

# **Invigorative Instruction to Engage and Advance Young Learners with Severe and Multiple Disabilities**

**WEBINAR-1**



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**AbleNet University**  
**Webinar**  
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# Webinar Objectives

Children with severe and multiple disabilities may have significant...

- Cognitive, Communication, Physical, Sensory Impairments and Behavioral Challenges
- Require instructional delivery that maximizes their learning opportunities and minimizes the barriers to attain desired learning outcomes.

- ❑ Webinar 1 will have an academic focus with illustrating how to promote cognitive and literacy development of young learners
- ❑ Webinar 2 will present art, music, movement and games activities to increase student alertness, attending and listening skills as well as nurture the growing brains.
- ❑ Gain skills in planning and implementing a variety of creatively crafted activities **to actively engage** young learners (preschool to early elementary) **in the learning process.**
- ❑ Learn specific strategies to gain and sustain a student's attention, increase his/her interaction with people and objects and attain successful outcomes supported with multi-sensory techniques, student-specific adaptations and assistive technology tools.

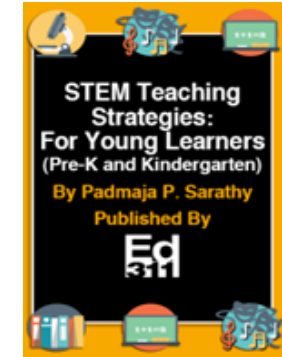
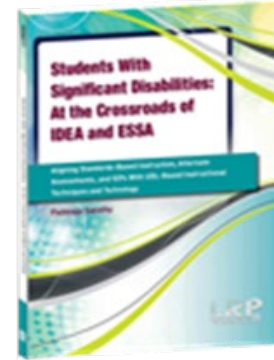
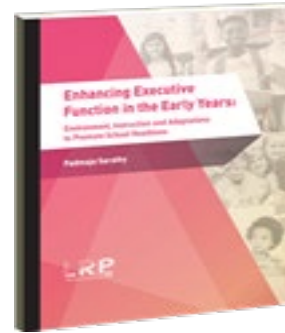
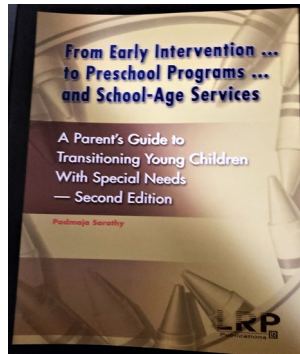
# Learner Characteristics

Severe and Multiple Disabilities affect less than 1% of the population.

The students may exhibit the following typical characteristics that impact their learning:

- ❑ Limited speech or communication (from minimal responses indicated through crying, vocalization and/or body movements, to gestures and combination of gestures and/or words).
- ❑ Experience difficulties with physical mobility, may not have the use of their hands or arms.
- ❑ Difficulties with personal care activities – eating, grooming, dressing, and toileting.
- ❑ Exhibit decreased attention span and high levels of distractibility.
- ❑ Difficulties in generalizing skills and transferring information from one situation to another.
- ❑ Self-stimulatory behaviors (e.g., repetitive body movements) and self-injurious behaviors.
- ❑ Have visual and auditory problems.
- ❑ Have medical issues (e.g., are tube-fed, have tracheotomy tubes, or have seizures).

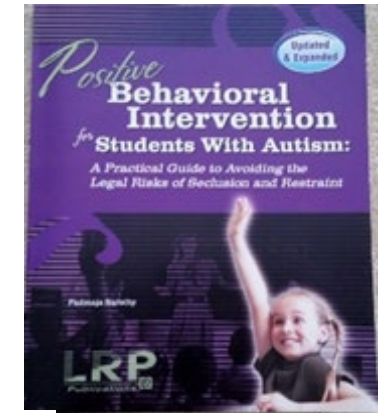
# Sarathy's Publications: Books and Quick Reference Guides



Recent Publications: 12/2018 & 2/2019

## Focus Areas

- Autism: Support Strategies & Interventions, Music CD – Transitions
- Behavior Guide (Preventive and Positive Approaches)
- Early Childhood: Transition, Parent Guide and STEM Teaching Strategies
- Executive Function - Early Years
- Paraeducator Training Guide and DVD
- Severe and Multiple Disabilities
- Significant Disabilities and ESSA



# UNIVERSAL DESIGN FOR LEARNING (UDL) IMPLEMENTATION: THE INSTRUCTIONAL FRAMEWORK

***Serving Students  
with Cognitive,  
Communication,  
Motor and  
Behavioral Needs to  
Access and Attain  
Desirable  
educational  
Outcomes***

**UDL Application  
During the Lesson Design Phase  
To Minimize Barriers and  
Reach all Learners with Diverse Needs**

**Engaging and Interactive Delivery  
for Active Engagement and Learning**

**Optimal Challenge  
with Technology and other Supports  
Vary demands and provide learner-specific  
supports. Incorporate Mainstream and  
Assistive Technology Aids.**

**Partial Participation  
To Facilitate Learner Action & Response**

## **UDL Application**

**1. Multiple Means of  
Representation**

**2. Multiple Means of  
Action and Expression**

**3. Multiple Means of  
Engagement**

# Adaptations for Access, Engagement, Action and Expression

Personalized adaptations and supports promote active participation of young learners with severe and multiple disabilities in everyday routines and activities:

- **Make environmental adjustments** (e.g., seating next to and not away from peers; minimizing adult proximity and prompting; designated boundaries; reducing visual over-stimulation, etc.).
- **Provide materials and instructional supports during activities and routines** (e.g., using multi-sensory techniques and concrete representations and to illustrate concepts and to build concept knowledge; weaving movement, role-play and music to sustain attention; alerting with pictures and songs for transitions; word bank paired with photos/concrete objects; etc.)
- **Offer personalized adaptations** (e.g., use of multiple ways for student to communicate and respond –consistent use of voice output devices/assistive tech.; slant boards; capturing child's attention with a flash light; etc.

## **Important Points to Remember Building Cognitive, Communication, and Social Skills for Students with Severe and Multiple Disabilities**

- ❑ Use intensive, intentional, and incidental teaching. Use formal and informal strategies.**
- ❑ Use systematic instruction with errorless prompting to build concept knowledge.**
- ❑ Identify the teachable moments all day. Exploit naturally occurring learning opportunities throughout the day in your daily routines and structured activities to:**
  - To strengthen comprehension skills**
  - To build vocabulary skills**
  - To enhance communication and literacy skills.**
  - To increase social skills.**
- ❑ Avoid teaching when problem behavior occurs.**
- ❑ Design interactive ‘Learning Centers’ with multi-sensory features.**
- ❑ Monitor progress consistently. Reteach, lots of practice! Modify supports if needed.**

# Communication of Students Who Are Experiencing Difficulty with Communication

How do your students with significant communication disabilities communicate?

Watch for different ways that the student communicates.

- |   |   |
|---|---|
| <input type="checkbox"/> Sign Language or modified signs  | <input type="checkbox"/> Pushing objects (towards them or away from them) |
| <input type="checkbox"/> Pointing or exchange pictures    | <input type="checkbox"/> Facial expression                                |
| <input type="checkbox"/> Vocalization and sounds          | <input type="checkbox"/> Eye gaze   |
| <input type="checkbox"/> Leading gestures                 | <input type="checkbox"/> Head nod or shake                                |
| <input type="checkbox"/> Pointing or Reaching gestures    | <input type="checkbox"/> Body orientation                                 |
| <input type="checkbox"/> Holding or point to real objects |   |
- Aided with technology?



## Developing A Communication Schedule

Student: J is visually impaired with significant cognitive difficulties

**Form of Communication:** Object level, vocalizations, pushing, pulling & holding objects

**Function of Communication:** Request, greeting; show interest

**Communication opportunities:** Provided throughout the day

**Breakfast:** Holding spoon inserted in hand

**Language/Story Time/Math:** Holding book/story prop with support; Vocalize to indicate involvement; Press AAC device with velcroid items to make a choice, respond touching and feeling objects and manipulatives

**Equipment:** Spoon, special book holder, story prop, math manipulatives, page turner, AAC device

**Support Persons:** Teacher; Para-educator; Therapist; Peer, etc.

# Academic Activities:

## Supports for Students with Significant Cognitive, Motor and Visual Difficulties



Make an adapted 'Page Turner' with a paper clip fastened to packing foam material.



Adaptation motor needs



An object velcroid to a glove for motor needs



An Adaptation Yes/No Response



Create a story character stamp using an empty film canister.



A Slant Board

To make a selection between two activities or identify the main story character

# Integrate the different senses into a planned language lesson.

## The Carrot Seed by Ruth Krauss

### Visual and Auditory

See book and the pictures.  
Listen to the book.  
See Word Wall with pictures.

### Tactile

Touch book. Turn the pages.  
Planting Activity: Touch seed, soil,  
water, etc.

### Visual, Tactile and Kinesthetic

Hold and touch a carrot  
Create a Student-authored book

Gustatory and Olfactory  
Smelling and tasting a carrot

Auditory and Kinesthetic  
Drama and role-play

### Associated Themes and Concepts

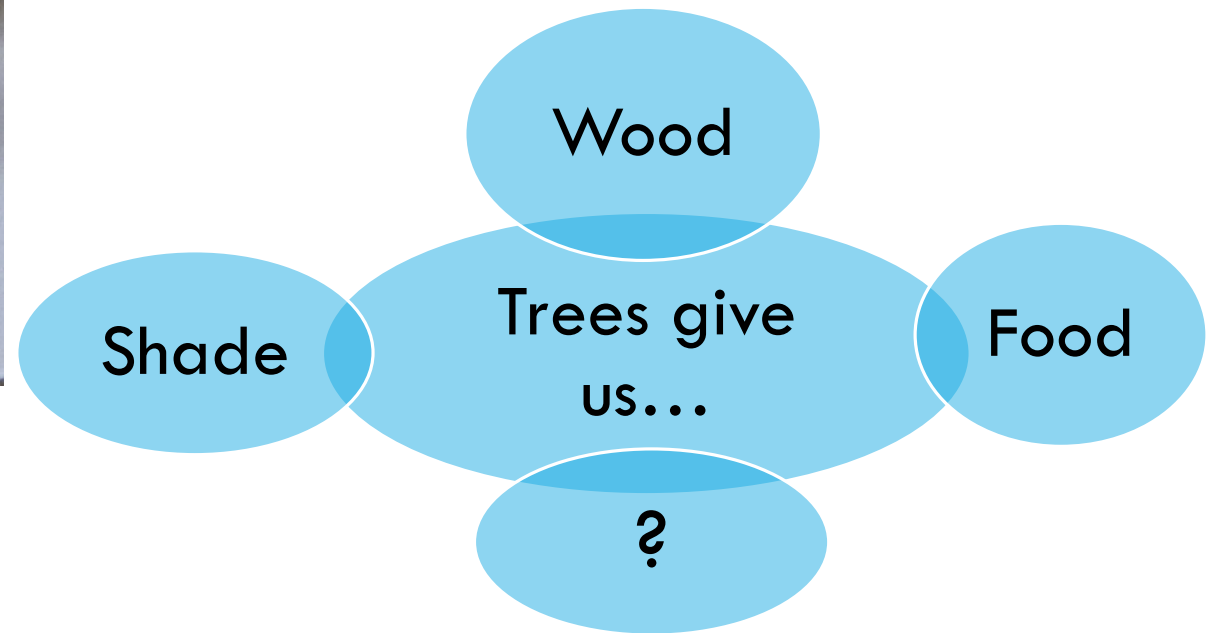
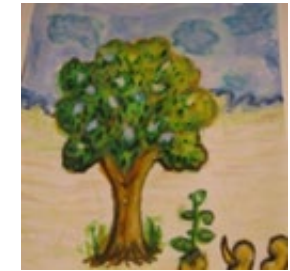
Family, Growing Things (STEM) & Feelings  
Executive Function: Focus & self-control

# Awaken the Senses!

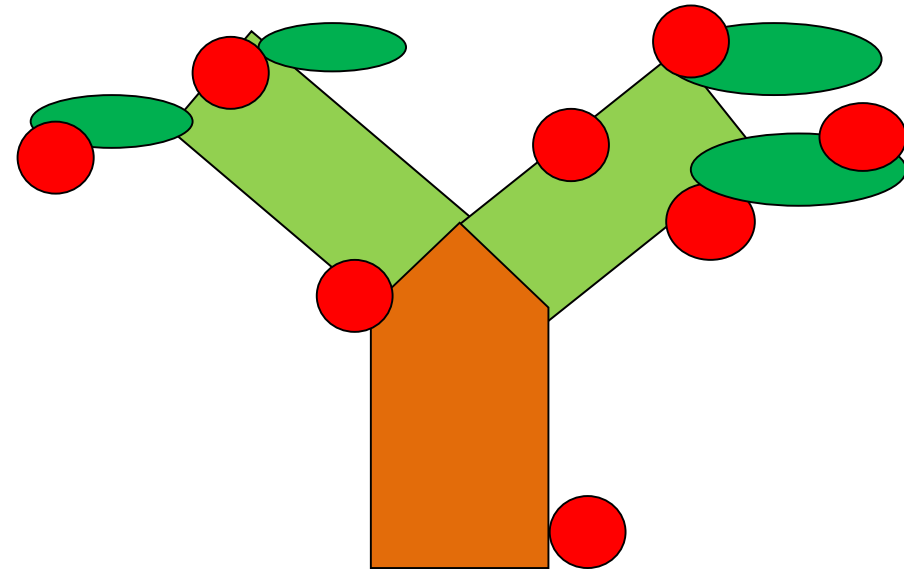
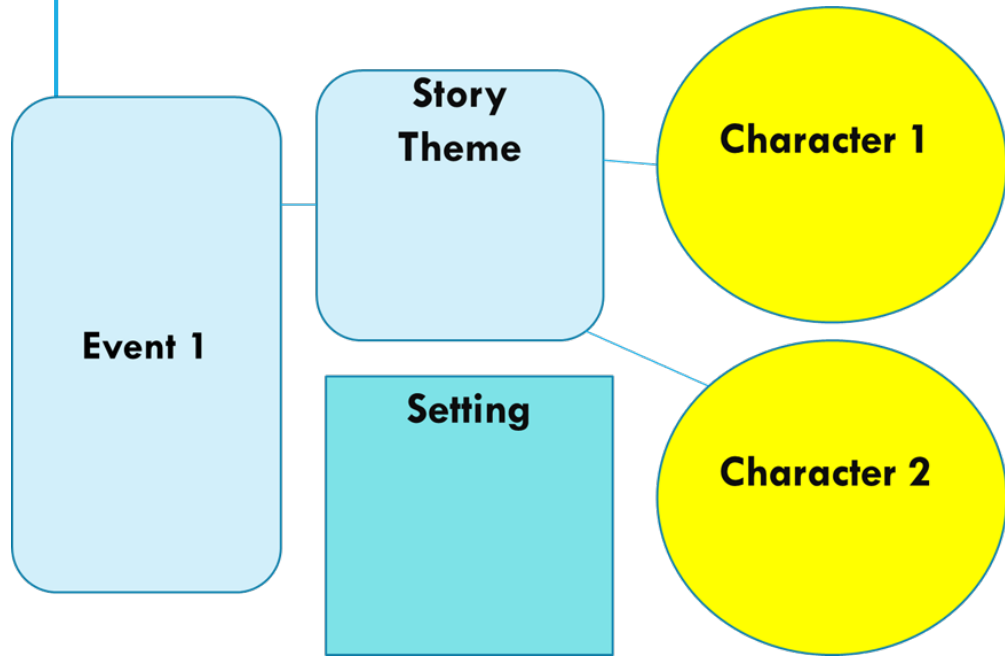
Create a graphic organizer paired with concrete items.



## The Giving Tree by Shel Silverstein



# Use a Story Map Organizer Tool

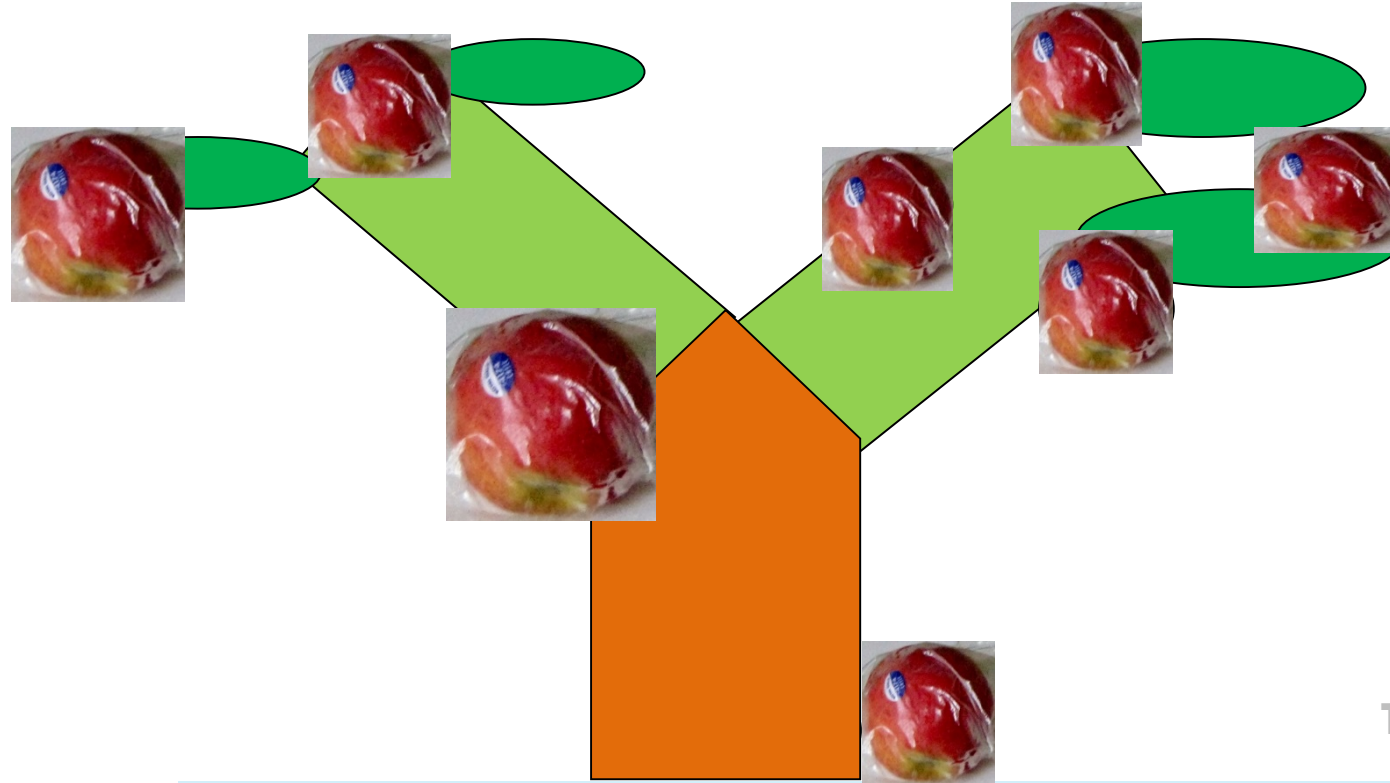


Present a vocabulary 'Word Wall' paired with photos or objects of key words: tree, apple, leaf, seed, flower, boy, etc.



# Making An Adapted Book Page for Additional Practice

***Adjust complexity level through an adapted book. Make an adapted book (a brief summary of the book) attached with representational items. Use during one-on-one intensive and systematic instruction.***



Touch an apple.

**The tree gave apples to the boy.**

# Child-specific Adaptations and Supports

Facilitate active participation of target student in the language/math group lessons.

- ❑ Use a voice output device preprogrammed with words/sentences from the story. Have children with no verbal communication activate the device to respond to questions and participate during the story (with repetitive text) with choral responses.
- ❑ Familiarize your students with the materials (touch, look, listen and smell).
- ❑ Position students appropriately to suit the specific activity.
- ❑ Stabilize the materials: objects/book, etc. on the table surface with Dycem mat or on a mini-board or in a tray fastened with tape (helpful for students who tend to throw the objects).
- ❑ Use an adaptive grip to grasp/hold objects with a Velcroed glove or Velcro wrist band (for students with limited motor control).
- ❑ Record stories using an AT device for students to listen to at the Book center.

Enable all students to have a way to respond to the lesson/story with less intrusive prompting.

# Use a sorting tray to teach counting and numeral identification.



- Present a variety of concrete objects for the student to count (using eye gaze, touch, pointing, etc.): balls, bean bags, pennies, spoons, cups, etc.
- Use student-preferred objects to obtain student attention and to sustain interest during the activity.
- Have student count 1-3 objects to experience success in gaining one-to-one correspondence.

**Attach (with Velcro) objects (spoons, markers, small musical instruments, etc.) in the counting book/eye gaze board.**





# Enhance



**Feel, Hear, and Count**



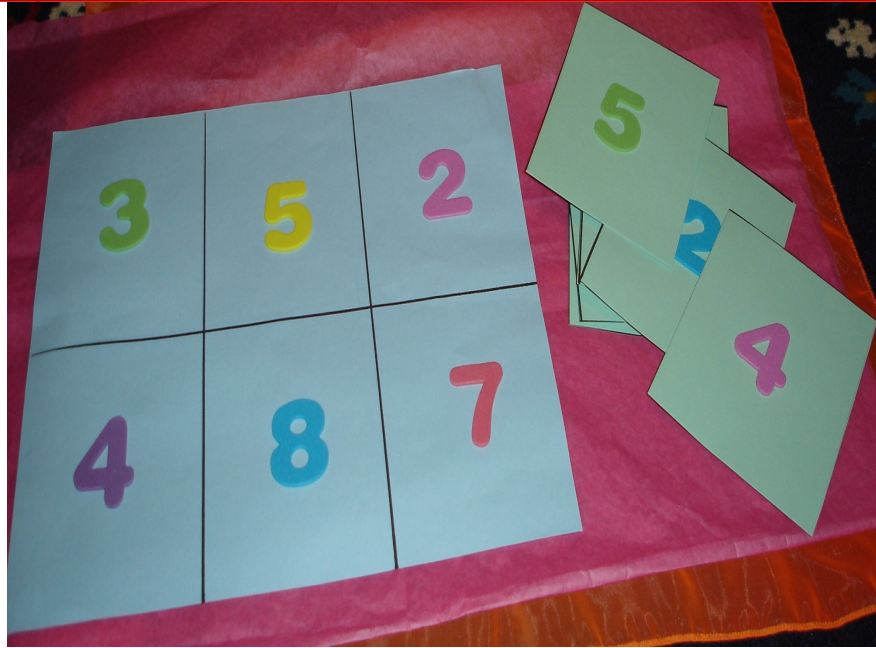
**ITalk2 Communicator  
from AbleNet, Inc.**

Use Assistive Technology to provide auditory stimulus in addition to visual.



**Numerals written  
with Wikki-Stix**

# Math Aided with Technology Supports to Promote Participation and Response



**Make and play a math game with tactile numbers.**



**A Super Talker and a Quick Talker**  
**To promote communication, and group participation and response**



**All-Turn-it Spinner**  
**(AbleNet, Inc.)**  
**Use it during group play/game and promote social skills**

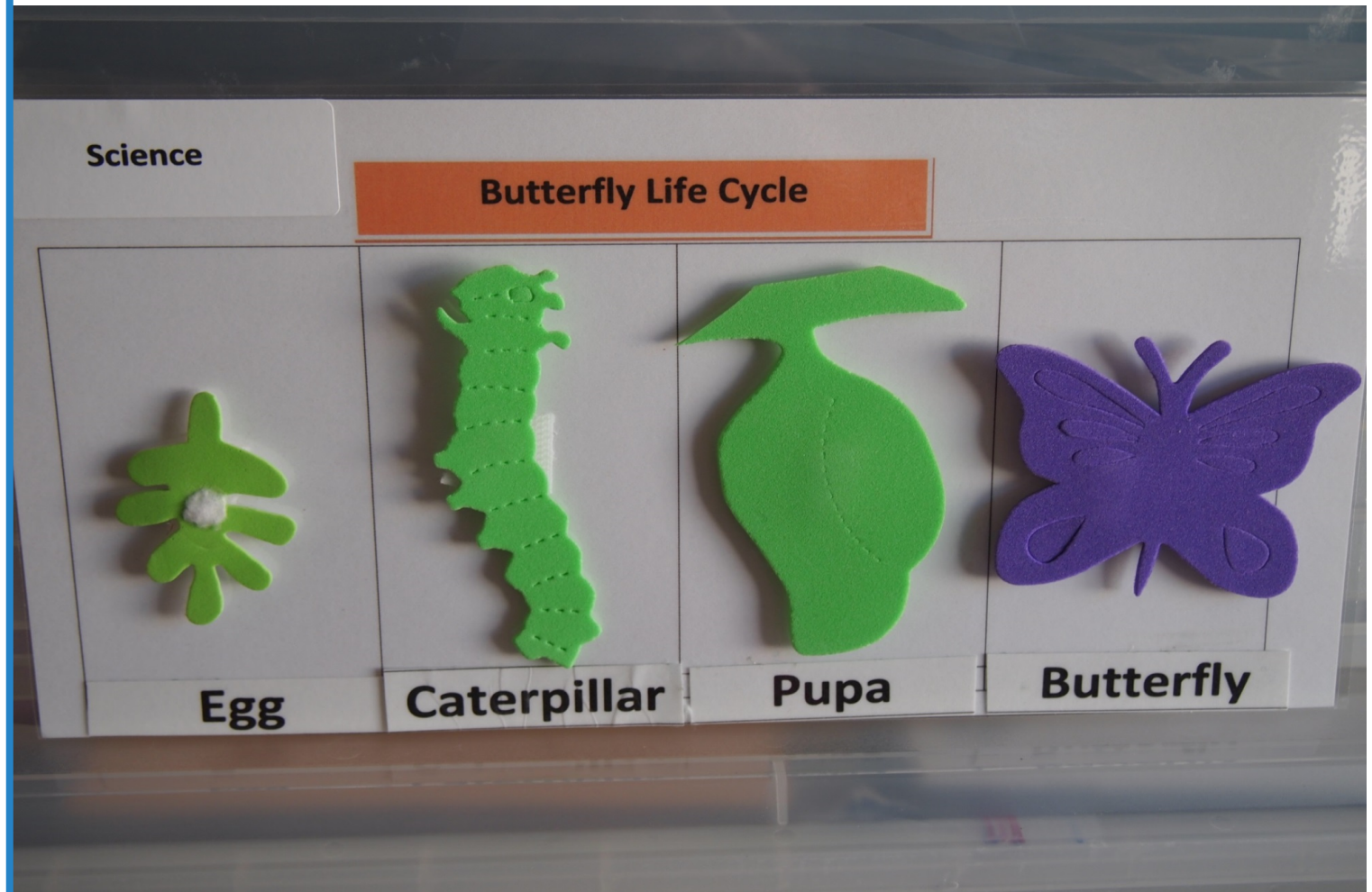
## Some Sample Learning Objectives Language and Math (and Executive Function)

- Attend to the story for 2-5 minutes.
- Point to object/pictures related to the story.
- Use a communication signal to request object (puppet) or picture.
- Carry out two-step directions with story props.
- Identify 1-2 characters from story given choices; the story theme. Recall 1-2 events from story (Respond to story questions with using words/eye gaze/gesture, pointing (aided with AT) .
- Count objects to 5 with one-to-one correspondence (1-5).
- Associate clock/time with a routine activity; Identify the day of the week with associated concrete times.
- Follow a sequence of 3-5 daily routine events using object/picture schedule.

# Cognitive & Literacy and Language – Science Activity

## *The Very Hungry Caterpillar by Eric Carle*

- Present the story with interactive multi-sensory features.
- Attach felt/foam items with Velcro.
- Have students:
  - ❖ Match picture with corresponding text.
  - ❖ Pull out the pictures and put them in life cycle sequence.
  - ❖ Feel and touch the picture.
  - ❖ Point to the picture.
  - ❖ Eye-gaze the picture



## A Case Example

Student has cerebral palsy with limited voluntary control of her arms and legs. Uses directed eye gaze to indicate what she wants. Loves the company of her peers and engages with a smile; Learning to uses object-based communication system to make her choices during morning circle, story-time, centers and snack time. The OT, PT and Speech team is currently experimenting with a chin switch (by slight movement of her head) for her to activate communication devices and turn on battery operated toys.

### Adaptations and Supports

- Increase concept knowledge using representational items. Attach items to mini-board/slant board.
- Shine a flash light to gain attention on items attached to board.
- can activate a pre-programmed communication device to join in choral response (for repetitive lines) with her peers during story-time, make requests/choices during centers, snack time, music, etc.
- Use an adapted cuff to attach bells/wide brush to enable participation.
- OT and PT guidance on positioning to facilitate active participation in different activities.
- Coach peers when to and when not to help her (to promote independent responses).

# Sample Goals and Learning Objectives to Focus on for Target Student...

The team focuses on her strengths, interests, desires and the preferences of her family to develop the following goals within the inclusive setting:

- Improve functional communication skills.
- Improve large/small motor control.
- Promote attending/listening skills.
- Increase concept building skills.
- Facilitate social interaction with age peers.

## **A few sample learning objectives:**

- Hold and grasp object when inserted in hand. Alternate gaze between props and book.
- Recognize cause and effect relationships.
- Associate an object (e.g., spoon/fork) associated with the routine.
- Perform specific action (turn head to activate switch, shake/ move feet).
- Make a clear choice given 3 choices (with concrete items during group instruction/centers).
- Attend to and engage in activity for 3-5 minutes.

# Facilitate Social Interactions During Group Instruction, Centers and Play-time

Provide group social skills coaching:

- ❑ Teach all children social interaction skills in the context of activities or play themes that attract children's attention: During Center time (Block Play, House/Dramatic Play, Art, etc.) Snack time, Recess time.
  - Through play, children learn to interact with the world around them.

Involve peers (without disabilities) in peer-mediated interventions.

- ❑ Teach socially competent peers the skills needed to initiate interactions with those with limited social skills (Odom and colleagues 1999).
- ❑ Give time and attention to children when they are playing together.
- ❑ Position children to encourage interaction.
- ❑ Teach children with autism the skills needed to play and interact with others.

# Adaptations and Supports

## Check if you are:

- Breaking complex tasks down into smaller parts.
- Presenting different tasks to meet diverse student needs within the same lesson.
- Offering concrete representational items to connect with the concepts taught
- Providing appropriate level of cues and prompts to gain student attention to focus on the highlighted text in the story or passage, word cards.
- Ensuring the prompts are gradually faded.
- Offering intensive level of support to students: match text to real objects (if needed).
- Coaching paraeducator to promote student's self-dependence and wean her gradually from total prompting.



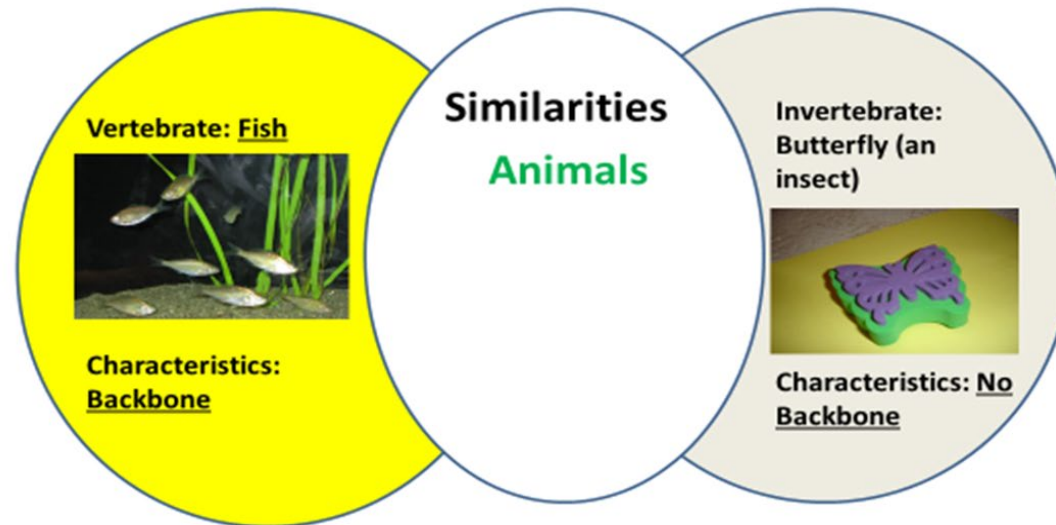
# Use Visual Tools Paired with Photos and Objects.



A book attached with concrete items. Use for counting activities.

## Build Knowledge of Science Concepts

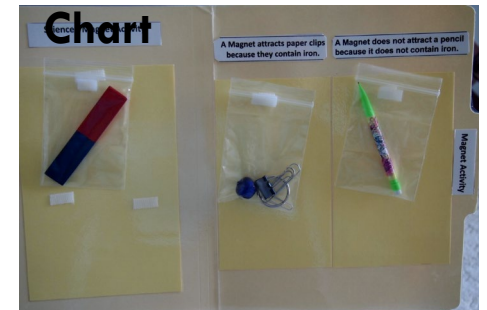
Compare Vertebrate (Fish) with Invertebrate (Insect-Butterfly).



Differences and Similarities

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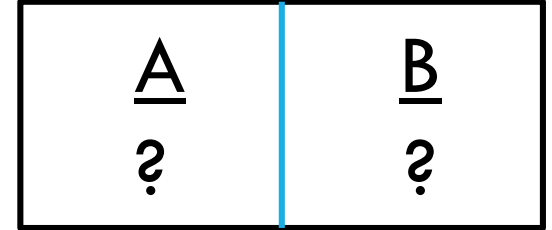
## Magnet Activity



# Choice-Making - A powerful tool!

What Types of Choices do you offer and when do you offer them?

- Within an activity?** What? When?
- Between two or more activities?** What? When?
- Deciding when to do an activity?** What? When?
- In selecting the individual with whom to participate in an activity?** What? When?
- Selecting where to do an activity?** what? when?
- To terminate an activity at a self-selected time?** What? When?
- To refuse to do an activity?** What? When?



**Provide opportunities for choice-making** – Have Students respond by making a choice.

## Recommended Best-Practices

Present information in a flexible manner for learner to access, respond and engage during instruction. Ensure that the delivery of instruction leads to the student engaging in academic and functional tasks that relate directly to improving his/her outcomes.

Ensure the student:

- Develops a means to communicate his/her essential intents.
- Indicates preferences/makes choices.
- Connect the learner with the learning. Be open enough to look for different ways.
- Allow and promote the student to perform whatever skills are possible without adult assistance.
- Moves towards full participation from partial/no participation.
- Avoid prompt dependence. Prevent learned helplessness.
- Exerts more power and control over the environment leading to improved quality of life.
- Gains greater self-dependence reducing dependence on adults.

# Begin with the End in Mind!

## Consider:

Happy

Excited

- How will this activity or adaptation and support prepare the student to be more independent and to improve his/her quality of life?
- How can you broaden his/her world?
- How can you build a positive perception about the learner in the eyes of others through this lesson/unit?
- How can this lesson/unit facilitate interactions with typical peers and promote social inclusion?
- What instructional activities will enable the student to gain self-dependence and control over the environment?

**“If someone does not expect or is not expected to achieve, then they never will.”**

**If we act as if students can do something, they just might be able to. Develop an expectation of performance however limited they may be.**

## Resources

- Broer, S. M., Doyle, M. B., and Giangreco, M. F. (2005) Perspectives of Students With Intellectual Disabilities About Their Experiences With Paraprofessional Support. *Exceptional Children*, 71(4), 415-430.
- Browder, D., Lee, A., Mims, P. (2011). Using Shared Stories and Individual Response Modes to Promote Comprehension and engagement in Literacy for Students with Multiple, Severe Disabilities. *Education and Training in Autism and Developmental Disabilities*. 46(3), 339-351.
- Downing, J. E., & Demchak, M., (2002). Determining Individual Abilities and How Best to Support Students. In Downing, J. E. (Ed.). *Including students with severe and multiple disabilities in typical classrooms: Practical strategies for teachers*. (pp. 37-70). Baltimore: Paul Brookes.
- Equals Math Curriculum from AbleNet, Inc. (<https://www.ablenetinc.com/>)
- Sarathy, P. (2019). P.R.E.V.E.N.T. Problem Behaviors: Seven Contemplative Discipline Steps. ED311, Austin Texas, Website: <http://www.ed311.com/>.
- Sarathy, P. (2017). *Students With Significant Disabilities: At the Crossroads of IDEA and ESSA*. Horsham, PA: LRP Publications.

## Resources (continued)

- Sarathy, P. (2015). *Autism Spectrum Disorders: Seven Steps of Support*, A quick reference guide, Publisher: National Professional Resources, Inc. ([www. nprinc.com](http://www.nprinc.com))
- *Magical Musical Transitions – A Music CD for assisting children with Autism Spectrum Disorders* ([www. nprinc.com](http://www.nprinc.com))
- Sarathy, P. (Second Edition, 2014). *Serving students with severe and multiple disabilities: A guide to strategies for successful learning*. Horsham, PA: LRP Publications.
- Sarathy, P. (2014). *Positive Behavior Intervention for Students with Autism: A Practical Guide to Avoiding the Legal Risks of Seclusion and Restraint*. Horsham, PA: LRP Publications.
- Sarathy, P. (2012). *Paraeducator Power Training*. ED311, Austin Texas, Website: <http://www.ed311.com/>.
- UDL website: (Center for Applied Special Technology (CAST)) <http://www.cast.org/research/udl/index.html>



**T H A N K S.**

**A SPECIAL THANKS TO ABLENET UNIVERSITY FOR HOSTING THE  
WEBINAR**

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**Future Webinars:**

**On March 28, 2019**

**Invigorative Instruction to engage and advance young learners with severe and multiple disabilities – Webinar 2 (Focus on art, music, movement and games)**

**On April 17, 2019**

**Inquiry, Exploration, Problem-solving: Nurturing STEM Thinking in All Young Learners**