first exercise make sure everyone is far enough away from each other that no one gets hit.	
Be aware that if someone has been bullied there are some serious emotions that may arise – especially if someone has been bullied by someone else in their class. Be prepared to spend some time letting everyone express their feelings.	

PURPOSE	RESEARCH AND ASSUMPTIONS
Overall Connection  <b>Observation Skills</b>	The primary purpose of the study of geometry is to expand observation skills -- To be able to recognize patterns in seemingly chaotic things. To understand the underlying structure for creative work. To be able to find coherence and harmony in order to feel more in the body and emotions. And spiritually, to be able to connect to nature and the Universe more. "You can learn everything you need to

	know by observing nature” - Pythagoras
Overall Connection ➤ <b>Presence</b>	Working with geometry and mandalas increases personal awareness and meditative states.
Overall Connection ➤ <b>Coherence</b>	Engaging with geometry uses both sides of the brain and helps them to work together, resulting in greater coherence. Experiencing the microcosmic expressions of the Universe heals the split between the cosmos and ourselves, creating a sense of unity and wholeness.
Overall Connection ➤ <b>Interpersonal Synchrony</b>	Synchronous non-verbal communication, movements and sound trigger mirror neurons, which create the foundation for whole brain development.
Emotional Connection ➤ <b>Emotional Engagement</b>	Consistent emotional engagement supports the integration of multisensory stimuli, social connection, self-regulation, self-awareness, self-esteem, and empathy. Additionally, emotional excitement created through these engagements enhances memory and learning. Emotionally engaging with nonverbal communication (body language, facial expression, eye contact, tone, and intention) aids in right brain development.
Emotional Connection ➤ <b>Healthy Emotional Expression</b>	Healthy emotional expression and interaction with the world develops healthy intellectual functioning contributing to a healthier, more productive, and creative individual. Using nonverbal and gestural communication promotes growth in a child’s brain, enhancing their ability to experience and understand their environment.
Mental/ Emotional Connection	Emotional awareness increases their ability to resolve emotional issues and effectively

➤ <b>Emotional Awareness</b>	communicate their feelings.
Spiritual Connection  ➤ <b>Spiritual Awareness</b>	Working with geometry and mandalas increases personal awareness and meditative states. Mandalas are specific shapes used by various traditions to represent the universe, thereby creating a sense of connection with a greater whole.
Sensory Refinement  ➤ <b>Spatial Awareness</b>	<p>Working with shape, dimension, and geometric pattern improves spatial understanding and awareness. This increases the brains ability to perceive and appreciate the role of shape and dimension in any given surrounding, allowing for an advanced understanding of space.</p> <p>Experiencing the microcosmic expressions of the Universe through geometry heals the split between the cosmos and ourselves, creating a sense of unity and wholeness.</p>
Emotional Connection  <b>Empathy</b>	Nonverbal communication develops emotional intelligence and empathy, as the children learn to perceive and express emotions. Engaging in a group setting gives children a healthy outlet for their expression and an opportunity to observe their classmate's emotional expression, cultivating a greater sense of empathy. Empathy plays a key role in developing social connection, pro-social behavior, and conflict resolution skills.
Mental/ Emotional Connection  <b>Confidence and Self-esteem</b>	Emotional engagement in a safe space provides a foundation for developing confidence and self-esteem. Confidence and healthy self-esteem effect overall well-being, playing an important role in feelings of security, acquiring and mastering new skills, likelihood to succeed in the world, and forming healthy relationships.

# Natural Patterns Scavenger Hunt

## #T4-11

### Track 4: Geometry

#### Category: Patterns of Nature

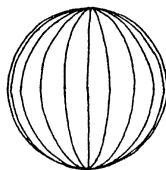
**Age:** 3-6 years

**Group/Individual:** Group / Individual

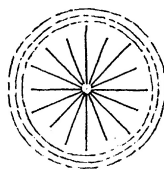
**Materials:** “Master Chart of Nature’s Patterns” \* “Patterns of Life Information” \* 10 Boxes with symbols for each pattern on them

#### List of Patterns for labeling

1. Sphere – Some Stones, Bubble
2. Radial – Spokes, Ripples – Splash, Explosion – Splash (not collectible),
3. Meander – Creek
4. Branching – Tree
5. Cluster/Close Packing – Bee Hive
6. Spiral – Snail shell
7. Helix – Slinky Toy
8. Alternation - Braiding, Hair Braid; Stepping right, left, right, left; Grapevine (plant or dance step)



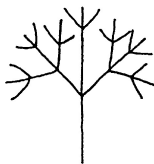
SPHERE



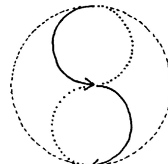
EXPLOSION-RADIAL  
RIPPLE



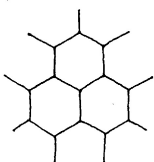
MEANDER



BRANCHING



ALTERNATION



CLOSE-PACKING



SPIRAL



HELIX

**Prerequisites:** n/a

**Teacher Preparation:**

- Familiarize yourself with the patterns
- Perhaps look online for these different patterns and see if you can find different examples of things in nature (online) that match the patterns. Just a little preparation is good.
- Make the boxes up or mark off a section of table for each pattern with colored masking tape and label with name of pattern.

**Repetition and Duration:** Once per year

**Presentation:**

**Natural Patterns Scavenger Hunt**

1. Introduce the patterns, showing three examples of each one. Show Richard Feather Anderson's "Master Chart of Nature's Patterns."
2. Go on a field trip somewhere in nature and have the children collect things from nature that fit the different patterns.
3. Make a box or a spots on a table for each pattern, using a symbol to label each one.
4. Have the children separate all the items they have collected personally into the appropriate box or spot on the table.

Note: Let them discover that some items could go into two different boxes. If the children don't realize it on their own, point out the items that could go into multiple boxes (for example, sunflower heads contains spiral, radial, and close-packing patterns)

**Control of Error:**

**Language:** Natural Patterns \* Spiral \* Radial

POINTS OF INTEREST	DEVELOPMENTAL VALUE
Tracing the patterns with your finger helps the children to see them. Have them also trace with their fingers.	

PURPOSE	RESEARCH AND ASSUMPTIONS
	The primary purpose of the study of geometry is to expand observation skills -- To be able to recognize patterns in seemingly chaotic

<p>Overall Connection</p> <p><b>Observation Skills</b></p>	<p>things. To understand the underlying structure for creative work. To be able to find coherence and harmony in order to feel more in the body and emotions. And spiritually, to be able to connect to nature and the Universe more. “You can learn everything you need to know by observing nature” - Pythagoras</p>
<p>Overall Connection</p> <p>➤ <b>Presence</b></p>	<p>Working with geometry and mandalas increases personal awareness and meditative states. Mandalas are specific shapes used by various traditions to represent the universe, thereby creating a sense of connection with a greater whole.</p>
<p>Overall Connection</p> <p>➤ <b>Coherence</b></p>	<p>Engaging with geometry uses both sides of the brain and helps them to work together, resulting in greater coherence. Experiencing the microcosmic expressions of the Universe heals the split between the cosmos and ourselves, creating a sense of unity and wholeness.</p>
<p>Overall Connection</p> <p>➤ <b>Musicality</b></p>	<p>Seeing harmony visually enhances harmony in music creation.</p>
<p>Overall Connection</p> <p>➤ <b>Connection to the Natural World</b></p>	<p>Working with shapes and geometric patterns promotes a greater appreciation of nature and the universe, as the student begins to see how these universal building blocks repeat in many places throughout nature and man-made structures. Connection with the natural world creates a greater sense of harmony and interconnectedness, allowing the student to develop a greater perspective of the whole. Experiencing reality from this expanded perspective synchronizes the brain hemispheres, which enhances creativity, problem solving, social intelligence, and emotional stability.</p> <p>Working with the natural patterns found in</p>



	nature (such as the harmonic structure of sound and the golden mean) naturally resonate these patterns of perfection into the individual – physically, mentally, emotionally and spiritually.
Overall Connection ➤ <b>Career</b>	Many different scientific and technological fields require knowledge of geometry. Especially in the more advanced and specialized study fields the use and knowledge of geometry is essential to excelling.
Mental/ Emotional Connection ➤ <b>Creativity</b>	Working with shapes and geometric patterns creates new neuronal pathways in the brain that enhance creativity. Once established, these pathways will manifest in creative thinking in other fields of work and play.
Mental Connection ➤ <b>Focus and Concentration</b>	Sufficient focus and concentration on something will fire neurons in new patterns, creating neural pathways that support cognition.
Mental Connection ➤ <b>Whole Brain Synchronization</b>	Music, rhythm, and geometry engage both sides of your brain and help them work together, creating whole brain synchronization. This stimulates the corpus callosum, strengthening the bridge between the two brain hemispheres. Whole brain functioning improves cognition, focus, memory, creative thinking, problem solving, overall mental health, and the ability to perceive connections between seemingly contradictory concepts.
Mental Connection ➤ <b>Analytical Skills</b>	Geometry assists in developing important analytical skills. Knowing how to apply and understand the relationship between shapes and sizes makes one better prepared to analyze when and how to use them in one's everyday lives. Analytical skills improve learning, decision making, and problem

	solving.
<p>Spiritual Connection</p> <p>➤ <b>Spiritual Awareness</b></p>	<p>Working with geometry and mandalas increases personal awareness and meditative states. Mandalas are specific shapes used by various traditions to represent the universe, thereby creating a sense of connection with a greater whole.</p>
<p>Sensory Refinement</p> <p>➤ <b>Spatial Awareness</b></p>	<p>Visually locating the source of a sound aids in developing spatial awareness, an essential cognitive skill that plays an important role in overall perception. Spatial awareness also plays a key role in auditory perception.</p> <p>Working with shape, dimension, and geometric pattern improves spatial understanding and awareness. This increases the brains ability to perceive and appreciate the role of shape and dimension in any given surrounding, allowing for an advanced understanding of space.</p> <p>Experiencing the microcosmic expressions of the Universe through geometry heals the split between the cosmos and ourselves, creating a sense of unity and wholeness.</p>
<p>Sensory Refinement</p> <p>➤ <b>Novelty</b></p>	<p>The auditory system adapts in response to novel stimuli, allowing for neural plasticity, a key feature of development throughout the nervous system.</p>

### Future Learning:

## Number Patterns in Nature #T4-12

### Track 4: Geometry Category: Patterns of Nature

**Age:** 3-6

**Group/Individual:** Group/Individual

**Materials:** “Master Chart of Nature’s Patterns” \* “Patterns of Life Information” \* 10 Boxes with symbols for each pattern on them

List of Items from Nature (number of parts should be obvious)

- Different number of petals on flowers
- Seed Pod (e.g., Eucalyptus seeds come in both 4 and 5 spoked)
- Leas with different number of extensions
- Twigs with multiple branches
- Cutting an apple open cross-wise

List of Patterns (in order of commonality)

- a. 1
- b. 2
- c. 4
- d. 8
- e. 3
- f. 6
- g. 12
- h. 5

**Prerequisites:** n/a

**Guide Preparation:**

- Familiarize yourself with the different numbers in patterns in nature. Perhaps do some searches on the internet.
- Make the boxes up or just have labels and put them on the table.

**Repetition and Duration:** Once per year

**Presentation:**

**Number Patterns in Nature**

1. Go on a field trip into nature and collect objects from nature with different patterns

Note: Do it on the same field trip as for the “Natural Patterns Scavenger Hunt”. You can even use a lot of the same materials for both exercises.

2. Make a box for each number or label spaces on a table with the numbers.
3. Have the students choose a nature item and count the number present in the pattern (i.e. number of leaves, branches, petals etc.) Have them put the items in the appropriate box or spot on the table. Have them say the numbers as they put them in the box.

Note: Let the children discover when an item should go into two boxes.

4. Have the students note which numbers have the most items.

### Control of Error:

#### Language: Patterns in Nature

POINTS OF INTEREST	DEVELOPMENTAL VALUE
Count the number of features one by one out loud as you point to them. Have them do the same.	

PURPOSE	RESEARCH AND ASSUMPTIONS
Overall Connection  <b>Observation Skills</b>	The primary purpose of the study of geometry is to expand observation skills -- To be able to recognize patterns in seemingly chaotic things. To understand the underlying structure for creative work. To be able to find coherence and harmony in order to feel more in the body and emotions. And spiritually, to be able to connect to nature and the Universe more. “You can learn everything you need to know by observing nature” - Pythagoras
Overall Connection  ➤ <b>Presence</b>	Working with geometry and mandalas increases personal awareness and meditative states. Mandalas are specific shapes used by various traditions to represent the universe, thereby creating a sense of connection with a greater whole.

<p>Overall Connection</p> <p>➤ <b>Coherence</b></p>	<p>Engaging with geometry uses both sides of the brain and helps them to work together, resulting in greater coherence. Experiencing the microcosmic expressions of the Universe heals the split between the cosmos and ourselves, creating a sense of unity and wholeness.</p>
<p>Overall Connection</p> <p>➤ <b>Musicality</b></p>	<p>Seeing harmony visually enhances harmony in music creation.</p>
<p>Overall Connection</p> <p>➤ <b>Connection to the Natural World</b></p>	<p>Working with shapes and geometric patterns promotes a greater appreciation of nature and the universe, as the student begins to see how these universal building blocks repeat in many places throughout nature and man-made structures. Connection with the natural world creates a greater sense of harmony and interconnectedness, allowing the student to develop a greater perspective of the whole. Experiencing reality from this expanded perspective synchronizes the brain hemispheres, which enhances creativity, problem solving, social intelligence, and emotional stability.</p> <p>Working with the natural patterns found in nature (such as the harmonic structure of sound and the golden mean) naturally resonate these patterns of perfection into the individual – physically, mentally, emotionally and spiritually.</p>
<p>Overall Connection</p> <p>➤ <b>Career</b></p>	<p>Many different scientific and technological fields require knowledge of geometry. Especially in the more advanced and specialized study fields the use and knowledge of geometry is essential to excelling.</p>
	<p>Working with shapes and geometric patterns</p>

Mental/ Emotional Connection ➤ <b>Creativity</b>	creates new neuronal pathways in the brain that enhance creativity. Once established, these pathways will manifest in creative thinking in other fields of work and play.
Mental Connection ➤ <b>Focus and Concentration</b>	Sufficient focus and concentration on something will fire neurons in new patterns, creating neural pathways that support cognition.
Mental Connection ➤ <b>Whole Brain Synchronization</b>	Music, rhythm, and geometry engage both sides of your brain and help them work together, creating whole brain synchronization. This stimulates the corpus callosum, strengthening the bridge between the two brain hemispheres. Whole brain functioning improves cognition, focus, memory, creative thinking, problem solving, overall mental health, and the ability to perceive connections between seemingly contradictory concepts.
Mental Connection ➤ <b>Analytical Skills</b>	Geometry assists in developing important analytical skills. Knowing how to apply and understand the relationship between shapes and sizes makes one better prepared to analyze when and how to use them in one's everyday lives. Analytical skills improve learning, decision making, and problem solving.
Spiritual Connection ➤ <b>Spiritual Awareness</b>	Working with geometry and mandalas increases personal awareness and meditative states. Mandalas are specific shapes used by various traditions to represent the universe, thereby creating a sense of connection with a greater whole.
Sensory Refinement ➤ <b>Spatial Awareness</b>	Visually locating the source of a sound aids in developing spatial awareness, an essential cognitive skill that plays an important role in overall perception. Spatial awareness also

	<p>plays a key role in auditory perception.</p> <p>Working with shape, dimension, and geometric pattern improves spatial understanding and awareness. This increases the brains ability to perceive and appreciate the role of shape and dimension in any given surrounding, allowing for an advanced understanding of space.</p> <p>Experiencing the microcosmic expressions of the Universe through geometry heals the split between the cosmos and ourselves, creating a sense of unity and wholeness.</p>
<p>Sensory Refinement</p> <p>➤ <b>Novelty</b></p>	<p>The auditory system adapts in response to novel stimuli, allowing for neural plasticity, a key feature of development throughout the nervous system.</p>

### Future Learning:

*Ages 3-6*

**TRACK 5**  
**EMOTIONAL EXPRESSION**



**The Voice in the Body**  
**#T5-1**

**Track 2: Instruments**  
**Category: Voice**

**Age:** 3-6 years

**Group/Individual:** Individual and Group

**Materials:** n/a

**Prerequisites:** n/a

**Guide Preparation:**

- “Guide Preparation”

**Repetition and Duration:** Before any Voice Exercise

**Presentation:**

**The Voice in the Body**

1. Voice Warmup – Make a full range of vowels, consonants and gibberish.
2. Shaking – Shake your hands, legs, hips, and whole body.
3. Yawning – Open your mouth wide and yawn.
4. Making faces – Make funny faces to stretch all of your mouth and face muscles.
5. Rolling through spine – Roll down and touch the earth (floor). Then slowly roll up and reach for the sky.
6. Breathing
  - a. Place your hands on your ribs and inhale.
  - b. Keep ribs expanded to exhale and bring belly button toward spine
  - c. With hands still on ribs, exhale with loud HA in rapid succession to wake up the singing muscle (diaphragmatic abdominal).
  - d. Turn each exhale into a sound and let it go as long as possible

**Language:** Full Range \* Vowels \* Consonants \* Gibberish \* Rapid Succession \* Diaphragm

POINTS OF INTEREST	DEVELOPMENTAL VALUE
<b>Disengagement:</b>  Note when students are unengaged. Adjust exercise accordingly.	

PURPOSE	RESEARCH AND ASSUMPTIONS
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<p>Overall Connection:</p> <ul style="list-style-type: none"> <li>• <b>Presence</b></li> </ul>	<p>The quality of being present creates focused attention on the child's sounds, movements, and reactions. This establishes a basis for attachment and bonding that will aid in the development of peace, awareness, emotional intelligence, self-confidence, and social connectedness.</p>
<ul style="list-style-type: none"> <li>• <b>Coherence</b></li> </ul>	<p>Consistent tones create steady brainwaves that entrain the child into a state of physical, mental, and emotional coherence, resulting in overall peace and harmony. This coherent state strengthens immunity and overall health, while also generating a sense of bonding. Vocalizing a consistent tone slows down the heart rate and respiration, while synchronizing brainwaves to help release tension and create a coherent state in the mind and body.</p>
<ul style="list-style-type: none"> <li>• <b>Musicality</b></li> </ul>	<p>Pitch perception and the use of rhythm enhance musicality. Developing musical abilities aids in left and right brain synchronization, speech and language skills, creative expression, emotional awareness, and improving mental functions such as memory, focus, problem solving. Additionally, toning develops the ear-voice connection, which supports the natural development of musical expression.</p>
<ul style="list-style-type: none"> <li>• <b>Creativity</b></li> </ul>	<p>Creative expression develops imagination, problem solving skills, emotional intelligence, and conflict resolution skills. Fostering creativity provides children with a lifelong tool that relieves stress, provides a healthy outlet for expression, strengthens a sense of self, and establishes a unity between the brain hemispheres. Creative expression in the voice promotes the use of a full range of possible sounds, resulting in new neural pathways that aid in future learning.</p>

	<ul style="list-style-type: none"> <li>The National Association for Music Education lists “creative expression” as one of the key benefits of studying music.</li> </ul>
➤ <b>Self-Expression</b>	<p>Self-expression is critical for a healthy, creative, and confident human being.</p> <ul style="list-style-type: none"> <li>The National Association for Music Education states that that music can be used “as a tool for expressing and releasing difficult and beautiful emotions.”</li> </ul>
<p>Physical Connection:</p> <p>➤ <b>Body Awareness</b></p>	<p>Movement aids in the development of body awareness, improving gross and fine motor skills, spatial awareness, right brain functioning, balance, and muscle tone. Shaking, yawning, making faces, and rolling the spine are effective exercises in developing body awareness.</p>
<ul style="list-style-type: none"> <li><b>Breath Awareness</b></li> </ul>	<p>Bringing awareness to the breath entrains the child into a consistent rhythm, creating steady brainwaves that enhance feelings of peace and calm. Additionally, toning develops both diaphragmatic and abdominal breathing, expanding the depth of the breath. This increases the oxygenation of the brain and body, enhancing cellular function.</p>
➤ <b>Auditory – Motor Coordination</b>	<p>Matching sound and movement increases auditory-motor coordination, which helps with preverbal communication, socio-cognitive skills, and cognition. It also builds strong and robust neural networks between voice and movement.</p>

**Future Learning:**

## Single Vowel Frequency Sweep with Movement #T5-2

### Track 5: Emotional Expression Category: Voice Expression

**Age:** 3 – 6 years

**Group/Individual:** Group

**Materials:** n/a

**Prerequisites:**

**Guide Preparation:**

- “Guidelines for Toning: How to Protect Your Voice”
- “Voice in the Body”

**Repetition and Duration:**

**Presentation:**

#### **Single Vowel Frequency Sweep with Movement**

1. Help the children form a circle so they can see each other. Ask them to listen as you make the first sound. *Uu* is a good vowel to start with.
2. Sweep the first vowel sound from a low pitch to a high pitch while sweeping the arms up. Choose a low starting pitch and a speed that is comfortable for you. Then sweep the same vowel from a high pitch to a low pitch while sweeping the arms back down.
3. Crouch down with your hands on the floor as you prompt them to crouch down with you.
4. Do each vowel sound (*Uu, Oh, Ah, Eh, Ee*) 2 times while sweeping your arms up as you go from low to high, and lowering them down as you go from high to low. Pause for a dramatic breath at the top of each sweep.
5. Before changing the vowel sound, clearly tone it and prompt the children to repeat the sound with you before beginning the sweeps up and down.

#### **Left and Right**

1. Now alternate raising your left and right arms as you sweep each of the 5 vowels 2 more times from low to high and back down to low.

#### **Different Tempos**

1. When comfortable, try the vowel sweep at different speeds.

#### **With Jump**

1. Have the children sweep the last vowel sound *Ee* up and end with a jump!

**Language:** Sweep \* Pitch

POINTS OF INTEREST	DEVELOPMENTAL VALUE
<p><b>Smooth Flow:</b></p> <p>Note the smoothness of your voice's flow. Aspire to the smoothest flow possible.</p>	<p>A smooth flow of sounds and music entrain all systems in a human being into a consistent flow, which is the basis of peace and harmony.</p>
<p><b>Tempo:</b></p> <p>Note how the tempo of how fast you sweep affects the smoothness of the flow. The ideal tempo is where you can hear each vowel individually completely clearly, while still creating a smooth flow from one vowel to the next.</p>	

PURPOSE	RESEARCH AND ASSUMPTIONS
<p>Overall Connection:</p> <ul style="list-style-type: none"> <li>• <b>Presence</b></li> </ul>	<p>The quality of being present creates focused attention on the child's sounds, movements, and reactions. This establishes a basis for attachment and bonding that will aid in the development of peace, awareness, emotional intelligence, self-confidence, and social connectedness.</p>
<ul style="list-style-type: none"> <li>• <b>Coherence</b></li> </ul>	<p>Consistent tones create steady brainwaves that entrain the child into a state of physical, mental, and emotional coherence, resulting in overall peace and harmony. This coherent state strengthens immunity and overall health, while also generating a sense of bonding. Vocalizing a consistent tone slows down the heart rate and respiration, while synchronizing brainwaves to</p>

	help release tension and create a coherent state in the mind and body.
<ul style="list-style-type: none"> <li>• <b>Interpersonal Synchrony</b></li> </ul>	Synchronous non-verbal communication, movements and sound trigger mirror neurons, which create the foundation for whole brain development.
<ul style="list-style-type: none"> <li>• <b>Smooth Flow</b></li> </ul>	A smooth flow of sounds and music entrain all systems in a human being into a consistent flow, which is the basis of peace and harmony. Physical, mental, and emotional flow with minimal blockages is the essence of health.
Physical Connection: <ul style="list-style-type: none"> <li>➤ <b>Auditory – Motor Coordination</b></li> </ul>	Matching sound and movement increases auditory-motor coordination, which helps with preverbal communication, socio-cognitive skills, and cognition. It also builds strong and robust neural networks between voice and movement.
Mental Connection: <ul style="list-style-type: none"> <li>• <b>Whole Brain Synchronization</b></li> </ul>	Music, rhythm, and geometry engage both sides of your brain and help them work together, creating whole brain synchronization. This stimulates the corpus callosum, strengthening the bridge between the two brain hemispheres. Whole brain functioning improves cognition, focus, memory, creative thinking, problem solving, overall mental health, and the ability to perceive connections between seemingly contradictory concepts.
Spiritual Connection: <ul style="list-style-type: none"> <li>• <b>Group Synchrony</b></li> </ul>	Group synchrony supports attention, social connection, pro-social behavior, and stress reduction. Call and response exercises promote group synchrony; as the children respond in unison they can learn and correct their sounds from hearing the sounds of the other children. This is a result of mirror neurons firing in

	response to the observed activity of another.
<p>Sensory Refinement:</p> <ul style="list-style-type: none"> <li>➤ <b>Auditory Awareness and Stimulation</b></li> </ul>	<p>Auditory stimulation is important for normal brain growth and connectivity.</p> <p>Non-auditory changes, such as attention, memory, and cognition, play an important role in auditory development.</p>
<ul style="list-style-type: none"> <li>• <b>Full Spectrum Auditory Stimulation</b></li> </ul>	<p>Stimulation of the auditory system with a full spectrum of frequencies, harmonics, timbres, and musical intervals develops a wide range of neural pathways. In young children, exposure to a full spectrum of auditory stimulation supports optimal development of sensory systems and whole brain growth. Every frequency is equivalent to a nutrient and necessary for the optimal functioning of the system as a whole (mind, body, emotions, and spirit). Therefore, exposure to a full spectrum of frequencies is essential to overall health and well-being.</p>

### Future Learning:

- Voice Expression
- Language Learning

## Track 5: Emotional Expression

### Category: Voice Expression

6. Now make the next sound *Oh*. Focus on making the rounded shape of “O” with the mouth and lips.



7. Continue with the vowel sounds *Ah*, *Eh*, *Ee*. To make the sound *Ah*, open the mouth and drop the jaw. Lower and flatten the tongue. The tip of the tongue will gently touch the gums just under the lower front teeth. (As when the dentist holds your tongue down with a depressor and asks you to say “Ah”). To make the *Eh* sound, open the mouth and drop the jaw as in the position for making the *Ah* sound, then close the mouth slightly. To make the *Ee* sound, open the mouth slightly.
8. Now make the long sound of *Mm*, and then *Shh*.

**Language:**

POINTS OF INTEREST	DEVELOPMENTAL VALUE
<b>Silence:</b>  Be especially aware of the peace in the silence in between vowels and at the end when you finish a vowel, or finish altogether.	The slow fade of the music to silence and the silence afterwards are important to pay attention to because this creates a state of peace.
<b>Overstimulation:</b>  Watch for signs of being overwhelmed: a vacant face, glazed eyes, or staring at a fixed object.	

PURPOSE	RESEARCH AND ASSUMPTIONS
Overall Connection: <ul style="list-style-type: none"> <li><b>Presence</b></li> </ul>	The quality of being present creates focused attention on the child’s sounds, movements, and reactions. This establishes a basis for attachment and bonding that will aid in the development of peace, awareness, emotional intelligence, self-confidence, and social connectedness.
<ul style="list-style-type: none"> <li><b>Coherence</b></li> </ul>	Consistent tones create steady brainwaves that entrain the child into a state of physical, mental, and emotional coherence, resulting in overall peace and harmony. This coherent state strengthens immunity and overall health, while also generating a sense of bonding. Vocalizing

	a consistent tone slows down the heart rate and respiration, while synchronizing brainwaves to help release tension and create a coherent state in the mind and body.
<ul style="list-style-type: none"> <li>• <b>Interpersonal Synchrony</b></li> </ul>	Synchronous non-verbal communication, movements and sound trigger mirror neurons, which create the foundation for whole brain development.
<ul style="list-style-type: none"> <li>• <b>Smooth Flow</b></li> </ul>	A smooth flow of sounds and music entrain all systems in a human being into a consistent flow, which is the basis of peace and harmony. Physical, mental, and emotional flow with minimal blockages is the essence of health.
Physical Connection: <ul style="list-style-type: none"> <li>• <b>Breath Awareness</b></li> </ul>	Bringing awareness to the breath entrains the child into a consistent rhythm, creating steady brainwaves that enhance feelings of peace and calm. Additionally, toning develops both diaphragmatic and abdominal breathing, expanding the depth of the breath. This increases the oxygenation of the brain and body, enhancing cellular function.
Emotional Connection: <ul style="list-style-type: none"> <li>➤ <b>Emotional Engagement</b></li> </ul>	Consistent emotional engagement supports the integration of multisensory stimuli, social connection, self-regulation, self-awareness, self-esteem, and empathy. Additionally, emotional excitement created through these engagements enhances memory and learning. Emotionally engaging with nonverbal communication (body language, facial expression, eye contact, tone, and intention) aids in right brain development.
<ul style="list-style-type: none"> <li>• <b>Emotional Stability</b></li> </ul>	Consistent rhythms and tones entrain the brain into a coherent state that supports emotional stability. When consistent tones or harmonious

	<p>melodic intervals are listened to or produced by the voice they create emotional and physical harmony. Emotional stability contributes to overall well-being, self-confidence, sense of security, emotional intelligence, and positive social behavior.</p>
<p>Mental/ Emotional Connection:</p> <ul style="list-style-type: none"> <li>• <b>Confidence and Self-esteem</b></li> </ul>	<p>Secure attachment supported by emotional engagement provides a foundation for developing confidence and self-esteem. Confidence and healthy self-esteem effect overall well-being, playing an important role in feelings of security, acquiring and mastering new skills, likelihood to succeed in the world, and forming healthy relationships.</p> <p>Mastery of musical instruments that are simple to play helps create more confidence.</p>
<p>Mental Connection:</p> <ul style="list-style-type: none"> <li>➤ <b>Brainwave Entrainment</b></li> </ul>	<p>Consistent tones and rhythms create brainwave entrainment, a process whereby the brain synchronizes to the frequency of the external stimuli. This allows the brain to entrain into certain brainwave states, such as delta, theta, alpha, and beta. These brainwave states have been proven to enhance sleep, meditation, creativity, presence, focus, learning, and mental processing.</p>
<ul style="list-style-type: none"> <li>• <b>Speech and Language Skills</b></li> </ul>	<p>Auditory discrimination of vowel sounds is a necessary foundation for the future development of speech and language skills. Word associations with vowel sounds further support language learning.</p> <p>Rhythm exercises support future language learning, as similar to music, language has strong rhythmic patterns. The timing of syllables in language helps define one speech sound from another and it's the ability to identify these differences that helps babies learn to speak.</p>

<p>Sensory Refinement:</p> <ul style="list-style-type: none"> <li>➤ <b>Auditory Awareness and Stimulation</b></li> </ul>	<p>Auditory stimulation is important for normal brain growth and connectivity.</p> <p>Non-auditory changes, such as attention, memory, and cognition, play an important role in auditory development.</p>
<ul style="list-style-type: none"> <li>• <b>Multisensory Integration</b></li> </ul>	<p>Multi-sensory input and output create higher brain functioning. Infants can perceive emotions as they learn to discriminate these emotions in multimodal contexts. Attention to relationships between faces, tones of voice, and emotional states develops with experience.</p>
<ul style="list-style-type: none"> <li>• <b>Novelty</b></li> </ul>	<p>The auditory system adapts in response to novel stimuli, allowing for neural plasticity, a key feature of development throughout the nervous system.</p>

### Future Learning:

- Ability to create peace in any situation by toning a vowel.
- Voice Expression
- Language Learning

**Steady Beat Vocal Rhythms**  
**#T5-9**

**Track 5: Emotional Expression**  
**Category: Voice Expression**

**Age:** 3 -6 years

**Group/Individual:** Group

**Materials:** List of Vowel/Consonant Combinations

**Prerequisites:**

- “Toning Long Vowel Sounds”

**Guide Preparation:**

- “Working with the Child Who is Sensitive to Sound”
- ”Guidelines for Toning: How to Protect Your Voice”
- “Voice in the Body”

**Repetition and Duration:** Progress variations over 8 times over 1 year

**Presentation:**

**4 Beat Vowel Rhythms**

1. Let the children know that you are going to create a vocal rhythm. Tell them to listen first and then make the same rhythm in sync with you.
2. Choose a rhythm that feels comfortable for you. To keep a steady rhythm, tap on your leg during the exercise, especially during the pauses in vocalization. You can also use a metronome.
3. Exaggerate the lip movements for each vowel sound.
4. Tone each vowel sound (*Uu, Oh, Ah, Eh, and Ee*) in a 4-beat sequence, 4 times. Between each repetition pause for 4 beats. The first of the 4 is done to demonstrate. Have the children join you for the last 3. .

*Uu Uu Uu Uu* (tap 1, 2, 3, 4) *Uu Uu Uu Uu* (tap 1, 2, 3, 4)...

*Uu Uu Uu Uu* (tap 1, 2, 3, 4) *Uu Uu Uu Uu* (tap 1, 2, 3, 4)... PAUSE

*Oh Oh Oh Oh* (tap 1, 2, 3, 4) *Oh Oh Oh Oh* (tap 1, 2, 3, 4)...

*Oh Oh Oh Oh* (tap 1, 2, 3, 4) *Oh Oh Oh Oh* (tap 1, 2, 3, 4)... PAUSE

*Ah Ah Ah Ah* (tap 1, 2, 3, 4) *Ah Ah Ah Ah* (tap 1, 2, 3, 4)...

*Ah Ah Ah Ah* (tap 1, 2, 3, 4) *Ah Ah Ah Ah* (tap 1, 2, 3, 4)... PAUSE

*Eh Eh Eh Eh* (tap 1, 2, 3, 4) *Eh Eh Eh Eh* (tap 1, 2, 3, 4)...

*Eh Eh Eh Eh* (tap 1, 2, 3, 4) *Eh Eh Eh Eh* (tap 1, 2, 3, 4)... PAUSE

*Ee Ee Ee Ee* (tap 1, 2, 3, 4) *Ee Ee Ee Ee* (tap 1, 2, 3, 4)...

*Ee Ee Ee Ee* (tap 1, 2, 3, 4) *Ee Ee Ee Ee* (tap 1, 2, 3, 4)... PAUSE

5. Note when students are off rhythm. If they are, slow down the rhythm.

### Alternating Long and Short Vowel Rhythms

1. Make the vowel sounds *Uu*, *Oh*, *Ah*, *Eh*, *Ee* alternating between long and short duration.
2. Begin with *Uuu*. Make one long sound followed by 4 short sounds repeated 2 times. Pause for a count of 4 between each of the 4 short rhythmic sounds.

*Uuuuuuuuuuuuu, Uuu Uuu Uuu Uuu (1, 2, 3, 4) Uuu Uuu Uuu Uuu (1, 2, 3, 4)*  
*Uuuuuuuuuuuuu, Uuu Uuu Uuu Uuu (1, 2, 3, 4) Uuu Uuu Uuu Uuu (1, 2, 3, 4)*

### Consonant Rhythms

1. Choose a rhythm that feels comfortable for you. If you need help keeping a steady rhythm, try tapping on your leg.
2. Create a simple rhythm by using consonants. Do each 4 beat sequence twice. Between each repetition pause for 4 beats. Keep tapping the same rhythm during the pauses between the consonant sounds. The first of the 4 is done to demonstrate. Have the children join you for the last 3 in sync.

*Ba Ba Ba Ba* (1, 2, 3, 4) *Ba Ba Ba Ba* (1, 2, 3, 4)...

*Da Da Da Da* (1, 2, 3, 4) *Da Da Da Da* (1, 2, 3, 4)...

*Ga Ga Ga Ga* (1, 2, 3, 4) *Ga Ga Ga Ga* (1, 2, 3, 4)...

*La La La La* (1, 2, 3, 4) *La La La La* (1, 2, 3, 4)...

*Ma Ma Ma Ma* (1, 2, 3, 4) *Ma Ma Ma Ma* (1, 2, 3, 4)...

*Pa Pa Pa Pa* (1, 2, 3, 4) *Pa Pa Pa Pa* (1, 2, 3, 4)...

3. Exaggerate the lip movements for each consonant sound.
4. If doing Call and response show the listening ear as you do the first rhythm so the children listen clearly to hear and understand the consonants, rhythm and pauses.

5. For Call and Response Do each 4 beat sequence twice. Pause as the children repeat.

<i>Ba Ba Ba Ba</i>	Children: <i>Ba Ba Ba Ba</i>
<i>Ba Ba Ba Ba</i>	Children: <i>Ba Ba Ba Ba</i>
<i>Da Da Da Da</i>	Children: <i>Da Da Da Da</i>
<i>Da Da Da Da</i>	Children: <i>Da Da Da Da</i>
<i>Ga Ga Ga Ga</i>	Children: <i>Ga Ga Ga Ga</i>
<i>Ga Ga Ga Ga</i>	Children: <i>Ga Ga Ga Ga</i>
<i>La La La La</i>	Children: <i>La La La La</i>
<i>Ma Ma Ma Ma</i>	Children: <i>Ma Ma Ma Ma</i>
<i>Ma Ma Ma Ma</i>	Children: <i>Ma Ma Ma Ma</i>
<i>Pa Pa Pa Pa</i>	Children: <i>Pa Pa Pa Pa</i>
<i>Pa Pa Pa Pa</i>	Children: <i>Pa Pa Pa Pa</i>

### 3-Beat Rhythms

1. Repeat the above exercise with a 3 beat rhythm.

*Ba Ba Ba (1, 2, 3) Ba Ba Ba (1, 2, 3)...*

or for Call and Response:

*Ba Ba Ba*                      Children: *Ba Ba Ba*

2. Repeat each group of consonants 2 times.

### 2 Vowels

1. Alternate between two vowels:

*Uu, Uh, Uh, Uh (1, 2, 3, 4) Ah, Ah, Ah, Ah (1, 2, 3, 4)...*

Or

*Uu, Ah, Uh, Ah (1, 2, 3, 4) Uh, Ah, Uh, Ah (1, 2, 3, 4)...*

2. Try several different vowel combinations from the “2 Vowel Chart.”

### 3 Vowels

1. Using a 3 beat rhythm, alternate between three vowels:

*Uu, Uu, Uu* (1, 2, 3) *Ah, Ah, Ah* (1, 2, 3) *Ee, Ee, Ee* (1, 2, 3)...

Or

*Uu, Ah, Ee* (1, 2, 3) *Uh, Ah, Ee* (1, 2, 3)...

2. Try several different vowel combinations from the “3 Vowel Chart.”

### Consonant and 2 Vowel Combinations

1. Using one consonant, alternate between two vowels:

*Buu, Buu, Buu, Buu* (1, 2, 3, 4) *Boh, Boh, Boh, Boh* (1, 2, 3, 4)...

Or

*Buu, Boh, Buu, Boh* (1, 2, 3, 4) *Buu, Boh, Buu, Boh* (1, 2, 3, 4)...

2. Try several different consonant/vowel combinations from the “2 Consonant/Vowel Combination Chart.”

### Consonant and 3 Vowel Combinations

1. Using a 3 beat rhythm, alternate between three vowels on one consonant:

*Buu, Buu Buu* (1, 2, 3) *Boh, Boh, Boh* (1, 2, 3) *Bah, Bah, Bah* (1, 2, 3)

Or

*Buu, Boh, Bah* (1, 2, 3) *Buu, Boh, Bah* (1, 2, 3)...

2. Try several different consonant/vowel combinations from the “3 Consonant/Vowel Combination Chart.”

### 4 Vowels

1. Alternate between four vowels:



*Uu, Uu, Uu, Uu* (1, 2, 3, 4) *Oh, Oh, Oh, Oh* (1, 2, 3, 4)...  
*Ah, Ah, Ah, Ah* (1, 2, 3, 4) *Ee, Ee, Ee, Ee* (1, 2, 3, 4)...

Or

*Uu, Oh, Ah, Ee* (1, 2, 3, 4) *Uu, Oh, Ah, Ee* (1, 2, 3, 4)...

2. Try several different vowel combinations from the “4 Vowel Chart.”

### **Consonant and 4 Vowel Combinations**

1. Using one consonant, alternate between four vowel combinations:

*Buu, Buu, Buu, Buu* (1, 2, 3, 4) *Boh, Boh, Boh, Boh* (1, 2, 3, 4)...  
*Beh, Beh, Beh, Beh* (1, 2, 3, 4) *Bee, Bee, Bee, Bee* (1, 2, 3, 4)...

Or

*Buu, Boh, Beh, Bee* (1, 2, 3, 4) *Buu, Boh, Beh, Bee* (1, 2, 3, 4)...

2. Try several different consonant/vowel combinations from the “4 Consonant/Vowel Combination Chart.”

### **Different Tempos**

1. When comfortable, try the above exercises at different tempos.
2. Try slow, medium, and fast rhythms.
3. Go progressively from really slow to really fast, until no one can keep up. Keep this fun and silly.

**Language:** 3 beat \* Call and Response

POINTS OF INTEREST	DEVELOPMENTAL VALUE
<b>Volume:</b>  Note how the volume of your toning affects the children – creating calmness or activation.	
<b>Keep a Steady Beat:</b>  If a children become agitated at all, make sure	Consistent rhythms create steady brainwaves that entrain the child into a state of physical, mental, and emotional coherence, resulting in

your rhythm is consistent. If necessary, use a metronome to learn to keep a steady beat rhythm.	overall peace and harmony.
<b>Disengagement:</b>  Note when students are unengaged. Adjust exercise accordingly. Children will engage over time.	

PURPOSE	RESEARCH AND ASSUMPTIONS
Overall Connection: <ul style="list-style-type: none"> <li><b>Presence</b></li> </ul>	The quality of being present creates focused attention on the child's sounds, movements, and reactions. This establishes a basis for attachment and bonding that will aid in the development of peace, awareness, emotional intelligence, self-confidence, and social connectedness.
<ul style="list-style-type: none"> <li><b>Coherence</b></li> </ul>	Consistent tones create steady brainwaves that entrain the child into a state of physical, mental, and emotional coherence, resulting in overall peace and harmony. This coherent state strengthens immunity and overall health, while also generating a sense of bonding. Vocalizing a consistent tone slows down the heart rate and respiration, while synchronizing brainwaves to help release tension and create a coherent state in the mind and body.
<ul style="list-style-type: none"> <li><b>Consistency</b></li> </ul>	Consistent rhythms entrain the child into peace, creating physical and emotional stability through the development of steady brainwaves, thought patterns, and focus. This stability strengthens immunity and overall health, while also generating a sense of bonding. In addition, the development of in sync timing is foundational for cognitive thought, movement, sensory response, and vital functions.

	<p>Repetitive speech catalyzes a parasympathetic response of the nervous system and increased vagal tone by stimulating the vagus nerve.</p>
<p>Emotional Connection:</p> <ul style="list-style-type: none"> <li>➤ <b>Emotional Engagement</b></li> </ul>	<p>Consistent emotional engagement supports the integration of multisensory stimuli, social connection, self-regulation, self-awareness, self-esteem, and empathy. Additionally, emotional excitement created through these engagements enhances memory and learning. Emotionally engaging with nonverbal communication (body language, facial expression, eye contact, tone, and intention) aids in right brain development.</p>
<ul style="list-style-type: none"> <li>• <b>Emotional Stability</b></li> </ul>	<p>Consistent rhythms and tones entrain the brain into a coherent state that supports emotional stability. When consistent tones or harmonious melodic intervals are listened to or produced by the voice they create emotional and physical harmony. Emotional stability contributes to overall well-being, self-confidence, sense of security, emotional intelligence, and positive social behavior.</p>
<ul style="list-style-type: none"> <li>• <b>Confidence and Self-esteem</b></li> </ul>	<p>Secure attachment supported by emotional engagement provides a foundation for developing confidence and self-esteem. Confidence and healthy self-esteem effect overall well-being, playing an important role in feelings of security, acquiring and mastering new skills, likelihood to succeed in the world, and forming healthy relationships.</p>
<p>Mental Connection:</p> <ul style="list-style-type: none"> <li>➤ <b>Brainwave Entrainment</b></li> </ul>	<p>Consistent tones and rhythms create brainwave entrainment, a process whereby the brain synchronizes to the frequency of the external stimuli. This allows the brain to entrain into certain brainwave states, such as delta, theta, alpha, and beta. These brainwave states have</p>

	<p>been proven to enhance sleep, meditation, creativity, presence, focus, learning, and mental processing.</p>
<ul style="list-style-type: none"> <li>• <b>Whole Brain Synchronization</b></li> </ul>	<p>Music, rhythm, and geometry engage both sides of your brain and help them work together, creating whole brain synchronization. This stimulates the corpus callosum, strengthening the bridge between the two brain hemispheres. Whole brain functioning improves cognition, focus, memory, creative thinking, problem solving, overall mental health, and the ability to perceive connections between seemingly contradictory concepts.</p>
<ul style="list-style-type: none"> <li>• <b>Speech and Language Skills</b></li> </ul>	<p>Auditory discrimination of vowel sounds is a necessary foundation for the future development of speech and language skills. Word associations with vowel sounds further support language learning.</p> <p>Rhythm exercises support future language learning, as similar to music, language has strong rhythmic patterns. The timing of syllables in language helps define one speech sound from another and it's the ability to identify these differences that helps babies learn to speak.</p>
<p>Sensory Refinement:</p> <ul style="list-style-type: none"> <li>➤ <b>Auditory Awareness and Stimulation</b></li> </ul>	<p>Auditory stimulation is important for normal brain growth and connectivity.</p> <p>Non-auditory changes, such as attention, memory, and cognition, play an important role in auditory development.</p>
<ul style="list-style-type: none"> <li>• <b>Temporal Awareness</b></li> </ul>	<p>Differentiating between short and long sounds is important for auditory processing and the optimal development of temporal awareness. The ability to differentiate short and long sounds involves the awareness of time, which</p>

	serves as an important aspect of language learning and the development of social intelligence. It also contributes to speech and language skills.
<ul style="list-style-type: none"> <li>• <b>Auditory-Visual Integration</b></li> </ul>	Visually locating the source of a sound in space enhances auditory-visual integration, supporting optimal sensory development important for preverbal logic and language learning.
<ul style="list-style-type: none"> <li>• <b>Multisensory Integration</b></li> </ul>	Multi-sensory input and output create higher brain functioning. Infants can perceive emotions as they learn to discriminate these emotions in multimodal contexts. Attention to relationships between faces, tones of voice, and emotional states develops with experience.
<ul style="list-style-type: none"> <li>• <b>Novelty</b></li> </ul>	The auditory system adapts in response to novel stimuli, allowing for neural plasticity, a key feature of development throughout the nervous system.

### Future Learning:

- Nonverbal and preverbal communication, language preparation
- Developing steady beat rhythms for playing more complex rhythms
- Emotional stability