* Cover slide

Compensatory Skills:

Essential Considerations for Learning

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* Brain’s Job
* Gather information
* Interpret information
* Respond to information
* Homunculus

More neurons are dedicated to certain regions

* senses
* Near Senses: Touch, Taste and Smell
* Distance Senses: Vision and Hearing
* **Why Consider Compensatory Skills?**
* To capitalize on strengths
* To support and build skills in weak areas
* Why consider, continued
* Understand how that sense develops in children.
* Assess how the child uses these senses.
* Think about strategies to support learning with these senses.
* Vision

Vision rules the brain

* How Vision Develops

Birth:

* Sees black, white and gray
* 8-12 inches

At 1 week:

* Sees red, orange, yellow and green
* 20/400
* Turns to look at light
* How Vision Develops

At 2-3 months:

* Eye contact
* Sharper acuity
* Eyes work together
* Follows object
* Shifts gaze
* How Vision Develops

At 4-6 months:

* Watching own hands
* Depth perception develops
* 20/25
* Reaching
* Recognizes things at a distance.
* How Vision Develops

At 7-10 months:

* Reaches to smaller things
* Interested in pictures
* Recognizes partially hidden things
* Coordinated vision and movement
* Better eye hand and eye foot
* Judges distances better
* How Vision Develops

At 12 months:

* Recognizes pictures
* Anticipates adult’s attention
* Nearly adult vision skills
* Visual Impairment Limits:
* Object understanding
* Relationship between objects
* Object permanence
* Cause and effect
* Spatial relationships
* Concept development
* Visual Impairment
* Communication (facial expressions, gestures, body language) Confused pronouns.
* Eye contact limits interactions
* Gross motor development
* Fine motor development
* Bonding
* Passive
* Assessing Vision

Ophthalmologist/ Low vision clinic

Certified Teacher of Students with Visual Impairments

* Functional vision assessment
* Cortical visual assessment
* Learning Media Assessment
* Interpret eye reports
* Improving Visual Experiences

For children with visual impairments:

* Early diagnosis of visual problems
* Early correction
* Early intervention
* Improving Visual Experiences
* Improved lighting
* Reduced glare
* Best distance and placement
* Higher contrast
* Larger sizes
* Real objects in natural routines
* Time for visual exploration
* Strategies: Vision: Cortical
* Highlighting color
* Movement
* Familiar
* Best distance
* Low complexity (visual, auditory, positional)
* Backlighted
* Control light
* Increased time to look, recognize and reach
* Questions?
* How Hearing Develops
* Neural pathways for hearing develop early in utero.
* Babies have been listening for about 12 weeks when they are born.
* How Hearing Develops

Hearing improves over time with full skills at adolescence.

* Frequency sensitivity: high frequencies are better until the second year.
* Sound localization: horizontal sounds are understood better, not good locating vertical sounds until 6 months old. This improves until the child is 7 years old.
* How Hearing Develops

Hearing Skills:

* Threshold: Babies are hard of hearing until about 6 months and improve gradually until puberty.
* Temporal resolution; babies need more time between sounds for understanding.
* Discriminating sound from background: poor in infancy and young childhood.
* Hearing
* A child who is sighted hears the world, turns and visually connects the sound with its sound source.
* A child who is visually impaired hears the sounds but often lacks the understanding of the sound’s direction or source.
* Hearing and Music
* Young children love music.
* The brain favors music.
* Music skills are in both hemispheres of the brain.
* Assessing Hearing
* Get hearing tested.
* Assess reaction to language and speech.
* Do they alert to familiar voices or music?
* Assess reactions to environmental sounds.
* Assessing Hearing
* What types of sound cause a reaction?
* Are there sound preferences?
* Is reaction better in quieter environments?
* Is the sound direction important?
* How long does the sound need to last before you see the reaction?
* Strategies: Hearing
* Bring the sound to them.
* Bring them to the sound.
* Allow them to create sounds and music.
* Use music and predictable books.
* Strategies: Hearing
* Speak to a child at eye level.
* Slow down your speech with more space between words and directions.
* Label sounds.
* Teach in a quieter environment.
* Address the child by name before the message.
* Identify yourself.
* Questions?
* Hearing

Fire truck!

* How Smell Develops
* Well developed in utero and immediately useful at birth
* Hardwired to the amygdala: (brain for emotions and memory).
* Learning tied to the amygdala lasts much longer.
* Smell and memory
* You can store some 10,000 different smells in your "scent memory."
* Certain smells will invoke specific memories in people.

 Remember…

* Smell and memory
* Primary learning channel linked to memory between birth and age 15.
* Connections: Smell and Taste
* These senses are highly connected.
* Interactions

Smell and taste:

* Tongue only detects sweetness, sour, bitter and saltiness.
* The nose can detect a large number of subtle variations.
* Taste
* Well developed at birth.
* Taste input causes salivation, tongue movements and swallowing.
* Important for emotional development; fats and sweets calm, improve attention and help babies sleep.
* How the Sense of Taste Develops
* The child has been tasting amniotic fluid.
* They prefer sweet tastes.
* Up to 20 exposures before accepting newer.
* Assessing the Sense of Smell/Taste
* Does child have a favorite food?
* Does the child turn away from a filled spoon?
* Do you see the child sniff objects and foods?

TRY THIS AT HOME:

JELLY BELLY BEAN

* Strategies: Using Smell/Taste
* Food Avoidance
* Children with visual impairments are often picky eaters.
* They dislike new foods.
* Textures are difficult.
* Questions?
* How Sense of Touch Develops
* Pushing, pulling and touching in utero (full term babies).
* Not well developed at birth.
* Understanding and discrimination builds with experience.
* How Sense of Touch Develops
* Passive: being touched until 4 months
* Reaching to the environment begins: active touch exploration
* At eight months, can identify a familiar object without seeing it
* Touch

Touch is really four abilities with four different pathways:

* Skin sensation (I’m touching. I’m being touched.)
* Temperature
* Pain
* Proprioception (sense of movement and position)
* Assessing Touch
* Moves to pain
* Moves the part of the body touched
* Moves to the touch cue
* Shows distinct materials they like and dislike
* Fully explores textures with mouth
* Fully explores objects with hands
* Assessing Touch
* Reaction to light pressure/deep pressure
* Reactions to different temperatures
* Reaction to movement
* Reaction to the sensitive touch areas: palm, on the fingers, or around the mouth
* Strategies: Using Touch

Active Learning

* Increase access to materials at all times
* Littleroom, sensory vests, attribute trays
* Touch
* Allow mouthing
* Hand under hand exploration
* Increased exploration time.
* Touch cues
* Allow full touch without hand splints
* Questions?
* Sensory Channels
* Give the child materials.
* What do they do?
* What self body play?
* Bringing it together

 Using senses is important but they must be used together, built into meaningful constructs for true understanding and meaning.

Compensatory Skills:

Essential Considerations

The End

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