

# Brain Development—How you can help

## Frontal Lobe—Concrete Thinking (3 to 12 years)

- Sort and categorize objects.
- Encourage problem-solving.
- Help them notice patterns.
- From age 5 and up, support academic learning.

## Prefrontal Cortex—Judgment (12—22 yrs)

- Let them make lots of choices.
- Talk to your child about plans.
- Help break down big tasks into little steps.
- Let try out ideas, and learn from mistakes.

## Limbic System - Emotions (8 mos to 2 yrs)

- Show unconditional love.
- Experience joy with your child.
- Respond in consistent ways.
- Talk to your child about emotions.

Thought, memory and behaviour

Hearing, learning and emotions

## Temporal Lobe—Hearing (Birth to 6 years)

- Expose them to a wide variety of sounds. And be sure there are quiet times.
- Listen to music, let them experiment with instruments / noisemaking.
- Play games where you echo each other.

## Parietal Lobe—Language (Birth to 6 years)

- Talk, sing, and read to your child.
- Listen to your child and respond.
- Read stories or sing songs over and over.
- Follow your child’s attention and talk about what they are looking at or doing.

## Parietal Lobe—Touch (Birth to 6 years)

- Carry your child, hold hands, hug, massage
- Hand them lots of objects to hold and manipulate.
- Let them touch things that are soft, rough, slimy...
- Let them explore hands-on—pulling, pushing, picking up, dropping, turning, twisting, opening, and closing.

Language and touch

Visual processing

Balance and coordination

Breathing, heart rate and temperature

## Occipital Lobe—Vision (Birth to 2 years)

- Provide interesting things to look at.
- Play games where they follow things with their eyes. Roll balls, throw balls.
- Look at things up close.
- Play “I spy” and “where’s waldo.”
- Spend plenty of time outdoors to develop distance vision.

## Cerebellum—Balance & Coordination (Birth to 1 yr and onward)

- Move with your baby: Dance with them. Hold them in your arms as you walk, bounce them, swing them.
- Let kids move! In lots of different ways. Let them run, jump, climb, swim, throw and kick.
- Take them to the playground and spend lots of time playing in nature.

## Brain Stem—Survival Mechanisms (Developed at Birth)

- Pregnancy: reduce stress, avoid alcohol, tobacco. Maximize healthy diet, include omega-3 fats.
- After birth: Help them feel safe. If a child is scared the brain goes into survival mode (brain stem function), and the rest of the brain can’t grow and develop. When they feel safe, they can learn.

Note: Timeframes are the “sensitive period” when that part of the brain is developing *the most*. The brain grows and changes throughout life, so we benefit by all these kinds of stimulation throughout life.