

# THE FAMILY HOPE CENTER • INTEGRATIVE AND DEVELOPMENTAL PROGRESSION CHART



BRAIN LEVEL		MEDULLA OBLONGATA • 1	PONS • 2	MIDBRAIN • 3	CORTEX • 4	CORTEX • 5	CORTEX • 6	CORTEX • 7	CORTEX • 8	
DEVELOPMENTAL PERIOD		BIRTH TO 0.5 MONTHS	0.5 MONTHS TO 2 MONTHS	2 TO 8 MONTHS	8 TO 12 MONTHS	12 TO 18 MONTHS	18 TO 36 MONTHS	36 TO 72 MONTHS	CHRONOLOGICAL AGE LEVEL	
BRAIN FUNCTION	SENSORY	SEEING AND READING	<ul style="list-style-type: none"> <li>Display a fast pupil contraction reflex in both eyes</li> </ul>	<ul style="list-style-type: none"> <li>Find light in a darkened room</li> <li>See and recognize shapes</li> <li>Consistently track people and objects</li> </ul>	<ul style="list-style-type: none"> <li>See and distinguish details from three meters</li> <li>See changes in facial expression</li> <li>Bring eyes together and converge vision on an object</li> </ul>	<ul style="list-style-type: none"> <li>See in three dimensions, perceiving depth</li> <li>Begin to have far-point depth perception</li> </ul>	<ul style="list-style-type: none"> <li>Perceive pictures as abstract representations of concrete objects</li> </ul>	<ul style="list-style-type: none"> <li>Recognize and identify numerals</li> <li>Recognize and identify letters of the alphabet</li> </ul>	<ul style="list-style-type: none"> <li>Read at least 50 single words and simple phrases</li> <li>Read in content and speed as well as peers</li> <li>Demonstrate uniform hemispheric dominance</li> </ul>	
		HEARING AND UNDERSTANDING	<ul style="list-style-type: none"> <li>Display immediate Moro reflex response to a loud and sudden noise</li> <li>Display immediate, yet controlled, startle reflex response to a repeated loud and sudden noise</li> </ul>	<ul style="list-style-type: none"> <li>Respond fearfully to a loud and threatening sound, such as thunder, or to a warning cry ("STOP!")</li> </ul>	<ul style="list-style-type: none"> <li>Recognize and appreciate voice inflection</li> <li>Quickly hear sounds in environment</li> <li>Quickly locate source of sounds in environment</li> <li>Understand significance of familiar sounds</li> <li>Successfully filter sounds and stay on task</li> <li>Be at ease in a noisy environment and with all familiar sounds</li> </ul>	<ul style="list-style-type: none"> <li>Understand at least ten common words and basic couplets</li> <li>Understand simple requests</li> <li>Remember simple events and familiar people</li> <li>Understand basic time concepts, such as "wait" and "in a moment"</li> </ul>	<ul style="list-style-type: none"> <li>Understand at least 50 words, as well as phrases and simple sentences</li> <li>Follow a basic three-step request</li> <li>Understand basic time concepts, such as yesterday, today and tomorrow</li> <li>Understand basic spatial concepts, such as underneath, on top of and around</li> </ul>	<ul style="list-style-type: none"> <li>Understand complex paragraphs and stories</li> <li>Follow a common four-step request</li> <li>Understand basic concepts in organized games</li> <li>Understand simple mathematical concepts</li> <li>Can be safely left alone for short periods</li> </ul>	<ul style="list-style-type: none"> <li>Understand sophisticated life concepts and relationships as well as peers</li> <li>Demonstrate uniform hemispheric dominance</li> </ul>	
		SENSATION AND TACTILITY	<ul style="list-style-type: none"> <li>The Newborn: Displays a positive Babinski reflex response</li> <li>The Toddler: Displays a negative plantar reflex response</li> </ul>	<ul style="list-style-type: none"> <li>Feel painful / vital sensations, such as cold, hot and a pin or needle, <u>throughout</u> the body</li> <li>Feel painful / vital sensations <u>instantly</u> throughout the body</li> <li>Feel painful / vital sensations <u>fully</u>, in terms of intensity, throughout the body</li> </ul>	<ul style="list-style-type: none"> <li>Feel meaningful sensations, such as light touch, stroking, kissing, tickling, warm and cool temperatures, <u>throughout</u> the body</li> <li>Feel meaningful sensations <u>instantly</u> throughout the body</li> <li>Feel meaningful sensations <u>fully</u> throughout the body</li> </ul>	<ul style="list-style-type: none"> <li>Feel the dynamic tactile relationships in three-dimensional objects</li> </ul>	<ul style="list-style-type: none"> <li>Locate a favorite toy by feel with each hand, without looking</li> </ul>	<ul style="list-style-type: none"> <li>Feel and identify an object by its physical characteristics (hard, soft, round, flat) with each hand</li> </ul>	<ul style="list-style-type: none"> <li>Feel the difference between sophisticated and similar objects, e.g. can determine the difference between two sides of a coin, with each hand</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate uniform hemispheric dominance</li> </ul>
	MOTOR	LOCOMOTION AND MOBILITY	<ul style="list-style-type: none"> <li>Display an immediate Tonic Neck Reflex when placed in the prone position</li> <li>Independently and freely move all the limbs and joints in the body without restriction</li> </ul>	<ul style="list-style-type: none"> <li>Independently crawl on stomach across the floor one meter</li> <li>Independently crawl as a means of transportation</li> <li>Independently crawl in an unrestricted and coordinated pattern</li> </ul>	<ul style="list-style-type: none"> <li>Independently creep on hands and knees across the floor three meters</li> <li>Independently creep on hands and knees as a means of transportation</li> <li>Independently creep on hands and knees in an unrestricted and coordinated cross pattern</li> </ul>	<ul style="list-style-type: none"> <li>Independently and consistently walk three meters across the room using the arms for balance</li> </ul>	<ul style="list-style-type: none"> <li>Stand up in the middle of the floor independently and walk three meters, without using arms for balance</li> <li>Walk as a means of transportation in an unrestricted and coordinated cross pattern</li> </ul>	<ul style="list-style-type: none"> <li>Independently run ten meters nonstop</li> <li>Independently run in an unrestricted and coordinated cross pattern</li> <li>Hop in place on one foot</li> </ul>	<ul style="list-style-type: none"> <li>Independently and bilaterally hop across a room five meters nonstop</li> </ul>	<ul style="list-style-type: none"> <li>Become proficient in new physical challenges as quickly as peers</li> <li>Learn new physical skills as quickly as peers</li> <li>Demonstrate uniform hemispheric dominance</li> </ul>
		COMMUNICATION AND SPEECH	<ul style="list-style-type: none"> <li>Demonstrate an initial birth cry</li> <li>Cry to express needs, such as hunger, tiredness, pain and discomfort</li> </ul>	<ul style="list-style-type: none"> <li>Cry in response to pain and distress</li> <li>Cry loud enough to be heard and rescued</li> </ul>	<ul style="list-style-type: none"> <li>Create many different sounds to relay emotions and needs, such as happy, hungry and tired</li> <li>Create vowel and consonant sounds</li> </ul>	<ul style="list-style-type: none"> <li>Voluntarily say four meaningful words of speech that is understood by parents</li> </ul>	<ul style="list-style-type: none"> <li>Voluntarily say 20 meaningful single words</li> <li>Voluntarily say at least three meaningful couplets</li> </ul>	<ul style="list-style-type: none"> <li>Voluntarily put a meaningful, organized sentence together</li> <li>Voluntarily tell a meaningful, organized short story</li> <li>Speak as clearly as peers</li> </ul>	<ul style="list-style-type: none"> <li>Voluntarily use organized paragraphs to express ideas</li> <li>Sequentially express information, as in a short story, event or movie</li> </ul>	<ul style="list-style-type: none"> <li>Voluntarily speak and express ideas as well as peers</li> </ul>
		MANUAL AND WRITING	<ul style="list-style-type: none"> <li>Reflexively grasp an object placed in hands</li> <li>Have a strong grasp reflex in both hands</li> </ul>	<ul style="list-style-type: none"> <li>Release an object from each hand, quickly and completely, when in pain or danger</li> </ul>	<ul style="list-style-type: none"> <li>Reach out and grab an object with a prehensile grasp with each hand</li> <li>Release an object voluntarily from each hand</li> <li>Pass an object from one hand to the other</li> <li>Begin feeding using own hands</li> </ul>	<ul style="list-style-type: none"> <li>Cortically oppose thumb and finger in each hand</li> <li>Begin feeding self using a utensil</li> <li>Hold a cup and drink from it</li> </ul>	<ul style="list-style-type: none"> <li>Use both hands together, cortically opposing the thumb and finger</li> <li>Build structures using blocks</li> <li>Begin basic dressing and undressing – taking off socks / shoes</li> </ul>	<ul style="list-style-type: none"> <li>Use hands for sophisticated skills (button, zip, screw), as quickly and easily as peers</li> <li>Dress and undress using one hand in a lead role</li> <li>Pour liquid using one hand in a lead role</li> </ul>	<ul style="list-style-type: none"> <li>Draw people with distinct body parts</li> <li>Voluntarily write ten words</li> <li>Voluntarily write five couplets</li> <li>Write clearly</li> </ul>	<ul style="list-style-type: none"> <li>Write organized sentences</li> <li>Write organized paragraphs</li> <li>Write thoughts spontaneously and voluntarily as well as peers</li> <li>Write clearly</li> <li>Demonstrate uniform hemispheric dominance</li> </ul>
	SOCIAL	EMOTIONAL AND SOCIAL — LIMBIC BRAIN	<ul style="list-style-type: none"> <li>Be comforted by touch, sound or smell</li> <li>Accept and seek security</li> </ul>	<ul style="list-style-type: none"> <li>Adjust to daily routine</li> <li>Express needs with various cries</li> <li>Show interest in the environment</li> </ul>	<ul style="list-style-type: none"> <li>Show interest in and interact with parents</li> <li>Begin to seek affection</li> <li>Display curiosity and begin to explore environment, consistent with locomotion</li> <li>Recognize when a familiar object disappears</li> <li>The ability to communicate with reciprocated expressions</li> </ul>	<ul style="list-style-type: none"> <li>Enjoy playing interactive games</li> <li>Miss parents, objects when moved out of sight</li> <li>Start to imitate behavior</li> <li>Assert position; begin to test boundaries</li> <li>Experiment with a variety of objects</li> <li>Transition smoothly from one situation to another</li> </ul>	<ul style="list-style-type: none"> <li>Make good eye contact while communicating</li> <li>Express wide range of emotions appropriately</li> <li>Play alongside other children (parallel play) with adult support</li> <li>Engage in purposeful activities with parents in the same room</li> </ul>	<ul style="list-style-type: none"> <li>Recognize link between behaviors and consequences</li> <li>Share toys and play with others (supervised)</li> <li>Engage in fantasy games and role-playing to express emotion and concept formation</li> <li>Spontaneously help others</li> <li>Refer to self using "me" or "I"</li> <li>Feel and display remorse and pride</li> </ul>	<ul style="list-style-type: none"> <li>Work with others, and seek opportunities to solve problems for the family</li> <li>Engage in a team or group setting and follow rules of the group</li> <li>Modify behavior to achieve a positive outcome and/or avoid a negative outcome</li> <li>Begin to gain insight into possible causes of emotions</li> </ul>	<ul style="list-style-type: none"> <li>Consider needs and emotions of others</li> <li>Engage in group activities with peers independently</li> <li>Able to defer gratification</li> <li>Able to develop meaningful and appropriate relationships</li> <li>Self-motivated to meet own and others' needs</li> </ul>

NAME: \_\_\_\_\_ DATE OF BIRTH: \_\_\_\_\_ TODAY'S DATE: \_\_\_\_\_ CHRONOLOGICAL AGE: \_\_\_\_\_ NEUROLOGICAL AGE: \_\_\_\_\_ INITIAL CHRONOLOGICAL AGE \_\_\_\_\_ INITIAL NEUROLOGICAL AGE \_\_\_\_\_

## INTEGRATIVE AND DEVELOPMENTAL PROGRESSION CHART

### Key:

Achieved = A    Nearly Achieved = NA    Partially Achieved = PA    Not Yet Achieved = NYA

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8
Achieved	0.5	2.0	8.0	12.0	18.0	36.0	72.0	C/A
Nearly Achieved	0.1	0.2	0.8	1.2	1.8	3.6	7.2	10% Reduction
Partially Achieved	0.1	0.4	1.6	2.4	3.6	7.2	14.4	20% Reduction
Not Yet Achieved	.25	1.0	4.0	6.0	9.0	18.0	36.0	50% Reduction

**Neurological Assessment:** Neurological Age / Chronological Age

**Degree of Injury:** 01% to 20% = **profound**  
 21% to 60% = **severe**  
 61% to 85% = **moderate**  
 86% to 99% = **mild**

**Extent of Injury:** **Extensive:** six to seven functions involved  
**Relatively Extensive:** four to five functions involved  
**Relatively Centralized:** two to three functions involved  
**Centralized:** one function involved  
**Laterality:** bilateral if both hemispheres are injured,  
 unilateral if only one hemisphere is injured

## The Family Hope Center



AN INTERNATIONAL CENTER FOR  
THE DEVELOPMENT OF CHILDREN

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