

ANGELA RUSS-AYON

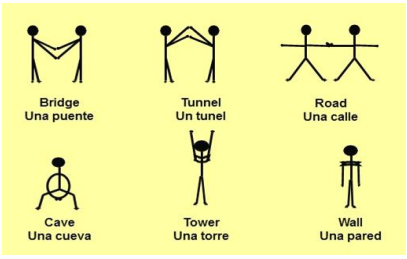
BODY SHAKES & BRAIN WAVES

AbridgeClub.com
a Russ InVision site
P: 562-421-1836
info@abridgeclub.com
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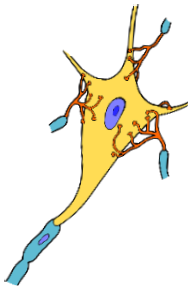
MUSIC TEMPO & TONE

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



Rewrite songs. 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.

MEMORY AND LEARNING develop as the brain forms, strengthens, and reorganizes connections between neurons. Repeated, meaningful experiences help these connections become more efficient.

Here are some meaningful experiences:

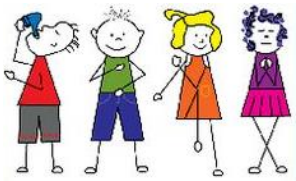
- **Relationships and interactions:** Responsive caregiver interactions, nurturing, conversation, and responding to children's cues.
- **Active learning:** Responding to instructions, practicing skills, and repeating activities with variations.
- **Movement and coordination:** Fine and gross motor activities, bilateral coordination, clapping games, and crossing the body's midline.
- **Sensory-motor experiences:** Indoor and outdoor exploration, music and movement, and appropriate vestibular activities.
- **Visual skills:** Tracking activities that encourage the eyes to follow moving objects.
- **Enriched experiences:** New and novel experiences that build on familiar skills.
- **Emotional well-being:** Supportive relationships and reducing excessive or prolonged stress

COGNITIVE FUNCTION: How your brain takes in information, thinks about it, remembers it, and uses it. 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 some of the greatest connectivity between the brain's **left** and **right hemispheres** and between the areas responsible for **attention, language, and motor coordination, supporting children's developing skills.**



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



BILATERAL COORDINATION means using both sides of your body together in a smooth way. In early childhood. Young children are still learning how to get their right and left sides to work as a team.
There are three main types:

- **Same-side movement:** both sides doing the same thing, like clapping, jumping (two feet), lifting.
- **Alternate-side movement:** sides take turns, like walking, running, pedaling a bike, crawling, skipping.
- **Different-side movement**: one side does something different than the other, like cutting with scissors while holding the paper, painting while holding the cup, transferring from one cup to the other.

TRACKING: The **left-to-right tracking ability** of the eyes to smoothly follow a moving object or person. It relies on coordination between the eyes, brain, and visual and motor systems. Tracking helps children follow moving objects, shift visual attention, and develop skills used in activities such as catching a ball, copying movements, and watching a teacher demonstrate a task.

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 stimulate inner ear motion and can result in significant gains in attention and reading, such as twisting, swinging, and rocking.

PROPRIOCEPTION: is your body's built-in sense of where it is, how it's moving—without looking how much force to use.

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.

THE 5 R'S: SUPPORTING BRAIN DEVELOPMENT THROUGH EVERYDAY EXPERIENCES

Small, intentional changes in everyday interactions and activities can create meaningful opportunities for children to learn, practice, and grow.

Relationships – Build safe, trusting connections by responding to children's needs and cues.

Repetition – Repeat meaningful activities to help children practice, strengthen, and refine skills.

Responsive Challenge – Offer manageable challenges and adjust support to help children succeed and grow.

Regulation – Support children's emotional and physical needs so they can feel safe, focus, and re-engage in learning.

Reflection – Encourage children to notice, remember, predict, explain, and try again.

TRANSITION CHILDREN USING BRAIN BREAKS:

When redirecting children from one activity or space to another, give them a simple activity to do: standing and sitting x 5, clap in different directions, move like animals, etc.

"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



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).

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

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."
♫ **"***Number Chant"* song on *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.

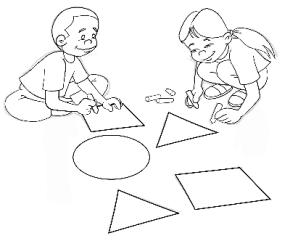
"*HIGH, LOW, PICCOLO*" Song
♫ *Clapping Games and Chants CD*
My name is high, low, Piccolo
Piccolo, high, low
High, low, Piccolo
Piccolo, "Hello!"

MEMORY: We kick start the memory process by creating memorable **episodes** and **novel** learning 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.

MAKE CONNECTIONS: When different topics, domains, and experiences are connected throughout the day, it helps children's brains organize, understand, and remember what they learn. Learning about "plants," for example, connects to counting & sorting seeds, planting seeds, caring for plants, painting flowers, and reading a story about gardens. Link topics to REAL LIFE!

Simple Ways to Keep Moving & Build Coordination:

- **Cut-outs out of foam/paper/fabric:** shapes, colors, numbers, letters, or action words. Use as targets for motor skills, manipulation, or scavenger hunts.
- **Chalk & Rope / Lace Activities:** shapes, numbers, letters, patterns, lines and pathways, create art, imaginative play. Hopscotch, jump over & other motor skills, draw an obstacle course.



- **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.
- **Equipment**
  - **Bubbles:** to blow, chase, pop, jump on
  - **Large boxes:** to climb into, crawl through, fill/empty, transfer solids, stack, decorate, imaginative play, construct & build.
  - **Balls** (beach balls, foam balls, bouncing balls)**:** to pass, roll, bat, bounce, toss, throw, catch, kick (Balloons are a choking hazard).
  - **Ribbons / scarves / party streamers:** to dance, shake, wave, toss, make fly, creative movement.
  - **Pool noodles:** to jump over, crawl through, strike with, slice and stack, construct for floating activities, etc.
  - **Hula Hoops:** to roll, crawl through, jump in and out of, create an obstacle course, use as a target.



  - **Paper plates:** as steppingstones, balance spots, targets.
  - **Beam Bags:** to stack, pass, toss & catch, toss to a target, balance on body parts, relay games.
  - **Plastic cones:** to create pathways, barriers, and direct foot traffic.
  - **Plastic or paper cups:** stacking, knocking down, filling, constructing, transferring liquids or solids.
  - **Buckets, shovels, spoons:** to scoop, dump, transfer solids or liquids.
  - **Line up**: using motor skills, animal acts, balance a beanbag on a body part, "1,2,3 FREEZE," or follow the leader.



  - **Animal mimicry / puppetry:** foam/paper/fabric and other materials.
  - **Interpret story content:** "Very Hungry Caterpillar": Line up and be a caterpillar, ball up into a chrysalis, uncurl, fly like a butterfly.

- **Musical instruments:** shakers, drums, ukeleles, scrapers (retail or homemade) for rhythmic movement and dance.
- **Dancing:** Free dance, dance freeze, choreograph a dance.



- **Partnering games:** Clapping, circle dances, parachute play, jump rope, Follow the Leader, Simon Says, tag, etc.
- **Yoga Mats / towels / stuffed animals** define space for quiet activities like stretching, breathing exercises, and mindfulness.

Between 18-months to 3-years…

- Toddlers have trouble communicating their needs and feelings.
- They are beginning to recognize their independence and control of their environment, so they frequently test rules and limits set by parents.
- Their prefrontal cortex - responsible for impulse control and emotional regulation - is still underdeveloped, resulting in rapid emotional shifts.
- They are egocentric, have trouble seeing things from another person's perspective, so don't understand concepts like sharing, patience, or compromise.
- Limited ability to adapt to sudden changes.
- Separation anxiety.



Around ages 4-5, a child's limbic system (the part of the brain that controls emotions, impulses, and social *behavior) goes through a* major growth spurt.

- Big emotions
- Impulsivity
- New fears & anxieties
- Wants independence, but not ready for it. "*I do it!"* but melts down when they can't.

TRIGGERS AND CODES: When you experience **bizarre or challenging behavior**, pay close attention and record what's happening in the environment before, during, and after the incidents. Doing so can lead to an understanding of the triggers. Children send coded messages; we just need to break the code.



- **Sensory sensitivities**
  Reactions to textures, sounds, lights, or smells.
  – Children may need help **stabilizing their senses** with **sensory breaks** so they can **fill sensory needs** either proactively (anticipated) or reactively (in the moment).

OBSERVING WHAT CHILDREN GRAVITATE TO when they repeat behaviors might give you some clues to the sensory activities that will help them calm down and regroup.

- Soft secluded seating area – a *Peace Place, Break Tent, Care Cave*
- Snuggling a pillow or stuffed animal
- Chewing crunchy food / Pacifier (biters)
- Sensory stimulation with different textures
  - Sensory bins or bottles: finger paint, clay, sand, water, shaving cream, tiny pebbles, bottle caps, fabrics, beans, rice
- Handling fidget or stress toys
- Laying under a weighted blanket
- Wearing noise cancelling headphones
- Listening to soft classical music
- Receiving a hug, holding hands, massage, back rub, or sway & rock
- Aromatherapy: lavender or chamomile
- Dimming the lights
- Looking at visual stimuli: lava lamps, bubble tubes
- Live animal interactions
- Taking a walk or relaxing outdoors

STOP AND THINK ACTIVITIES give children opportunities to practice attention, working memory, and impulse control. They are great for transitions, distracting, and helping support autonomy. Some examples are.

- Wait for the signal before starting verbal, physical, or printed signal.
- Freeze when the music stops
- Remember a two-step instruction
- Balance or carry an object using the body or a tool
- Choose between two routes or options

Thank you for listening,
and welcome to the CLUB!

UPK Universal PreKindergarten Foundations 2025 <Pg. 1 of 2>

Approaches to Learning

- **Motivation to Learn:** Curiosity, Initiative, Engagement, Perseverance
- **Executive Functioning:** Working Memory (follows instructions, understands language), Impulse Control, Flexible, Adapts, Pays Attention
- **Goal-Oriented Learning:** Problem-Solves, Collaborative Effort

Mathematics

- **Counting and Cardinality:** Counting, Recognizes Quantities, Numerals
- **Operations and Algebraic Thinking:** Adds, Subtracts, Divides (share), Patterns
- **Measurement:** Compares, Sorts/Orders, Interprets Data
- **Geometry and Spatial Thinking:** 2-D & 3-D Shapes, Positions in Space

Physical Development

- **Fundamental Movement Skills:** Balance, Gross Motor, Fine Motor, Manipulative
- **Perceptual–Motor Skills and Movement Concepts:** Body Parts, Directional, and Spatial Awareness, Object Location, Sensory Integration (process & respond)
- **Active Physical Play:** Participation, Cardiovascular Endurance, Strength, Flexible

Language & Literacy Development

- **Listening & Speaking:** Vocabulary, Grammar, Language Use, Questions Links Words to Actions.
- **Foundational Literacy Skills:** Identifies Letters, Phonological Awareness (sounds, blends, rhymes), Concepts in Print
- **Reading:** Interested in & Understands Stories
- **Writing:** Writing Motor Skills, Writing to Communicate

Social & Emotional Development

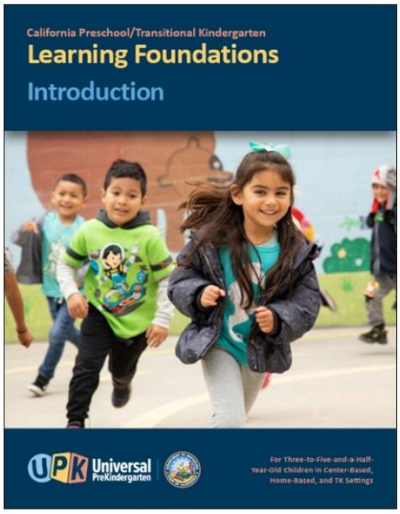
- **Self:** Confident, Understands & Regulates Emotions, Other Perspectives, Empathetic
- **Interactions and Relationships w/ Adults:** Reciprocal Interactions with Adults, Seeks Support or Comfort, Copes with Departures
- **Interactions and Relationships with Peers:** Cooperation, Conflict Resolution, Fairness & Respect, Develops Friendships

Sciences

- **Science and Engineering Practices:** Observes, Compares, Questions, Predicts, Documents
- **Physical Science:** Properties of Nonliving Things - force, motion, light, sound
- **Life Science:** Properties of Living Things - body, habitats, growth
- **Earth Science:** Earth Materials & Objects - sky, land, weather, conservation
- **Engineering, Technology, and Applications of Science:** Engineering & Design Process, Use of Digital Devices

Health

- **Understanding Health and Wellness:** Identify & Name Body Parts, Communicates Health Needs, Recognizes Boundaries (unwanted touches, biting, hitting, high 5s), Understands Role of Health Care Providers, Nutrition (identifies foods), Bodies Response to Physical Activity, Sleep
- **Health and Safety Habits:** Basic Hygiene, Handwashing, Brushing Teeth, Sun Safety, Injury Prevention (rules)



History-Social Science

- **Social Inquiry Skills:** Observes & Asks Questions, Communicates Ideas about Their World
- **Self & Social Systems:** Self-Identity, Awareness of Social Rules
- **Civic Mindedness:** Includes Peers, Contributes to Group, Collaborative Problem-Solving
- **Time, Continuity, and Change:** Understands Time, Describes Personal Changes, Recalls Past Events
- **Sense of Place and Environment:** Navigates, Identifies, Gives Directions, Draws Maps, Cares for World
- **Economic Systems:** Awareness of People at Work, Understands Exchange

Visual & Performing Arts

- **Visual Arts:** Engages, Develops Skills, Creates (mixes colors, describes creations, 2-D & 3-D), Invents, Expresses Oneself
- **Music:** Notices, Responds to, Develops Skills (singing, sounds, beat, etc.), Creates, Expresses Oneself, Vocal Expression, Explores Instruments
- **Drama:** Engages, Understands Plot, Develops Skills (shows emotion, acts out, role-play), Creates (uses props), Invents, Expresses Oneself
- **Dance:** Engages, Develops Skills (spatial awareness, coordination), Creates (uses props), Invents, Expresses Oneself

Link:
https://www.cde.ca.gov/sp/cd/re/psfoundations.asp

This is a summary or general overview of the foundations.
Please refer to the above website for details and examples.

Courtesy of: **AbridgeClub.com**

Movement Charts

Fundamental Movement Skills

Balance Skills	Locomotor Skills	Fine Motor Manipulative Skills	Object Control Manipulative Skills
Pushing / Pulling	Walk / March	Grasp / Hold	Roll
Bending / Stretching	Run / Jog	Move / Adjust	Toss
Twisting / Turning	Hop	Tear / Cut	Throw
Swinging / Swaying	Jump	Draw / Paint	Catch
Sinking / Rising	Gallop	Scribble / Write	Bounce
Small / Big	Skip	Stack / Build	Dribble
Wide / Thin	Side-slide	Lace / Thread / Weave	Kick
Standing / Kneeling	Leap	Use Utensils	Strike
Shaking	Climb	Zip / Button / Snap	Trap
<Both stationary & while moving>	Crawl		

Movement Concepts

Space	Pathways	Levels	Tempo	Direction
Personal	Straight	Low	Slow	In place
General	Curvy	Medium	Fast	Forward / Backward
	Zigzag	High	Half-speed	Left / Right
Body Parts Force & Flow of Movement (smooth/sharp)	Diagonal		Speeding up/ down	Over, under, around, beside, to the side, in front/back of, on top of, between, near, far

Skill Progression

Individual ▶ Individual w/ Manipulative ▶ Partner ▶ Group

Courtesy of AbridgeClub.com

In cooperation with Patty Kimbrell, M. Ed.