



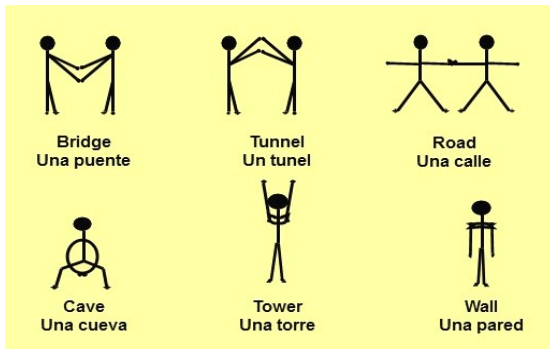
**ANGELA RUSS-AYON**  
**BODY SHAKES & BRAIN WAVES**

AbridgeClub.com  
 a Russ InVision site  
 P: 562-421-1836  
 info@abridgeclub.com  
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**WARM-UP THE BODY - TEMPO & TONE**

Play music that is upbeat with a tone of voice that is high-pitched and excited to get children energized - at a mid-tempo to move but not lose them - and play music at the resting heart rate with a low-pitched tone of voice to calm them down.

“Build a Bridge” To: “If You’re Happy & You Know It”  
 🎵 *Smart Moves 1 & Smart Moves 2* CDs



Expand on this well-known melody to build shapes, mimic an animal or form of transportation, or introduce other concepts “Spend a penny (1 finger), spend a nickel (5 fingers), spend a dime (10 fingers)!”

🎵 *Math Music & Motion* CD

**BRAIN PATHWAYS:** In early childhood, the brain undergoes rapid development and forms a complex network of pathways and connections that lay the foundation for cognitive, emotional, and sensory processing. These pathways and connections are crucial for learning, memory, and overall brain function.

- **NEURONS:** Neurons are the building blocks of the brain. In early childhood, the brain generates billions of neurons, which are specialized cells that communicate with each other through connections called synapses.
- **SYNAPSES:** Synapses are the junctions where neurons communicate. During early childhood, synapses are formed, strengthening connections that are used frequently and pruning unused connections. This synaptic plasticity is essential for learning and memory.

**WHAT IS COGNITION?** It involves the brain's ability to process information. It refers to the mental processes and activities related to thinking, understanding, and learning.

**HOW CAN WE BUILD BRAIN PATHWAYS?** Here are some of the main ways to help children build brain pathways:

- Physical and verbal interaction with caregivers
- Physical and/or verbal responses to instruction
- Nurturing
- Sensory-motor activities (indoors and outdoors)
- Music and movement
- Crossing the midlines when moving
- Tracking activities
- Clapping games
- Vestibular activities
- New and novel experiences
- Reducing stress
- Good nutrition

**COGNITIVE FUNCTION:** A variety of habits improve cognitive function, such as:

- New and novel experiences
- Making social connections
- Meditation
- Getting enough sleep
- Reducing chronic stress
- Visualizing fictional stories
- Physical Activity
- Brain Games

**WHY MUSIC?**

Music prompts greater connectivity between the brain’s **left and right hemispheres** and between the areas responsible for **emotion and memory** than almost any other stimulus.

**MOVEMENT** and **RHYTHM STIMULATE** the **FRONTAL LOBES** and enrich **LANGUAGE** and **MOTOR** development.

**CROSSING MIDLINES** is the ability to move a part of the body, such as a hand, foot, or eye into the space of the other hand, foot, or eye across imaginary lines. When we cross the mid-lines of the body, the two hemispheres of the brain communicate across the **Corpus Callosum**. Neurons and synapses are firing and attempting to connect!



- ▶ Left / Right
- ▶ Top / Bottom
- ▶ Back / Front

The more connections made in the brain, especially before the age of 7, the faster we are apt to learn and the more information we are likely to retain into adulthood.

**MEMORY AND LEARNING OCCUR WHEN THE NEURONS AND SYNAPSES IN THE BRAIN REORGANIZE AND STRENGTHEN THEMSELVES THROUGH REPEATED USAGE.**

**TRACKING:** The **left-to-right tracking ability** is necessary for the brain to be ready to read and write effectively.

**VESTIBULAR SYSTEM:** The vestibular system processes incoming sensory data. When you move your head or spin around, changing your body's orientation, the liquid in your inner ear canals move too. Research shows that activities that stimulate inner ear motion and can result in significant gains in attention and reading. Some activities that help develop the vestibular system are swinging, rocking/rocking a horse, riding a scooter board, spinning on a swivel chair, hammocks, hanging upside down, etc.

**SPATIAL SENSE:** Developing spatial sense means children improve their ability to judge distances between their bodies and objects around them and control their limbs while keeping track of their entire body's location.

**TRANSITION CHILDREN USING BRAIN BREAKS:** When moving children from the table to the carpet, or from the carpet to the door, or in from outside - or redirecting them from one activity to another, give them a simple physical activity to do as they transition. Simply standing and sitting, or clapping in different directions a number of times will work.

*"Children should not be sedentary for more than 60 minutes at a time."*

**NASPE 2002 - Nat'l Ed. for Sport and Phys. Ed.**  
[www.aahperd.org](http://www.aahperd.org)

**PROPS & EQUIPMENT:** Introduce scarves, streamers, balls, ropes/laces, instruments, or child-safe **manipulatives** into everyday activities. Props help develop ocular control skills and can bring exciting new **visual** and **physical aspects** to any music & movement activity.

**MOTOR SKILLS** help build brain motor pathways, including fine motor/manipulative skills (use of hands and feet), non-locomotor (moving in one place), and locomotor (large muscle groups moving the body to another place).

**ENHANCING DIRECTIONALITY:** Consciously using **prepositions**, **opposites**, and **directional terms** when directing children on where and how to move expands their vocabulary and helps them communicate more effectively. Abstract concepts, like opposites, are difficult to explain but become more concrete when demonstrated using motion. Positional words also assist children when they begin to develop their writing skills.

*"Belly on top. Belly below. Three has nowhere else to go."*  
♪ *Smart Songs 1 CD*

**SENSORY-MOTOR ACTIVITIES:** Sensory-motor activities stimulate different regions of the brain, providing it with valuable information about the environment, such as texture, temperature, sound, and spatial orientation.

**CLAPPING GAMES:** Age-appropriate clapping games can engage brain circuitry, boost cognition, promote pattern extension, relieve boredom, and have other wonderful benefits for ALL AGES! There are many clapping games and chants. Choreograph your own variation or make up a new game altogether.

### **"HIGH, LOW, PICCOLO"**

♪ *Clapping Games and Chants CD*  
My name is high, low, Piccolo  
Piccolo, high, low  
High, low, Piccolo  
Piccolo, "Hello!"

### **"DOUBLE, DOUBLE"**

♪ *Clapping Games and Chants CD*  
Double Double, This This  
Double Double, That That  
Double This, Double That  
Double Double, This That

**MEMORY:** We kick start the memory process by creating memorable **episodes** and **novel** experiences that children will take home, repeat, and teach to someone else. Children tend to remember more in a comfortable environment where they can control their moods, read other people, react to emotions appropriately, explain their own thoughts, and justify their actions.

### **SIMPLE WAYS TO KEEP MOVING**

- **Chalk & Rope Activities:** shapes, numbers, letters, patterns, lines and pathways
- **Moving along pathways:** straight, curved, zigzag, waves, squiggles
- **Locomotor Moves:** walk, run, jump, hop, crawl, march, gallop, climb
- **Non-locomotor Moves:** bend, stretch, lift, rise, twist, flex, shake, push
- **Cut-outs:** foam/paper/fabric shapes with colors, numbers, letters, shapes, or action words
- **Equipment:** to pass, roll, bat, bounce, toss, catch, kick
- **Line up:** using motor skills, animal acts, balance a beanbag, "1,2,3 FREEZE"
- **Interpret story content:** "Very Hungry Caterpillar" - Line up and be a caterpillar, ball up into a chrysalis, uncurl, fly like a butterfly
- **Animal Mimicry / Puppetry:** foam/paper/fabric and other materials
- **Dancing:** Free dance, dance freeze, choreograph a dance
- **Partnering games:** Clapping, circle dances, parachute play, jump rope, Follow the Leader, Simon Says, tag, etc.

**Thank you for listening,  
and welcome to the CLUB!**