

If you would identify children who are high risk for academic learning tasks, with the goal of providing early intervention, evaluate:

- **C**oordination
- **L**anguage
- **A**ttention
- **P**erception
- **S**ocial-Emotional

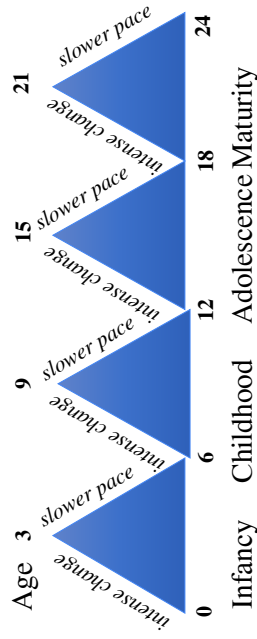
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EARLY IDENTIFICATION AND INTERVENTION FOR CHILDREN AT RISK FOR LEARNING DIFFERENCES

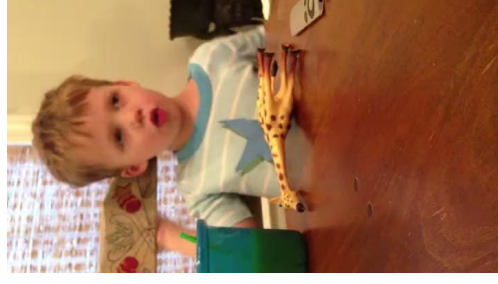


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Four Planes of Development

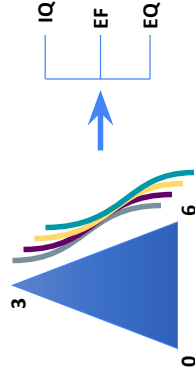


“Montessori education is geared to peaks and valleys of human formation.”
Dr. Montessori suggested we “divide education into planes and each of these should correspond to the phase the developing individual goes through”.



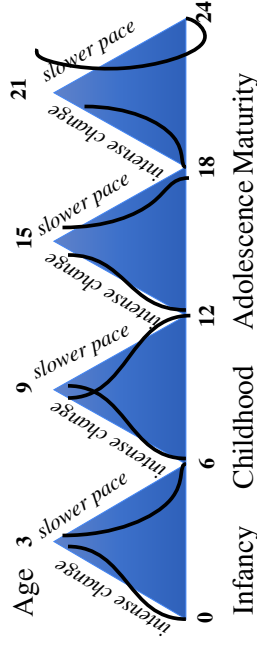
When do they know?

The First Plane 3 - 6 Years



By 3 years in the typically developing child Coordination, Language-speech, Attention and Perception have matured to equal levels of ability. Then at 3 - 6, these abilities are able to be integrated, leading to the resulting cognitive ability (IQ), executive functioning (EF), sustained attention, organization skills, ability to prioritize and also social skill competence/adaptive ability (EQ).

Four Planes of Development

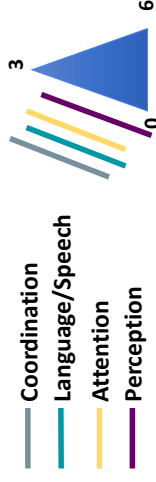


The development of the “at risk” child is uneven. Some areas are developing typically; others are not. The sensitive periods are different. Since the development in the first 6 years is different, all other periods of development are affected.

Brain Function - Processing



The First Plane 0 - 3 Years



Each area of development proceeding along a separate developmental track as coordination, language, attention and perception mature, which is the beginning of the creation of IQ, EF and EQ.

- **C**oordination
- Language
- Attention
- Perception
- Social-Emotional

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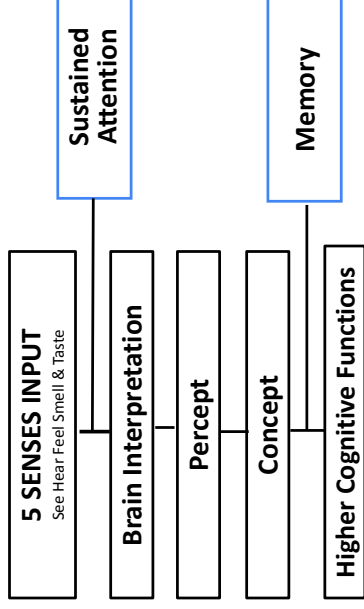
The BIG C – Typical Coordination



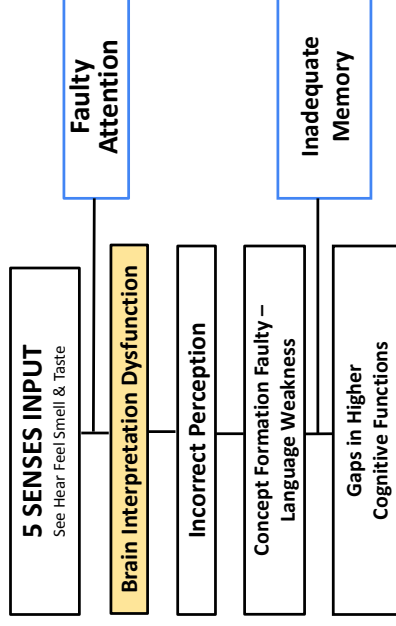
- 0 - 1st weeks - lifts head
- 3 - 4 months - turns over
- 6 months - sits up
- 9 months - crawls
- 10 - 11 months - pulls up, cruises
- 12 months - first steps

Motor Development - cephalocaudal (head to tail)
 - proximodistal (midline out)

Processing Chart – For a typical learner



Processing With Dysfunctions



Intervention - Coordination

The **fine motor skills** are enhanced through the practical life activities.

- tweezing
- pincer pickup
- rolling clay
- grasping
- pouring
- spooning



The BIG C - Atypical Coordination

- Delays in each or all milestones.
- Uncoordinated movements beyond the typical development.
- Difficulty with judgment of space.
- Difficulty with balance.
- Poor core strength.
- Uncoordinated hand grasp and movement.

Intervention - Coordination

The **gross motor skills** are enhanced through the practical life activities.

- climbing
- scrubbing
- lifting
- running



Intervention - Coordination

Perceptual motor skills are practiced

- in walking,
- tiptoeing,
- hopping
- and skipping

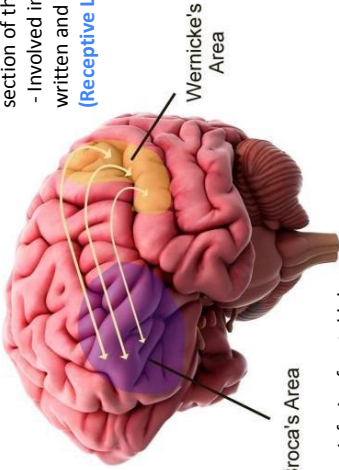
<https://www.therapist.com.au/2015/04/08/increase-of-challenges-is-on-a-line/>

- carrying an object around obstacles



The BIG L - Language Centers

- Located in the posterior section of the temporal lobe.
- Involved in understanding written and spoken language. (**Receptive Language**)



Broca's Area

- Located in the inferior frontal lobe.
- Involved in the production of speech. (**Expressive Language**)

- Coordination
- **Language**
- Attention
- Perception
- Social-Emotional

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The BIG L – Typical Language Development

Age	Stage of Development
0-3 months	crying, cooing
3-9 months	babbling
9-12 months	echolalia
12 months, 1 year	first word

Vocabulary develops from birth – 5 years

Enters 1st grade : 2,500 – 5, 000 word vocabulary

Now, child seeks to refine grammar and usage

The BIG L - Language

Oral Language

- Receptive
 - ✓ Listening
 - ✓ Processing
 - ✓ Understanding

Oral Language

- Expressive
 - ✓ Form
 - ✓ Function
 - ✓ Content

Speech

- Articulation
 - ✓ Disorder
 - ✓ Delay
- Voice
- Fluency

Intervention - Language

Expressive Skills are practiced by

Teaching the language of everyday life, the environment, the world.

Experience

Label – Attribute – Function

Category



The Development of Oral Language

Words

Phrases – Sentences

Following Directions

Associations

Synonyms

Antonyms

Definitions

Multiple Definitions

Language of Reasoning



Intervention - Language

Receptive skills are practiced by

- Use a slower rate of speech
- Speak in shorter phrases/sentences
- Pause longer between sentences
- Give directions in shorter length and use more simple language
- Use visual whenever possible
- Allow time to process: count to 10
- Use a lot of repetitions
- Use of motor to enhance memory



The BIG L- Atypical Language

- Difficulty attending to spoken language

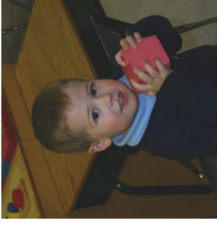
Example: Not interested listening to a story, either because of attention problems or difficulty understanding what's being said.

- Delay of syntax or word order
- Persistent articulation errors.
- The development of fluency and stuttering.
- Differences in speech pitch, unusually high or low.
- Deficient vocabulary for age.
- Word finding difficulties.
- Difficulty understanding what is said. (Receptive)
- Difficulty expressing thoughts. (Expressive)

The BIG A – Typical Attention

Children typically develop neurologically by age 3 to attend to short interesting lessons.

The maturation by this age has allowed the child to **inhibit his behavior** in order to wait a turn and to focus on the important information while being able to **“shut out”** sounds and movements that are not usually distracting.



- Coordination
- Language
- **Attention**
- Perception
- Social-Emotional

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The BIG A – Marshmallow Test

<https://www.dailymotion.com/video/xd0ccx>

The BIG A – Typical Attention

- Birth to 2 ^{1/2} to 3 years - no inhibition control.
- Attends to all incoming sensory input.
- By 3 years of age typically **selective attention** is developing.



Intervention - Attention

Mind in the Making

By: Ellen Galinsky

Practice calm, stillness, meditation

Practice games that require attention

I spy, guessing games, puzzles, red light-green light

Be direct/explicit – cut out the chatter

Immediate opportunity to act/follow through

Understand your child and their limits

don't drain their cup of attention

- Coordination
- Language
- Attention
- **Perception**
- Social-Emotional

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The BIG A – Atypical Attention

The child with ADHD may experience 3 types of attention difficulty.

- Inattention
- Hyperactivity
- A combination of inattention and hyperactivity

Children with ADHD often show difficulties with executive functions.

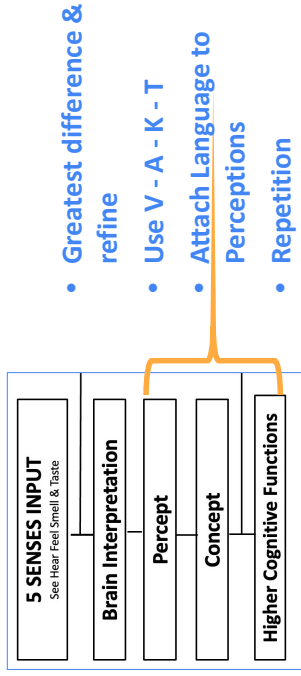
Intervention - Attention

Dr. Edward Hallowell

Treatment begins with:

- Diagnosis
- Education
- Restructuring
- Exercise
- Nutrition

Intervention - Perception

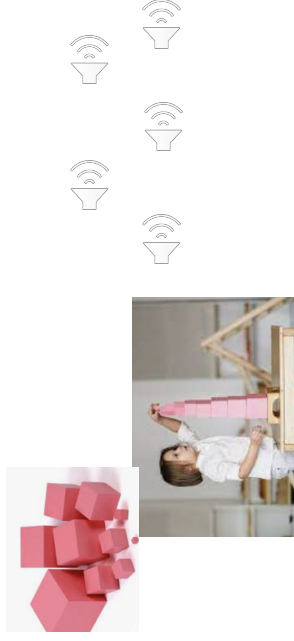


The BIG P– Typical Perception

- perceives **gross sensory input** such as light, sounds, textures, smells, tastes from their early months of life.
- In development from **birth to 3 years**, the child becomes **more able to perceive visual and auditory input** and begins to discriminate.
- From 3 - 6 years the typical child can refine discrimination from **gross to finer** and finer perceptual input. (*large-small, larger-smaller, largest-smallest; high-low in pitch*)

The BIG P– Atypical Perception

The “**just noticeable difference**” is faulty in perception



- Coordination
- Language
- Attention
- Perception
- **Social-Emotional**

Intervention – Social-Emotional

“A special technique is needed to lead towards the development of *self mastery*.”

- Structure
- Imitation
- Direct Teaching
 - Work
- Independence
- Correction is specific

The BIG S – Typical Social Emotional

Between birth and 6 years, children develop:

- Basic emotions
- Language to assist with emotional self-regulation
- Joins in play with others
- Friendships develop
- A moral compass

happiness, interest, surprise, fear, sadness



social cues, reciprocity

The BIG S – Atypical Social-Emotional

Marked delays in:

- Extreme **Intensity** of emotions
- Abnormal separation **anxiety**
 - Lacks signs of **empathy**
- Self control** is not developing
 - Poor **reciprocity**
- Struggles reading **non-verbal cues**
- Lacks language to assist in **regulation**

“The path of development **is a journey** of discovery that is clear only in retrospect, and

it's **rarely a straight line.**”



— Eileen Kennedy-Moore