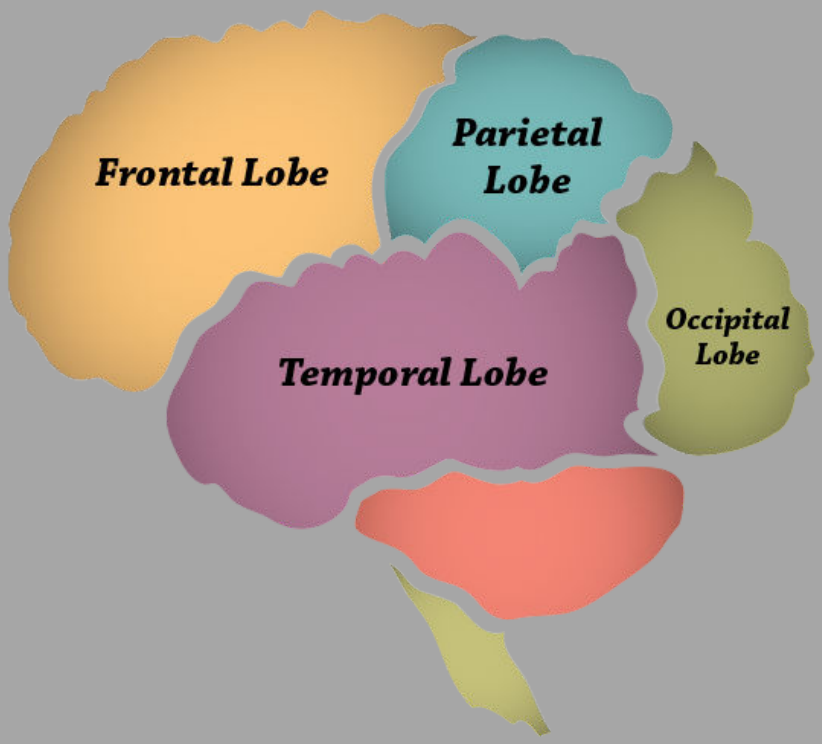


Stepping Stone School

Brain Boosters

ACTIVITY BOOK

Stepping Stone School Brain Boosters Program

A newborn's brain is about a quarter of the size of the average adult brain. Incredibly, it doubles in size in the first year and keeps growing to about 80 percent of adult size by age three and 90 percent — nearly full grown — by age five. This important fact is why Stepping Stone School bases its curriculum around brain development. Brain development builds on itself, as connections eventually link with each other in more complex ways. This enables your child to move, speak and think in more complex ways. The early years are the best opportunity for your child's brain to develop the connections they need to be healthy, capable and successful adults. The long-term, positive impact of our high-quality early education on your child's success in school and life is supported by decades of research and developmental science. There are four brain lobes that are key components supporting neural pathways for language, social-emotional, cognitive, and physical development. Stepping Stone School's curriculum is designed to provide stimulating learning experiences supporting brain development and maximizing your children's mental capacity.

To develop your child's listening skills try: rhyming practice, listening to music, playing "Freeze Dance," or paint to music!

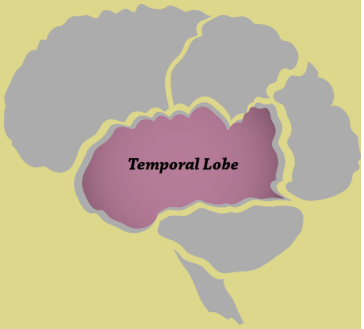
Freeze Dance

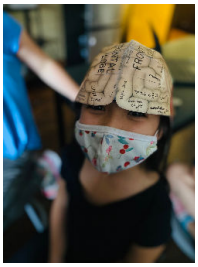
How To Play: In this activity, everyone dance as the music plays.When the music stops, each player must freeze immediately and hold that position until the music begins again. If a player does not freeze immediately, s/he does 10 jumping jacks during the start of the next round and then rejoins the dance.Since this is an aerobic game, it is better not for players to get "out."

Variations: Assign players as a look-out and have them pick out a unique dance move. When the music stops, they demonstrate the move for everyone; the group tries the new move at the start of the next round. Rather than have players do 10 jumping jacks, have them do something else- push ups, a balance challenge, act as DJ, etc.

Temporal Lobe: Manages memory, recall, auditory processing, distinguishing between sounds, receptive language skills

Temporal Lobe





To practice language with your child: Singing songs or fingerplays are great ways to practice language skills in a fun and interactive way! Other possible activities are reading books, creating rhymes, solving riddles, and chants!

Clean up Song
(sung to "Twinkle, Twinkle Little Star")

Twinkle, Twinkle little star,
time to clean up where you are.
Put the toys back in their place.
Keep a smile upon your face.
Twinkle, twinkle little star,
time to clean up where you are.

Phonological Practice with your child: identifying letter sounds, initial letter sounds, rhyming skills, animal sounds (say: moo, baa, etc.)

Activities to help your child identify sounds: Playing instruments, auditory patterns (clap/stomp patterns), Nature sounds, identifying voices, songs for activities (clean-up song)

By following directions your chld will build important brain connections try these games at home! "Mother-May I?" "Red Light, Green Light," "Simon Says," first/then activities, and simple multiple step directions will increase their Parietal Lobe.

How to play the Mother, May I Game:

1. Line up each player about a foot apart.The player who is "Mother" stands in front of the other players.
2. Mother then calls on a child by name and gives them instructions so they can move forward. For instance, "Emma, take 2 GIANT steps forward."
3. The child who is called on must then say, "Mother, may I?"
4. Mother then responds either "Yes", and the child can take the steps forward, or "No" and the child must comply
5. If a child makes a move and forgets to ask, "Mother, may I?" then must go back to the starting line.
6. If another child takes the steps out of turn, they must also go back to the starting line.The first child to reach Mother, wins!

Parietal Lobe: Processes sensory information from the body, eye-hand coordination, spatial awareness, comprehension skills, visual and speech processing

Ways to help your child with sensory processing include, sensory bin activities, five senses activities, ice cube art, exploring temperatures, taste test, sticky paper art, comparison of hard & soft, sensory playdough

Sensory Playdough

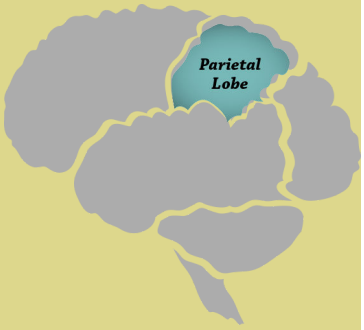
Ingredients:

- 4 cups flour
- 4 Tbsp Cream of Tartar
- 1/2 cup salt
- 1/2 cup coconut oil
- 2-3 cups of boiling water (add in at least 2 cups then up to 1 additional cup a bit at a time until the dough feels just right)
- *optional* Food Coloring Options (pre-packaged food coloring, pure cocoa, tumeric or cinnamon)*optional* Essential oils (for older children past the taste-testing stage)

Instructions

1. In a large bowl, mix together the dry ingredients.
2. On the stovetop, bring water to a boil. Add in the coconut oil.
3. Pour boiling water/ coconut mixture into the dry ingredients and mix with a heavy duty spoon. When it's too stiff to stir, let it cool a little, set it on parchment or an old cutting board, and knead until ingredients are well combined.

Parietal Lobe



Children can work on their eye-hand coordination by throwing & catching, reaching, grabbing, popping bubbles, bean bag toss, ring toss, or tracing!

Developing your child's position in space by incorporating balancing skills, practicing prepositions (over, under, in, out, etc.), or helping them to draw a picture while lying under a table.

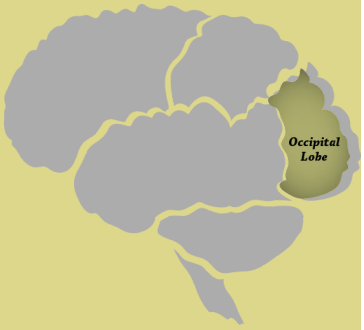
By increasing your child's visual stimulation you can improve their Occipital lobe. You can do this at home by sharing real life pictures versus illustrations, creating visual schedules, a scavenger hunt, or sharing same/different pictures

OUTDOOR SCAVENGER HUNT

- Find 3 Different Kinds of Leaves
- Find a Bug
- Find Something Yellow
- Find 2 Sticks
- Find Something that Smells Good
- Find Something in the Sky
- Find Something that Grows that is Green
- Find Something that is Round
- Find something that has Corners
- Find a Bird
- Find 3 Different Colored Rocks

Occipital Lobe: Controls vision processes including visual perception, seeing colors, shapes and movement

Occipital Lobe



Color Recognition is an important skill for children to develop, some ideas to work on this at home are: a color scavenger hunt, color association activities, color mixing, color matching, color sorting, or color sensory bins!

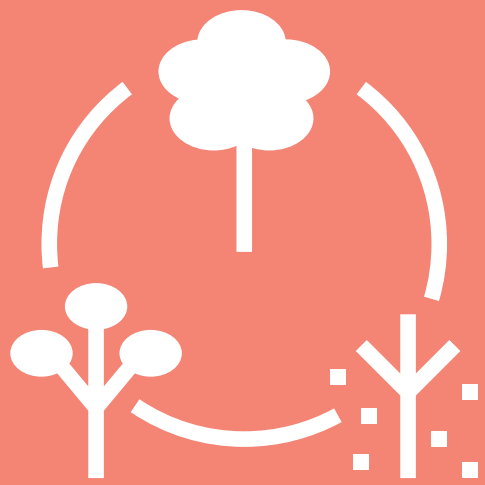
INDOOR SCAVENGER HUNT

- Find something blue
- Find Something the is Red
- Find a Tissue Box
- Find 3 Things that have Wheels
- Find an Orange Crayon
- Find Something that is Very Soft
- Find a Key
- Find a Band Aid
- Find 2 Socks that Match
- Find Something Round
- Find something green
- Find a Rubber Band
- Find a Pair of Glasses
- Find an Envelope

Shape recognition is a fundamental skill to work on with your children. Ways you can achieve this at home are: shape prints, shape cookie cutters and playdough, shape sorting, shape matching, shape puzzles, and shape tracing!

Visual memory skills can be improved by: Playing "What is Missing? "(3 objects out, remove one, then ask what is missing?), Memory Card Games, and Peek-a-boo!

Sequencing activities can improve your child's frontal lobe! Ordering objects biggest to smallest or visa versa, coding, placing objects in numerical or alphabetical order, order of events, story sequencing, life cycles, and patterning all will help develop your child's frontal lobe!



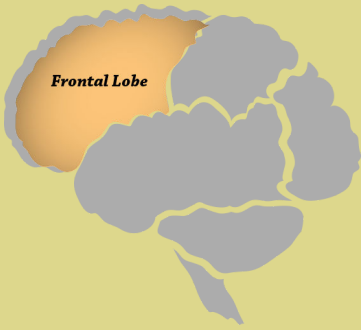
Frontal Lobe: Manages decision-making, problem solving, cognitive thinking, motor development, language development, social-emotional behaviors, impulse control

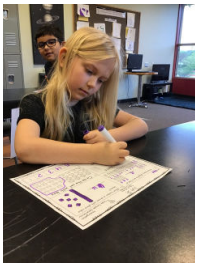
Sorting and classifying items can also develop the frontal lobe: sorting by shape, sorting by color, group by attributes, organizing information into groups, analyzing information are all great brain builders!

Open-Ended Knowledge Questions

- What happened when...?
- What happened before/after...?
- What did it look/feel/sound/taste/smell like?
- What do you remember from...?
- Describe what you know about...
- Tell me about your...
- Name all of your favorite _____.
- What did you use to make it?
- List everything you think you might find in...
- Describe to me _____ (block structure, etc.) and how you made it.

Frontal Lobe





Simple ways you can work on your child's decision making skills: Choose your favorite_____, choose what you need, choose what the character should do, and if/then scenarios!

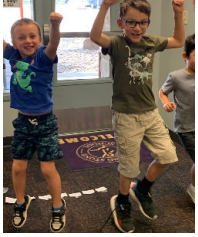
Problem solving skills are developed by: completing puzzles, nesting toys, stacking rings, open-ended questions, chess, memory games, mathematical thinking.

Children learn to interpret symbols by : understanding environmental print; recognizing or identifying shapes, letters, and numbers

"Environmental print is the print of everyday life. It's the name given to the print that appears in signs, labels, and logos. Street signs, candy wrappers, labels on peanut butter and the K in Kmart are other examples of environmental print. For many emergent readers, environmental print helps bridge the connection between letters and first efforts to read."

Vocabulary building ideas: Reading stories together, labeling objects, singing songs, and fingerplays.

Gross Motor Development: jumping, kicking, crawling, walking, climbing, hopping, skipping, obstacle courses, running



Self-regulation can be improved at home by: discussions of rules, teaching ASL signs for “stop” and “please,” teaching breathing and calming techniques, follow through, and by giving a 5-minute warning before a change in activity!

stop

please

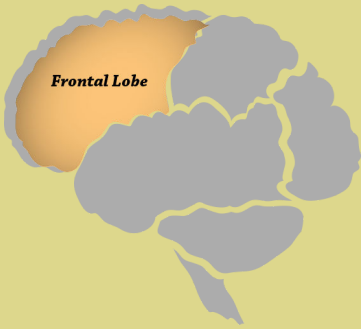
thank you

you’re welcome

more

finished

Frontal Lobe

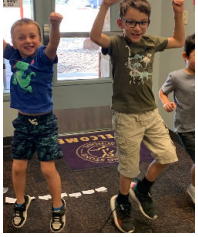


Social interactions and social emotional development can be developed by: recognition of feelings, social problem-solving, facial expressions, turn-taking, sharing, and playing peek-a-boo!

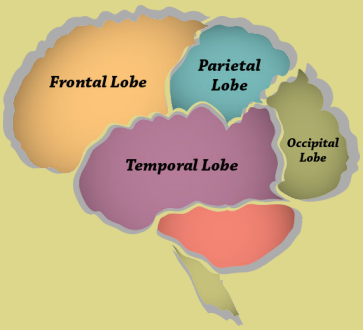
Fine motor development activities that can be done at home: playing with playdough, cutting skills, writing skills, lacing cards, stacking blocks, building with Legos, tear paper art!

Important Brain Facts

- At Birth the brain has 100 billion neurons, but only 17% are activated.
- The brain activates from the bottom up and from the back to the front.
- 80 billion of the 100 billion total cells are activated or die before a child reaches his/her 6th birthday
- The brain produces 800 neurological connections for every second it is properly stimulated..



Brain Boosters



- Each brain cell has a short and finite time frame in which it can be activated. If the individual cell does not get activated within that time frame, it dies and will never be replaced.
- Repetition is key to brain development. The more times a child hears a correct answer, the stronger the neural pathways become.
- Social and emotional neural pathways are cemented after a single occurrence while neural pathways that identify colors, shapes, letters, and numbers require hundreds of repetitions to create the link.
- Becuse newly formed synapses are cemented during sleep, enough sleep is crucial for proper brain development.