

# **Enhancing Teaching and Learning with UDL: Multiple Formats for Access and Engagement**

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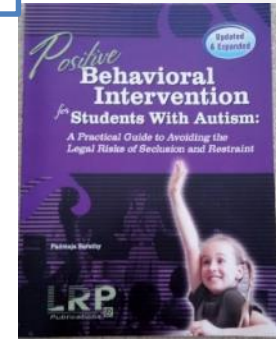
# Session Focus

- Gain skills in incorporating Universal Design for Learning (UDL) principles as part of the instructional delivery process to redress disabilities.
- The webinar session will illustrate how to:
  - Use multiple and flexible formats to represent information to students with significant disabilities to facilitate access, offer appropriate levels of challenge and increase engagement.
  - Augmented with student scenarios spanning grade levels and academic content areas.



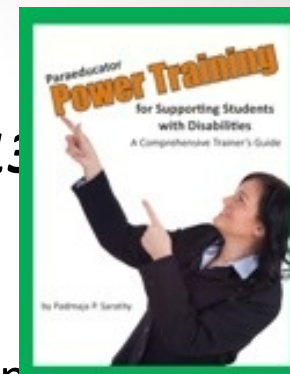
## Author & Educational Consultant [www.infinitepossibilities-sped.com](http://www.infinitepossibilities-sped.com)

- **Positive Behavior Strategies for Students with ASD: A Practical Guide to Avoiding the Legal Risks of 2013.** Publisher: LRP Publications, ([www.shoplrp.com](http://www.shoplrp.com))
- **Autism Spectrum Disorders: Seven Steps of Support, 2015.** A quick reference laminated guide; Publisher: National Professional Resources, Inc. ([www.nprinc.com](http://www.nprinc.com))
- **Magical Musical Transitions (Law and Sarathy), 2009.** A Music CD for assisting children with Autism Spectrum Disorders. Marketed by [www.nprinc.com](http://www.nprinc.com)
- **Serving Students with Severe and Multiple Disabilities (Second Edition), 2014:** A Guide to Strategies for Successful Learning (Publisher: LRP, [www.shoplrp.com](http://www.shoplrp.com))



# Books and Products

- ***Paraeducator Training DVD and Trainee Manual, 2013***  
(Publisher: Legal Digest (www.ed311.com))
  - A 'Trainer of Trainers ' DVD with multiple training units
  - Paraeducator trainee manual with pre and post assessment for each unit, quizzes, checklists and role-play activities
- ***From Early Intervention... to Preschool Program... and School-Age Services: A Parent's Guide, 2006.*** (Publisher: LRP Publications, www.shoplrp.com)
- ***Together We Succeed: Building a Better System for Transitioning Preschoolers with Disabilities , 2004.***(Publisher: LRP Publications)
- ***New release - Students with Significant Disabilities: At the Crossroads of IDEA and ESSA.*** (Feb., 2017. LRP Publications)  
[http://www.shoplrp.com/product\\_p/300677.htm](http://www.shoplrp.com/product_p/300677.htm).
- **Book on Executive Function coming later in 2017.**



# A Question

***A teacher delivers a lesson on the topic of biomes (and Eco Systems) using Smart Board technology. She/he is implementing Universal Design for Learning (UDL) principles and is definitely providing access to all learners in the classroom with diverse and complex learning needs.***

# Yes or No Survey

***The teacher is implementing UDL principles and is definitely providing access to all learners in the classroom with diverse and complex learning needs.***

# Universal Design for Learning (UDL) Implementation: The Instructional Framework

*Serving Students  
with Cognitive,  
Communication  
Behavioral and  
Motor Needs to  
Access and Attain  
Academic  
and  
Functional  
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 at a Glance

## Summing up...

<https://www.youtube.com/watch?v=bDvKnY0g6e4&feature=youtu.be>



# Universal Design for Learning

- UDL principles consider the range of user abilities at the design stage of the curriculum and incorporates accommodations at that point.
- Reaching all learners applying principles of UDL
  - Principle I - Multiple Means of Representation
  - Principle II - Multiple Means of Action and Expression
  - Principle III - Multiple Means of Engagement
- UDL offers "built-in" access for a wide range of users.  
(Center for Applied Special Technology –CAST:  
<http://www.cast.org/research/udl/index.html>)

# Multiple Means of Representation

- **Provide options for perception:**
  - Customizing the display of information - alternatives for auditory and visual information.
- **Provide a variety of options for defining language and symbols.**
  - Using appropriate tools - calculators, measuring tools, etc.
- **Provide options for comprehension:**
  - Activating background knowledge
  - Highlighting critical features, big ideas, and relationships
  - Guiding information processing
  - Supporting memory and transfer with hands-on activities.
- **Source URL:** [http://www.udlcenter.org/aboutudl/udlguidelines/udlguidelines\\_graphicorganizer](http://www.udlcenter.org/aboutudl/udlguidelines/udlguidelines_graphicorganizer)

# UDL - Environmental Arrangement and Adaptations

## Customize and Personalize to Meet Needs of All Learners

- Determine the adaptations needed in the physical environment, scheduling, everyday activities, instructional materials, etc.:
  - Seating arrangements to access lesson presentation, group participation and interaction with peers.
  - Visual displays of academic and instructional materials (e.g., Word Wall with pictures, labeling of centers, etc.)
  - Easy access to instructional centers
- Identify ahead of time any barriers that your learners may experience in the specific lesson. Plan ahead for how you will reach every learner.

# UDL – Prior Planning

## Customize and Personalize to Serve All Learners

- UDL “is based on the assumption that curricula are flexible and proactively designed to allow multiple means of access for all students (Parette, and Blum, 2014).
- Ensure the structure of the activity and the steps are clear.
- Model the activity and provide guided practice.
- Allow sufficient processing time (as needed).
- Plan for collaborative grouping to assist with projects.
  - Assign peer partners to assist students who may need additional help and support.

# Promoting Learner Access - Survey Question

What methods of lesson delivery do you use to provide access to learners with diverse and complex needs?

**Identify the method you use the most:**

- 1. Multi-media presentations with interactive tools**
- 2. Text paired with representational items and/or visuals**
- 3. Hands-on activities with real concrete items**
- 4. Simplified summary of story or content passage**

# Multiple Means of Engagement

- **Provide options for gaining student engagement and sustaining interest in the activity.**
  - Increase individual choice and autonomy.
  - Make sure the distractions are reduced.
- **Provide options for sustaining effort and persistence.**
  - Vary task demands and complexity level. Provide appropriate supports.
  - Provide encouraging feedback.
- **Provide options to develop self-regulation and coping skills.**
  - Guide development of strategies to strengthen persistence and goal oriented expectations.

Source URL:

[http://www.udlcenter.org/aboutudl/udlguidelines/udlguidelines\\_graphicorganizer.](http://www.udlcenter.org/aboutudl/udlguidelines/udlguidelines_graphicorganizer)

CAST (2008). Universal design for learning guidelines version 1.0. Wakefield, MA:

Author.

# Learner Engagement

- Facilitate active Learner engagement in multiple ways:
  - Use a variety of hands-on activities to facilitate immediate practice and for memory transfer (to long-term memory).
  - Add novelty to sustain attention and motivation.
  - Use a multi-sensory approach. Present concrete representational items, manipulatives, real items, calculators, etc.
  - Provide partially filled-out templates for writing.
  - Offer response cards to facilitate group participation.
  - Provide choices.

# Partial Participation and UDL

- Partial Participation enables students with significant disabilities to participate partially across least restrictive environments and activities.
- Specialized services, AT and alternate or modified activities may be provided to maximize participation (Downing , 2010).
- Example: The activity is 'Literacy–Reading'. The student's participation may be:
  - Finding the location to join the rest of the group for the activity  
Following a simple teacher-direction
  - Accessing and engaging with listening to an adapted version of text programmed into a Book Worm
  - Tolerate touching and feeling the concrete items attached to the book.





# Learner Scenario - 1

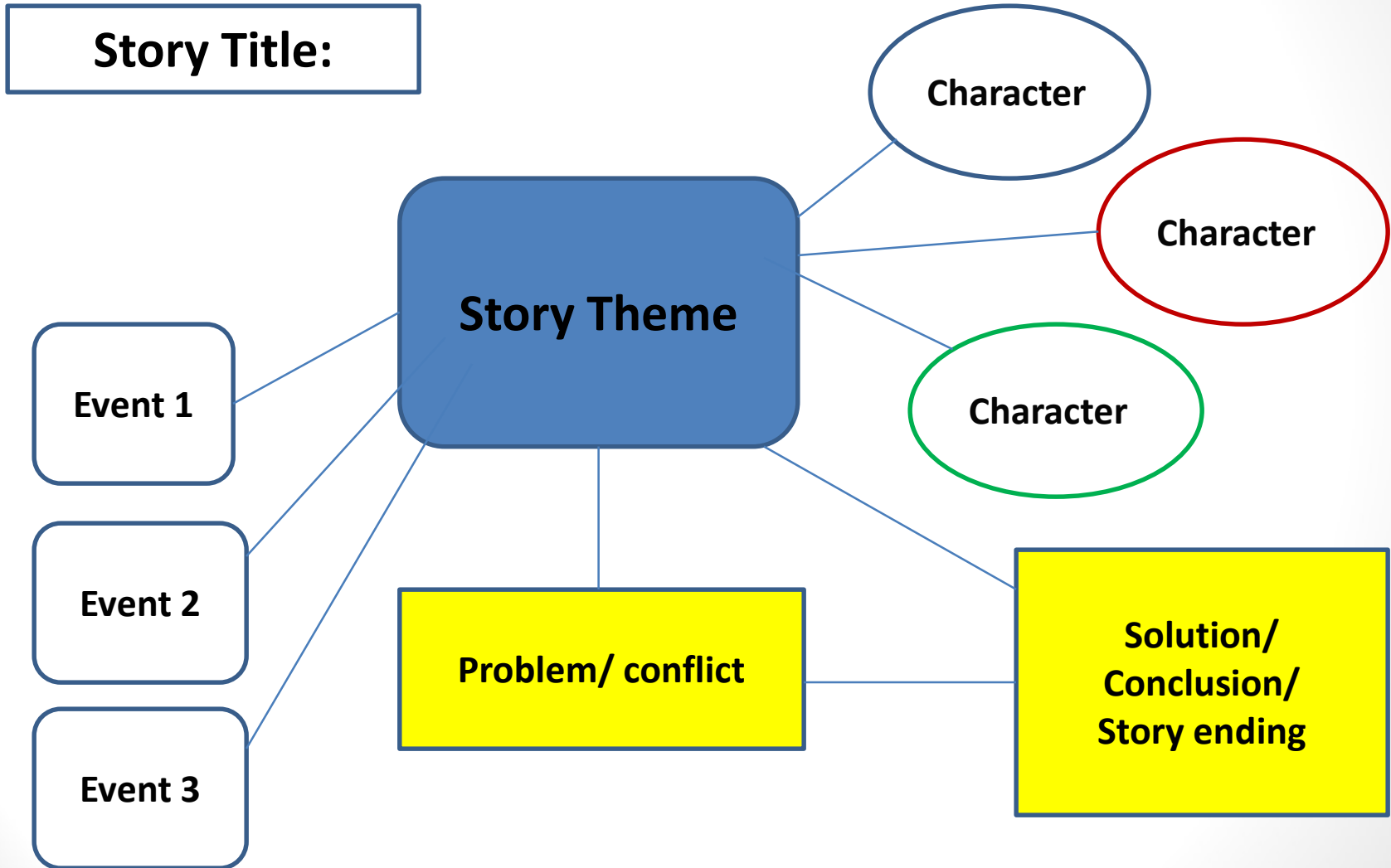
- *Jordan has a diagnosis of autism spectrum disorders. Capable of good verbal skills, he communicates using single words/phrases.*
- *He does not, however, initiate much communication with his peers.*
- *Exhibits tantrum behavior when asked to stop a preferred activity or change to a new activity.*



# UDL Access and Engagement: Learner Scenario - 1

- **What are some tools and techniques that will help Jordan?**
  - Adapted summaries of text
  - Graphic Organizers (Concept map, Venn-diagram, etc.)
  - Writing templates to write stories aided with a word bank
  - Frame sentences to write stories aided with a word bank
  - Drama and Role Play to increase communication with peers
  - Collaborative projects with an assigned peer mentor
  - On-going behavior supports (visual supports - e.g., If-then cards)

# Graphic Organizer/Story map

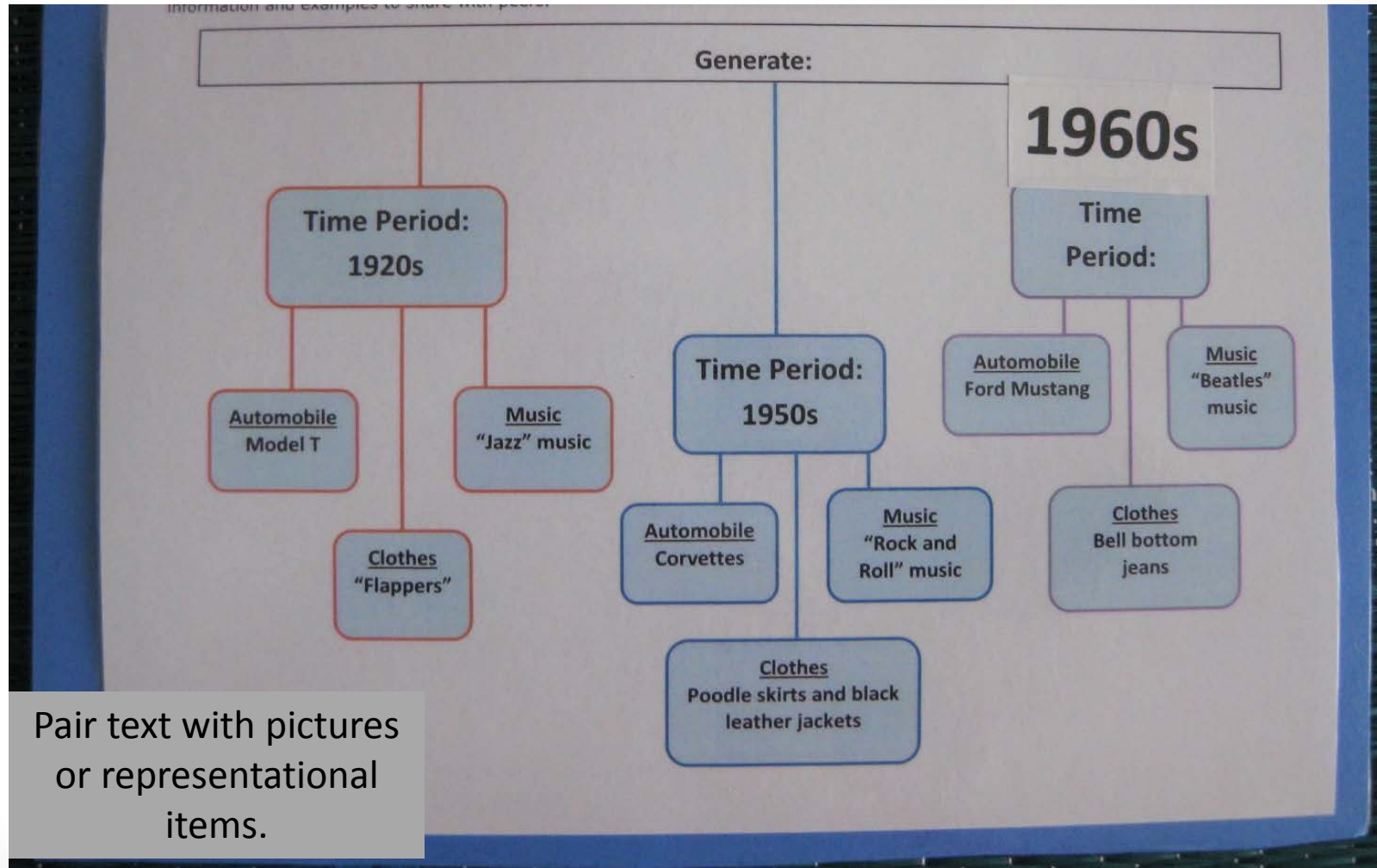


(Adapted from Sarathy, 2017)

Higher Complexity Level

# A Graphic Organizer to present historical information

- Vary demands and resources to optimize challenge.



Pair text with pictures or representational items.

# A Simulated Store

*A collaborative project for learners to pursue. Besides teaching essential real-life mathematics - money skills, the simulated store offers opportunities for learners to role play, communicate and collaborate with each other.*

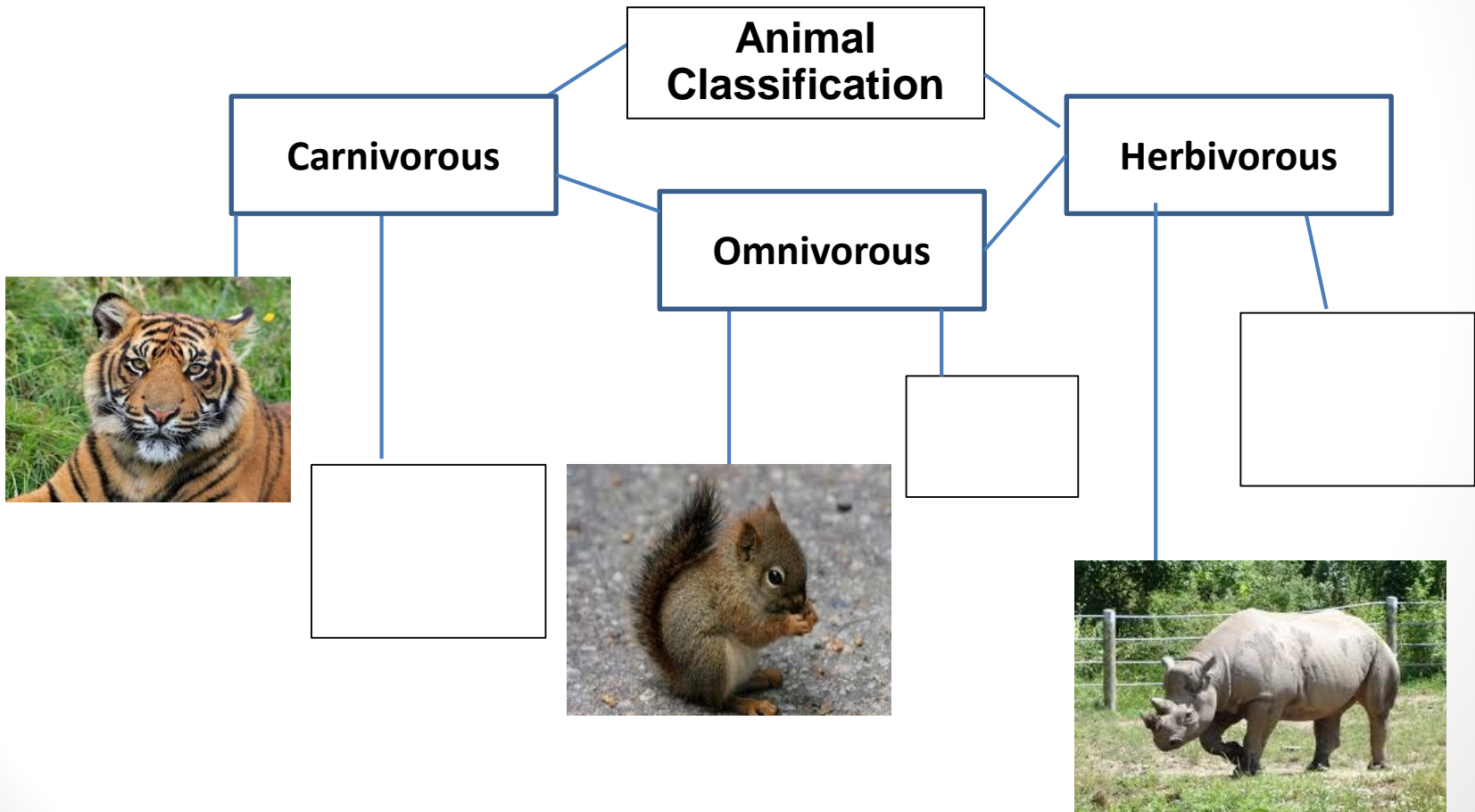


# A T-Chart


**Present a 3-colum chart to make a selection given 3 choices.  
Provide a 2-colum T-chart to identify and list differences  
(e.g., between a mammal and a reptile)**

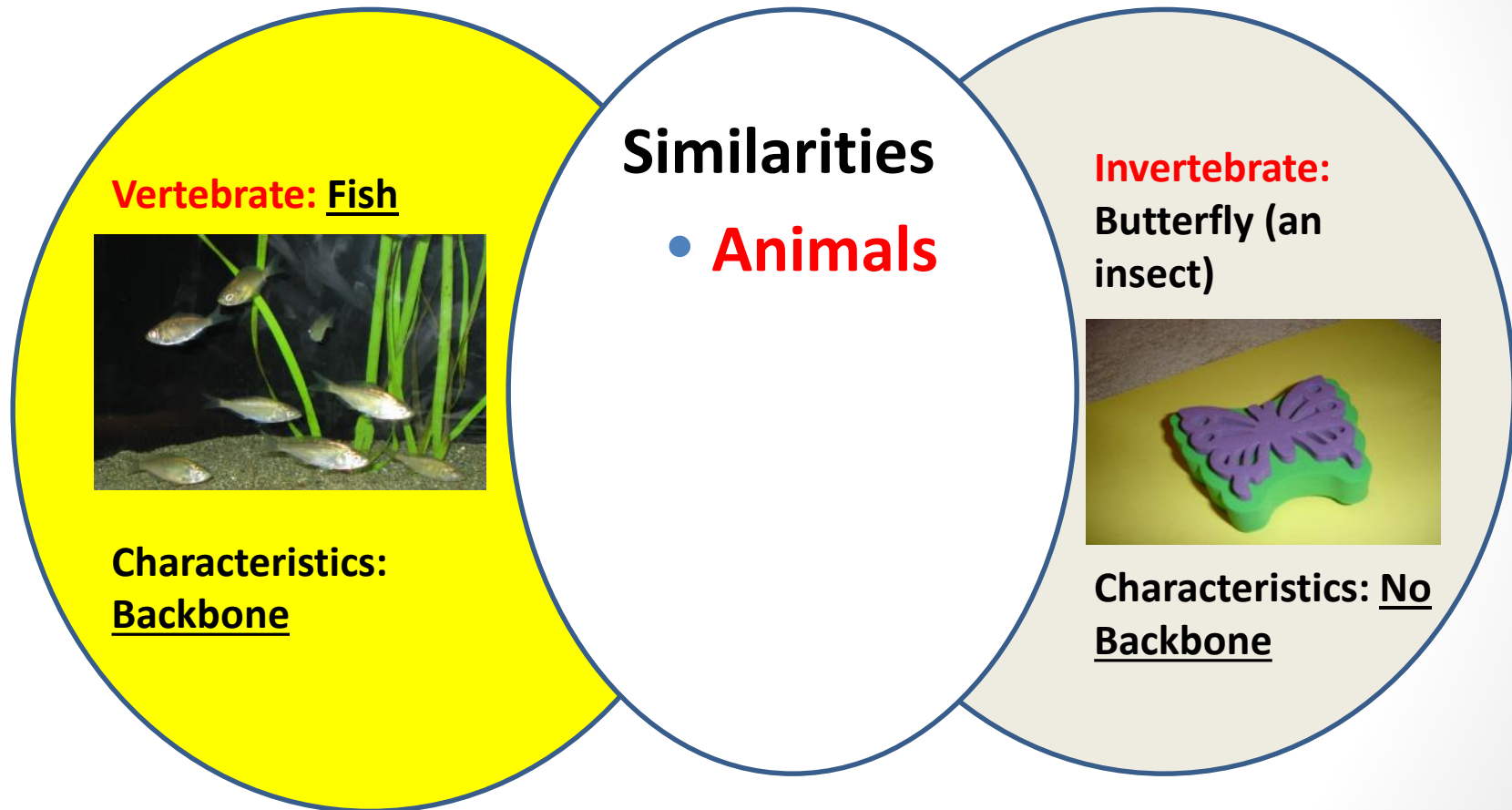
# Learner Engagement: Building Science Knowledge

- Activate prior knowledge with a brainstorming tool to generate discussion on the topic.



# Present concepts using graphic tools –Venn diagram

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



## Differences and Similarities



## *Learner Scenario - 2*

- *Simone has cerebral palsy. Her communication and motor difficulties present challenges in her active participation during academic instruction.*
- *Due to her motor difficulties, she cannot use her wheelchair independently or hold a pencil or crayon.*
- *Friendly by nature, she smiles a lot and appears eager to communicate with adults and peers. She uses a few gestures to communicate and does not speak.*

## *Access & Engagement: Learner Scenario – 2*

- Use of UDL-based approaches that will help Simone **access and engage** during instruction:
  - Use of real concrete items to represent concepts.
  - Presenting limited text and information at a given time.
  - An adapted book fastened with picture/object supports to increase motivation and sustain her engagement
  - Lots of hands-on activities, a choice board (a mini-board) fastened with real items linked to concepts & directing her attention
  - Use of AT for communication and engagement (Proximity switch, iTalk2Communicator, TalkingBrix Communicator, etc.)
  - Adapted cuff to grasp writing tool, spoon, pencil, paint brush, etc.

# Reading/ELA

- Provide curriculum access and address diverse learning styles and needs with a variety of formats.

## *The Giving Tree*



- Prepare an Adapted and Simplified Summary. (*You can try to build stories with Story Maker App: <http://www.carnegielibrary.org/kids/storymaker/>*).
- Create and present a power point presentation. Print out slides and make a book attached with objects.
- Program a Book Worm (AT) with the adapted story.

(Adapted from Sarathy, 2014)

# Create A Word Wall

## Visuals and tactile combined with auditory

- Create a word-photo or word-object wall to teach the vocabulary words. Pair it with auditory output using technology aids.



**wood**



**tree**



**leaves**



**flower**



**apple**



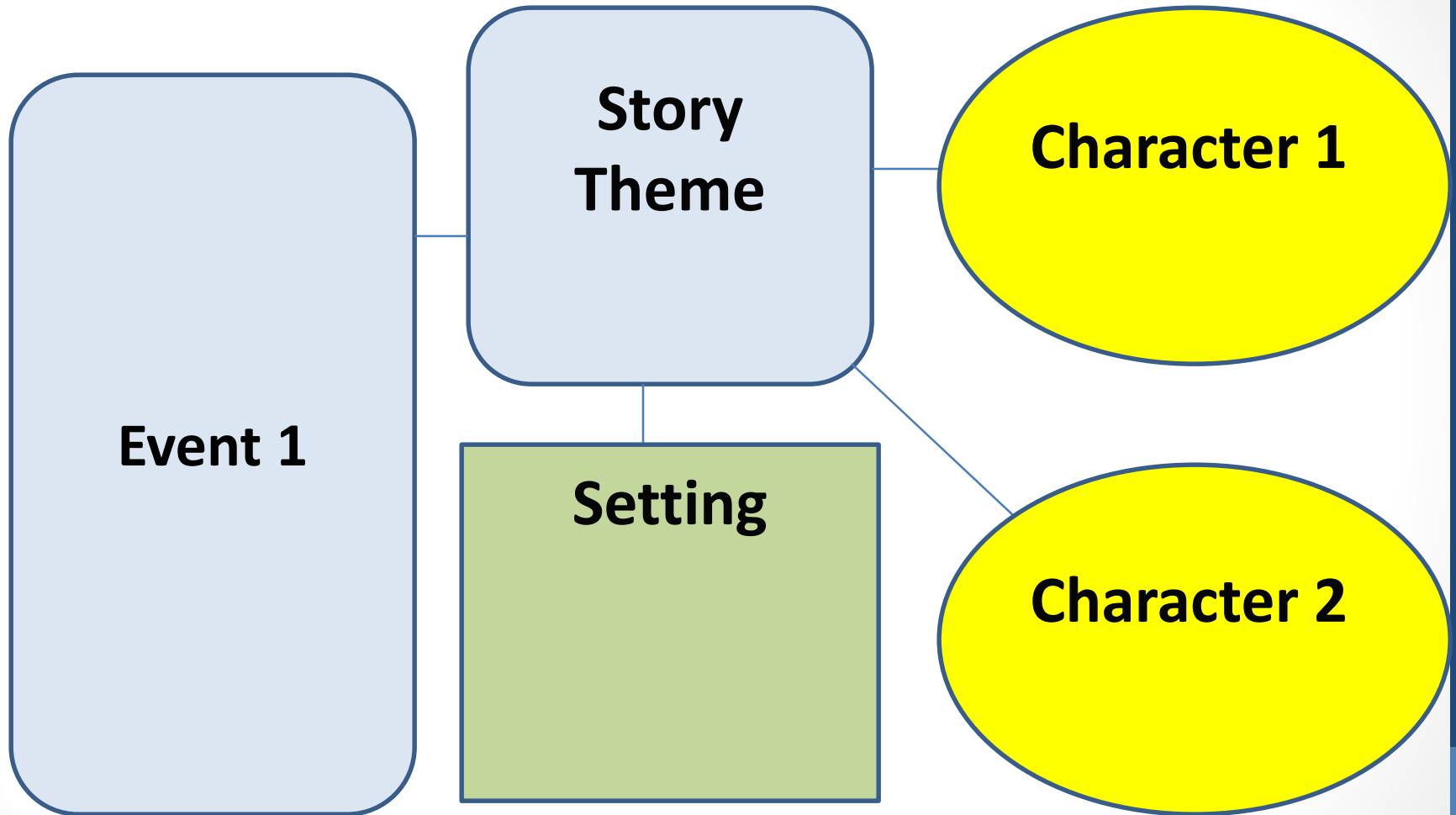
Pair text and photo with auditory output - Talking Brix communicator.

- Link word-wall with the concepts/theme of lesson.
  - Ensure repeated practice to facilitate transfer and recall.

(Adapted from Sarathy, 2014; Sarathy, 2017)

# Story Map Organizer Tool

- **Story title:**



(Adapted from Sarathy, 2014; Sarathy, 2017)

Lower Complexity Level

# Math - Number Sense

Present materials in a variety of ways to reach all learners.



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



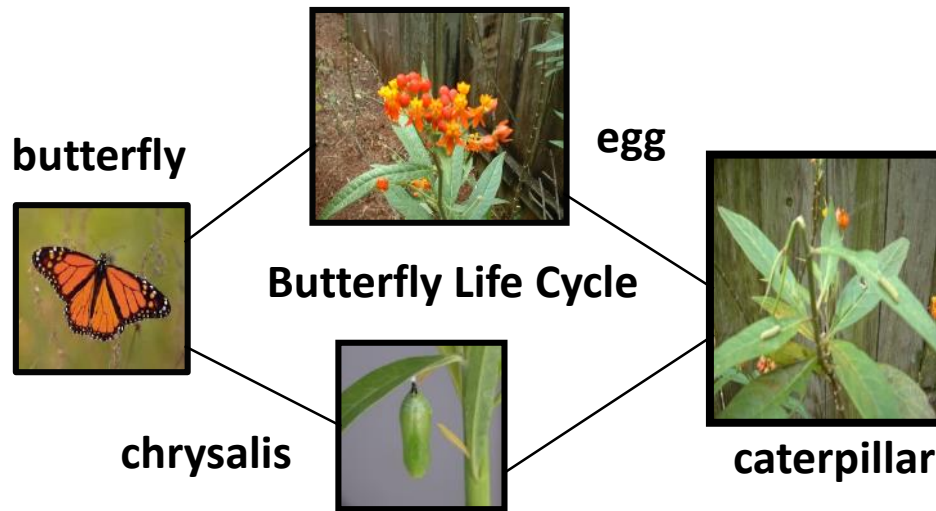
**Numeral and object matching bells in mini-bags (specially for students who may put objects in their mouth) for math activity providing both visual and auditory input**

(Adapted from Sarathy, 2014)

# Present information in multiple formats.

## The caterpillar story

The caterpillar eats and eats... feeding on the leaves of the butterfly bush. It grows large...



Students engage with the caterpillar story manipulating representational pictures/items fastened to the graphic organizer or use a sequence board.

# References and Resources

- Downing, J.E. (2010). Academic instruction for students with moderate and severe disabilities in inclusive classrooms. Thousand Oaks, CA: Corwin
- Parette, H.P., & Blum, C. (2014). Using Flexible Participation in Technology-Supported Universally Designed Preschool Activities, *Teaching Exceptional Children*, 46(3), 60-67.
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# References and Resources

- Sarathy, P. (2017). *Students with Significant Disabilities: At the Crossroads of IDEA and ESSA*. Publisher: LRP Publications ([www.lrp.com](http://www.lrp.com)). A New Resource with lots of UDL examples for implementation, book to be released in February, 2017.
- Link to book:  
[http://www.shoplrp.com/product\\_p/300677.htm](http://www.shoplrp.com/product_p/300677.htm).
- UDL website: (Center for Applied Special Technology (CAST))  
<http://www.cast.org/research/udl/index.html>



# THANKS.

**A special thanks to AbleNet  
University for hosting the webinar**

The AbleNet University webinar UDL- (part 2)  
**Expanding Opportunities for Student Action and Response  
Supported with UDL Application**  
is on March 1st, 2017

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