



Inclusive Play

The basics of accessibility, inclusion, sensory integration, and intergenerational play

About The Presenter

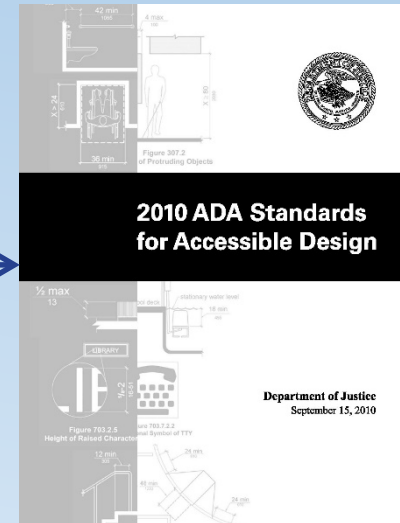
- Started career at the Center for Persons with Disabilities
- Speaks nationally about the subject
- Published regionally and nationally on the subject
- Is involved locally as a grass roots advocate for inclusive play
- Has designed award winning inclusive projects
- Is a Certified Playground Safety Inspector



Accessible Codes Requirements for Play Areas











































2010 ADA Guidelines for Accessible Design – Chapter 10

2016 California Building Code – Part 2 – Volume 1, Chapter 11B



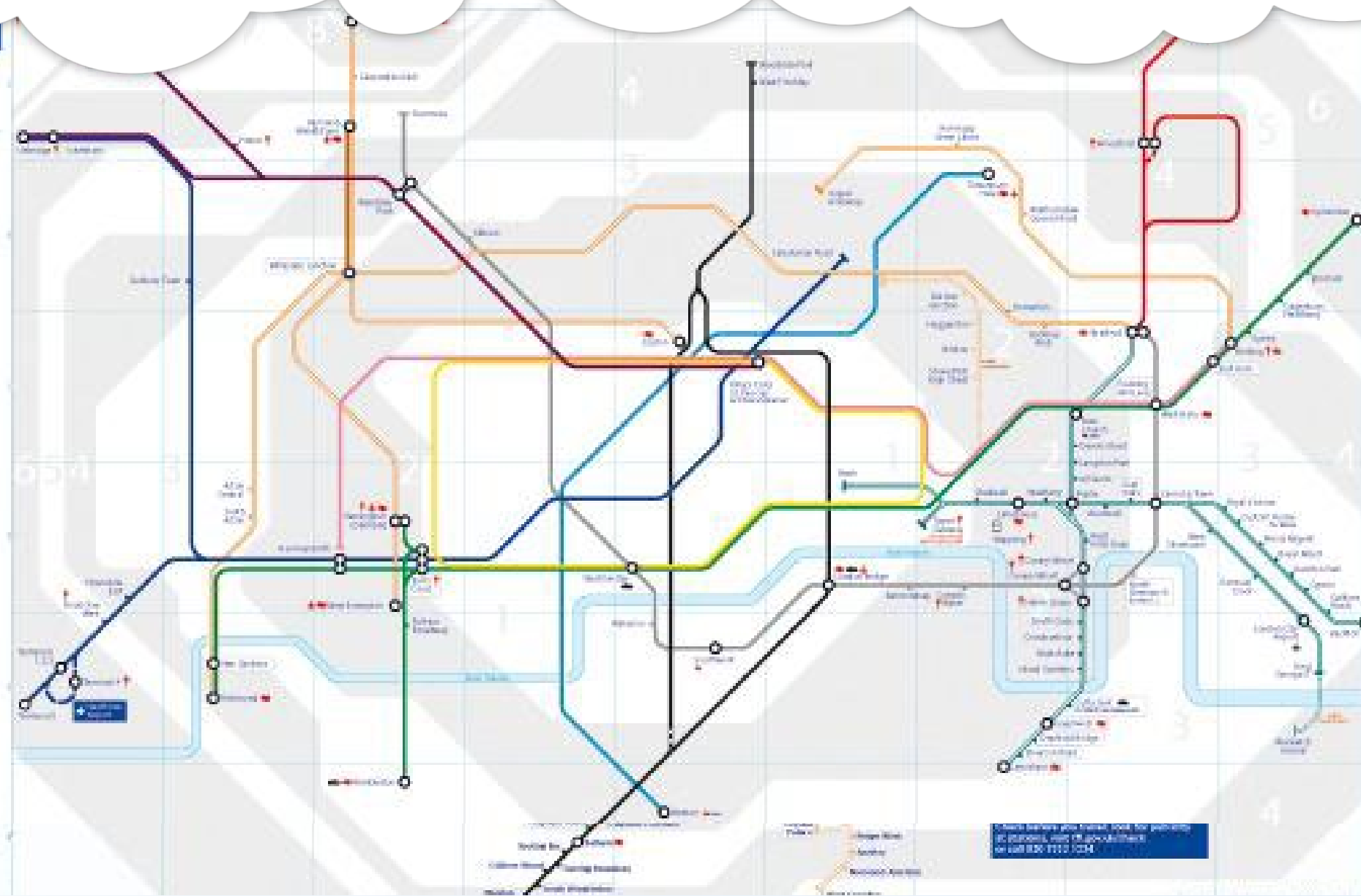


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- **Modeling Agents**
 - **Discrete-time** vs **continuous-time** systems
 - **State** versus **output** feedback
 - **Control** versus **observer** feedback
 - **Control** vs **filter** feedback
 - **Localization** (agent)
 - **Interplay** with **learning** and **communication**
 - **Regulation** vs **control**
 - **Robot** vs **agent**
 - **Can** **learn**
 - **Feedback** vs **open-loop**
 - **Task** vs **control**

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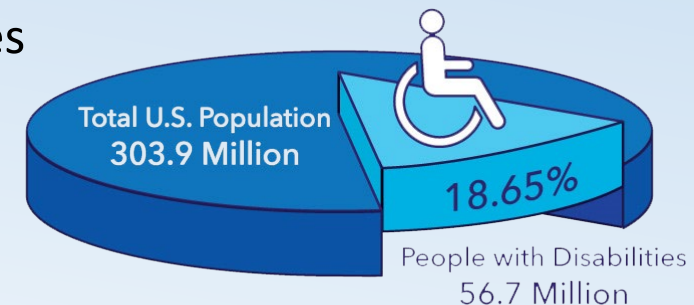


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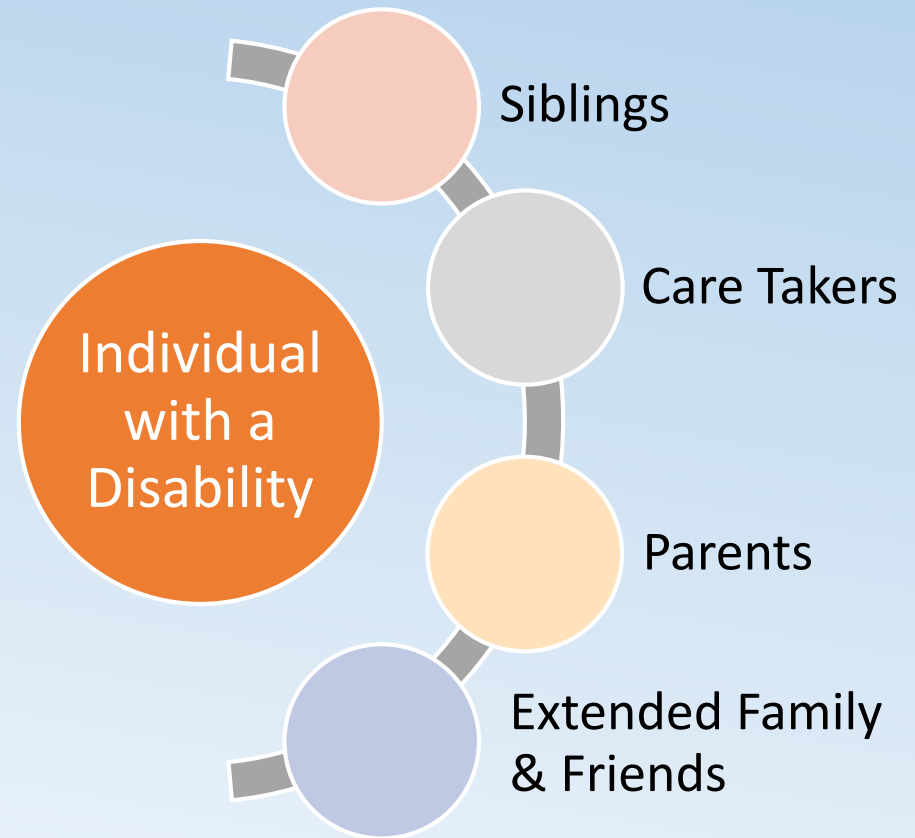
Who Needs Play?

- Everyone needs play!
 - 18.7% of U.S. Population has a disability
 - 12.2% of children between 6 and 14, have a disability
 - 1% will have a physical disability
 - 1% will have a sensory disability
 - 19% will have a communicative disability
 - 11% will have a social/emotional disability
 - 54% will have an intellectual disability
 - 2% will have multiple disabilities
 - 10% will have a chronic health impairment such as cancer





Who's play is affected by disabilities?



Equal vs. Equitable



Equal Treatment

Everyone benefits from the same supports.



Equitable Treatment

Individuals are given different supports to have equal access.



Inequity/Barrier Addressed

All can see because systemic barrier has been addressed.



Accessibility vs. Social Inclusion

- **Accessibility**

- Appropriate slopes and grades
- Head clearances
- All weather surfaces
- Knee and arm clearances

- **Inclusion**

- Participation in play
- Engaged social interaction
- Independent choice making
- Opportunities for risk taking



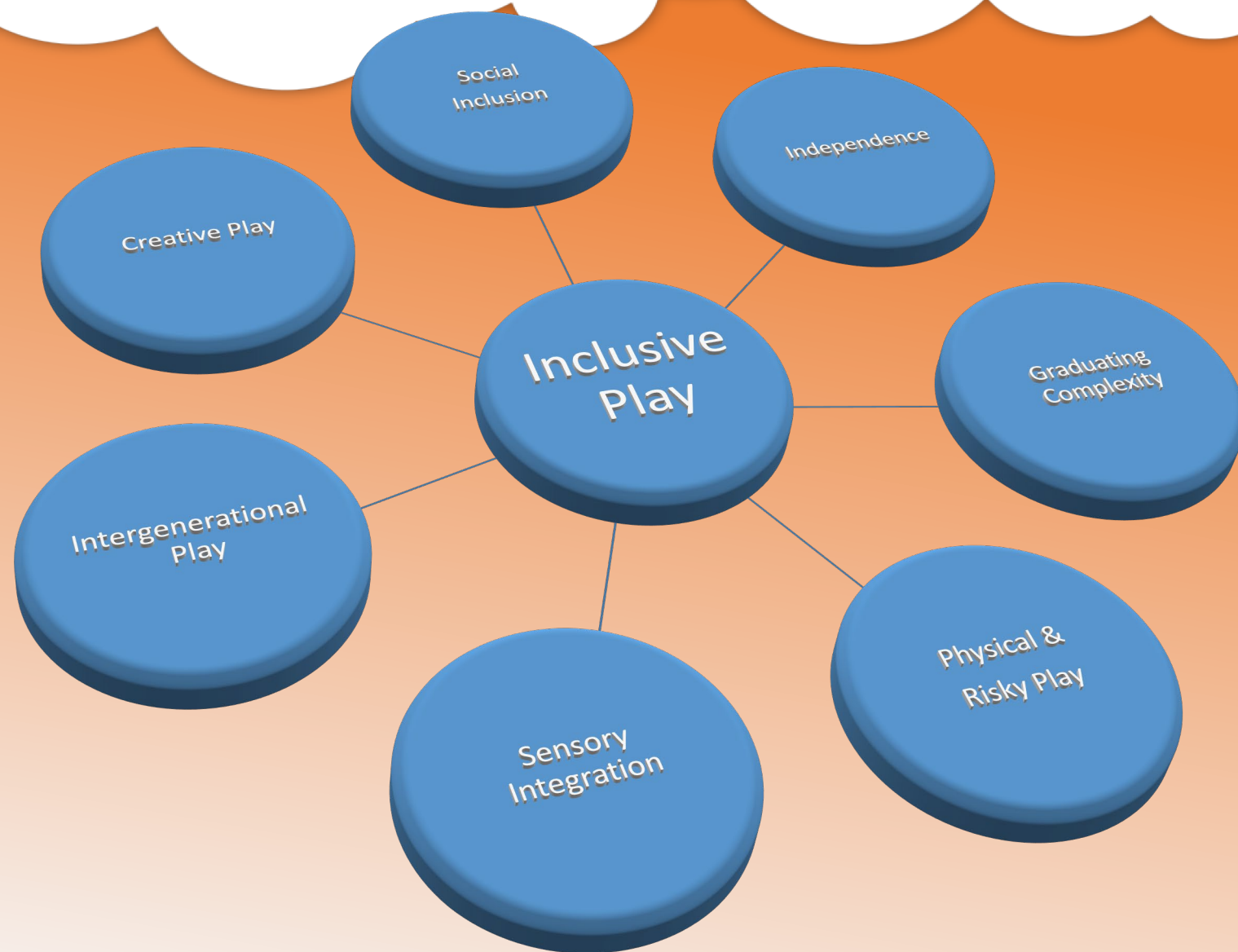
Accessibility vs. Social Inclusion

- Accessibility

- Civil rights legislation in 1990
- Ensures those with disabilities have the same right to participate.
- Minimum standards to be met

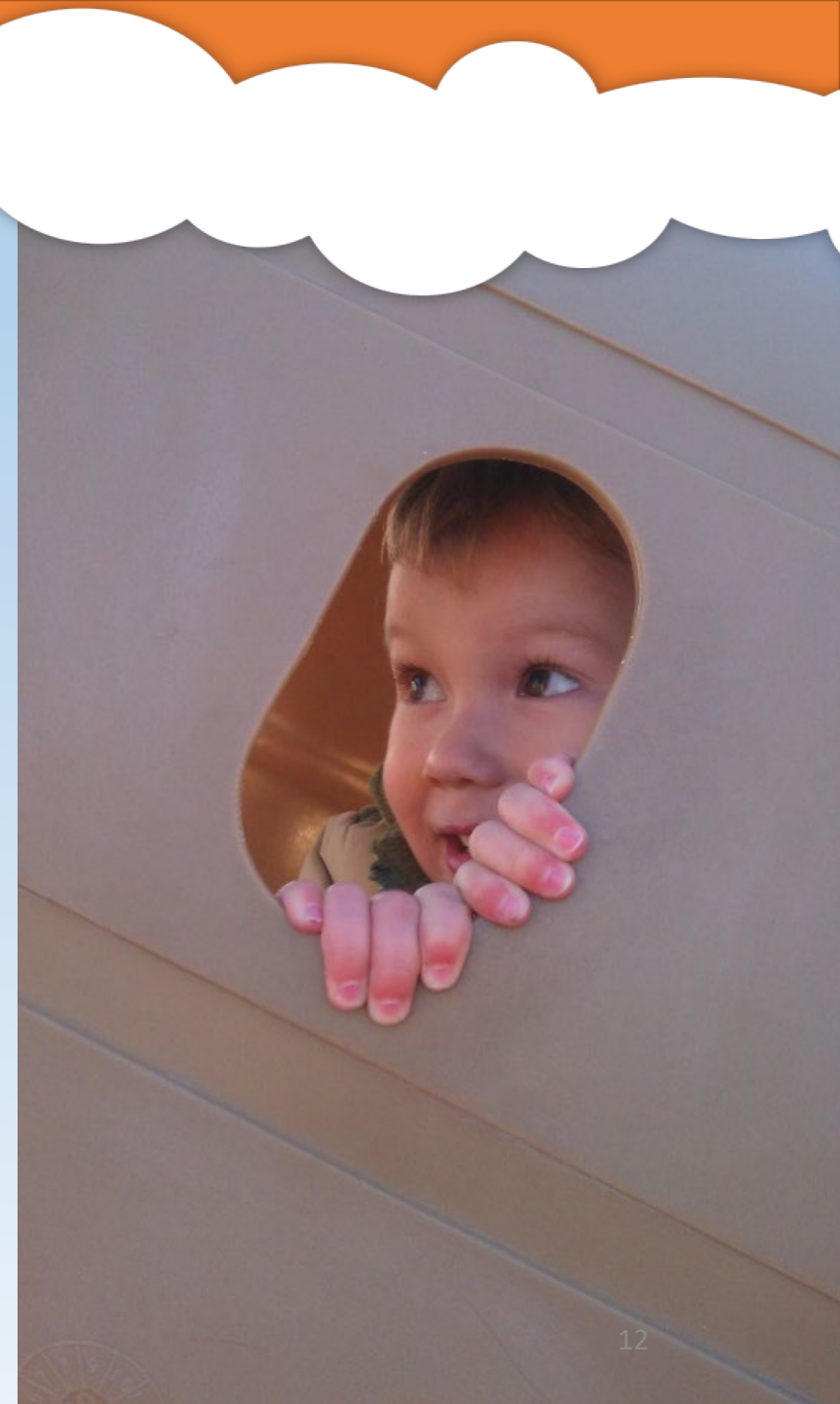
- Inclusion

- Enables ALL children, families, and friends to play together
- Provides high quality and well designed play environments for ALL.
- Provides as much diversity as possible in play opportunities and experiences.



Concept #1 - Independence

- Accessible surfaces = independent movement around playground (unitary surfacing)
- Fenced play areas = reliable and safe boundaries within which independent play can occur.
- Accessible equipment = play free from care takers and helicopter parents



Concept #1 - Independence

- Cause & effect play = independent thinking
- Cognitive simplicity = reduced confusion and independent exploration of space
 - Dramatic Play
 - Creative Play / Exploration
 - Wayfinding / Landmarks
 - Looping
 - Intuitive Spaces / Clear delineations
 - Recognizable travel way hierarchy
 - Use of color to decipher activity



Concept #2 – Social Inclusion

- Cozy spaces = opportunity for self-regulation and determination on when to jump into play.
- Cooperative play (multi-user equipment) = opportunities for children to interact in play with others
 - Encourage verbal expression
 - Encourage listening
- Eye-level play = opportunity for everyone to play together as equals whether above or below.



Concept #2 – Social Inclusion

- Parallel play = options for fully abled individuals to play alongside, not separate from, those with disabilities.
- Social pods = smaller more intimate spaces for passive, not active, social play
- Associative play = educational development for younger children
- Affect Attunement = strong family bonds



Concept #3 – Graduating Complexity

- Equality & flexibility = everyone has room to grow and learn. Allow for room to grow with activity types. (simple-complex)
 - Simple (may require assistance or support)
 - Moderate (needs less assistance or support)
 - Complex (needs no assistance or support)
 - Diversity in play types
 - Diversity in grasping methods
 - Diversity in level of effort



Concept #4 – Physical & Risky Play

- Fine motor activities = improvement in dexterity hand-eye coordination
- Gross motor activities = closely tied to vestibular and proprioceptive sensory systems
- Strength building activities = better muscle tone and overall health (upper and lower body)
- Opportunities for Risk = Children need to push their boundaries in a safe manner in order to learn. Risk vs. Hazard



Concept #5 – Sensory Integration

- Real world example of how children experience the world through sensory input.
- Everyone has a unique way of processing sensory information.
- Each person has different sensory needs:
 - varying types of input at different times
 - differing tolerances for types of sensation
 - unique preferences, likes and dislikes.



Sensory Systems

- Taste
- Smell
- Touch
- Sight
- Hearing
- Vestibular (balance)
- Proprioception (spatial awareness)
- Interoception (internal sensations)
 - Allergies, hunger, thirst, etc.



Sensory Systems

- Children who have difficulty processing sensory input through multiple sensory systems may:
 - Under-Register - need a lot of input to 'normalize'
 - BIG CUP Response
 - Over-Respond –a tiny amount of input can cause overstimulation and over-reaction – SMALL CUP response



Sensory Systems

- “Just right input” at proper levels for each of the senses support the nervous system in functioning optimally as a whole.
- Some children have very narrow ranges between not enough input and becoming under or overwhelmed.



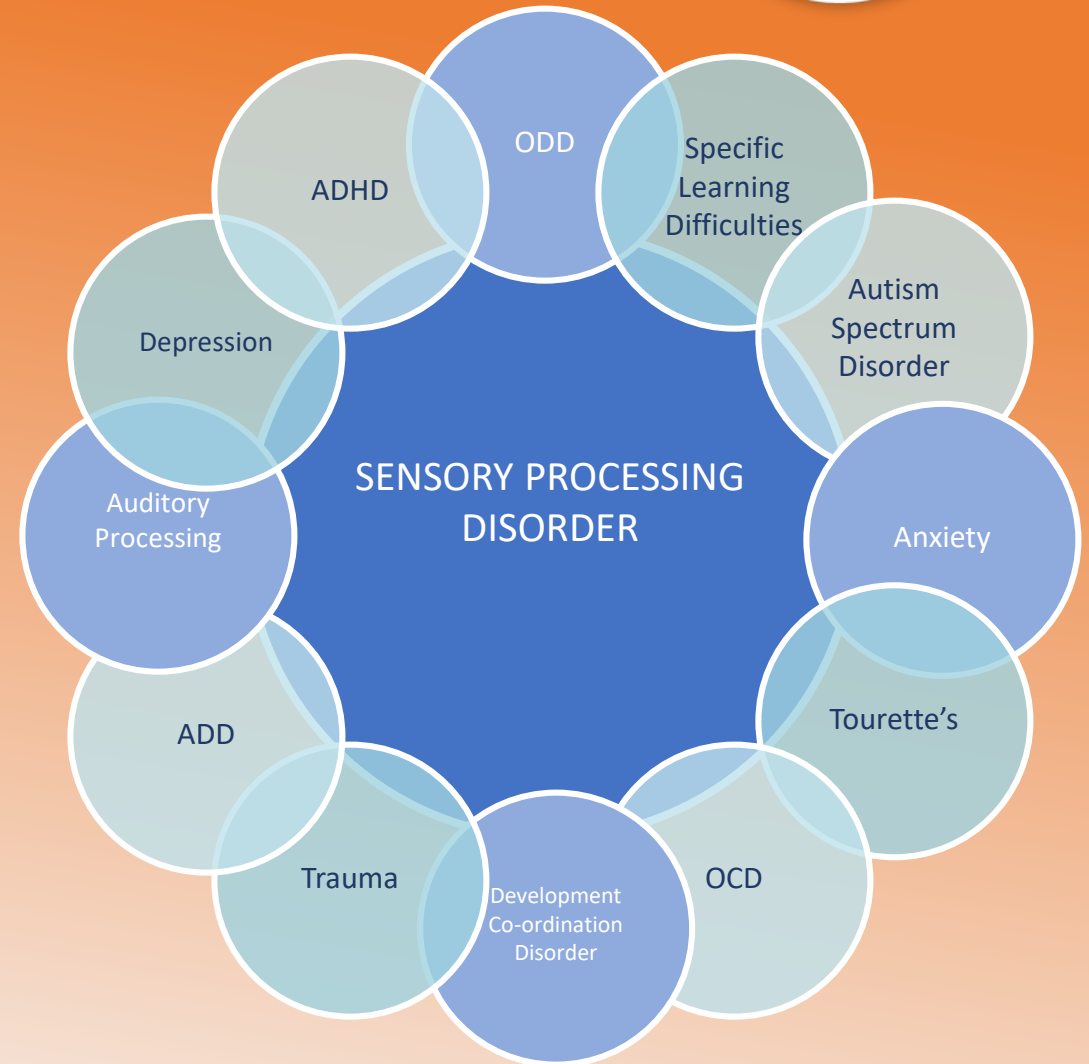
SPD

- It is difficult to filter and tune out irrelevant information.
- Leads to being overwhelmed & challenged, even for daily life activities.



Sensory Processing Disorder (SPD)

- Disorders and conditions associated with sensory processing difficulties.
- More people are affected than you think.



Taste & Smell- what does it smell and taste like?

- Can I smell any flowers and herbs?
- Can I taste fruit, veggies, and herbs growing in the play space?
- Design for safe smell and taste experiences
 - low odor paints or noxious smelling plants
 - nontoxic plants and play surfaces
 - Children with low sensory registration may excessively mouth objects
 - no rough or jagged edges





Touch – What does it tell me?

- What I am touching
- What is touching me
- Shape, size, textures
- There are many different types of touch receptors throughout the body:
 - pain (greatest number of receptors), light and deep touch, temperature, pressure, vibration, sharp and dull, smooth and rough



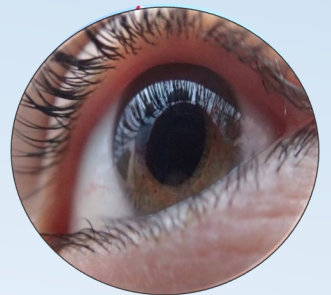
Touch – What does it tell me?

- Variety in texture
- Variety in temperature
- Loose parts
 - Social interaction
 - Surface materials
 - Manipulation
 - making piles, putting in, pouring out, rubbing, variation in grasp patterns, plant parts (seeds/pods/leaves)



Sight – What do I see?

- What I am looking at?
- Where is it? Up, down, on, off?
- What color do I see?
- Where are my friends and is there room for me to play?
- Where does the grass another surface begin?
- Where are the steps up the slide and how high up do I need to climb?



Sight

- Mid-line awareness
- Head position



Auditory- what do I hear?

- Self stimulatory behaviors like covering ears in response to certain sounds.
 - Loud sounds in general
 - High pitched frequencies (blender, vacuum, fans)
 - Buzzing of fluorescent lights, electricity in walls, radio signals
- Many lack the ability to localize sound
- It is important to identify a sounds in order to feel safe.



Auditory- what do I hear?

- Generally, softer, low pitched more musical sounds with a 1 beat per second rhythm are calming
- Soft rhythmical counting can also be calming



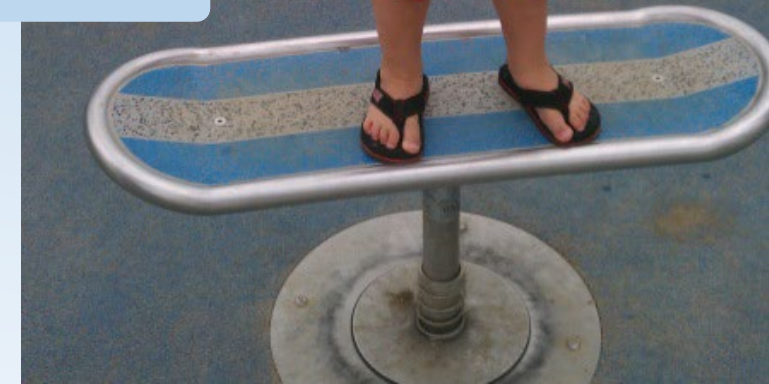
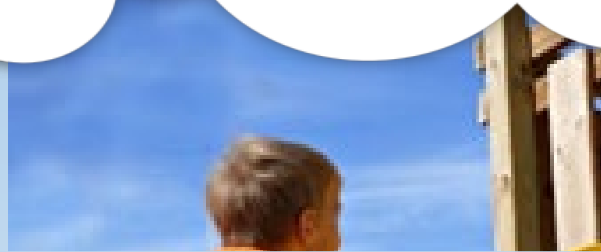
Vestibular System – What does it tell me?

- The posture/ balance/ movement sense / muscle tone / midline awareness
- The dizzy system
- Awareness of gravity
- Sense of “I AM HERE”



Vestibular System

- Gliding/Rolling/Bouncing/Jumping-linear
- Swinging/Rocking-arc
- Rotating/Spinning
- Combined movement directions: hang upside down, walk on unstable surfaces
- Crashing



Proprioception – What does it tell me?

- Where are my arms and legs?
- What are my arms and legs doing right now?
- What kind of internal body pressures am I feeling right now?
- How much pressure/body weight/strength do I need to use to move, hold, or carry an object or do an activity?
- Motor planning

Past experiences with actions and objects and predicts how much effort and stability needs to be provided by the body to support that action.



Proprioception

- Climbing
- Hanging
- Pushing
- Digging
- Jumping/Crashing
- Toe walking



Interoception: What is going on inside my body?

- Am I hungry?
- Am I too hot or cold?
- Do I need to use the restroom?
- Am I breathing heavily and is my heart racing?
- Is my body regulated so I can play to my best capacity?



Interoception

- Temperature regulation
- Thirst
- Hunger
- Allergies / Congestion
- Restrooms
- Skin irritation (surfaces and plants)



Concept #6 – Intergenerational Play

- Intergenerational planning = diverse play options between age groups
 - More fun for everyone, means longer trips to the park
 - Adults enjoy play as well
 - Many seniors and parents have disabilities themselves.
 - Work out stations, bocce ball, corn hole, game tables, gardens, abundant seating, etc.
 - Activities for Tweens/Teens Near Playgrounds
 - Sports courts, social meeting nodes, skateboardable features, parkour / obstacle courses, challenge games (Bank shot), DJ posts etc.



Concept #7 – Creative Play

- Explorative play = engaging play activities that don't lose their intrigue.
 - Loose play items allow children to explore cause and effect relationships and methods of manipulating their environment.
- Dramatic play = opportunity to reenact and repeat what children see and hear.
- Themed play = community interest and support
 - Caution to avoid directing play with over theming





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