UDL IN THE PRESCHOOL CLASSROOM

https://www.specialedtechcenter.org/

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TODAY'S OBJECTIVES

❖ Gain an understanding of the key principles of Universal Design for Learning.

❖ Identify ways to provide multiple means of representation, expression and engagement in a preschool classroom.

❖ Explore resources to support implementation of assistive technology tools and UDL principles.
State Needs Projects...

Center for Change in Transition Services

eLearning for Educators

Special Education Support Center

Special Education Technology Center

Washington Sensory Disability Services
SETC Services

- Lending Library
- Technology technical assistance and consultations
- Professional development
- Dissemination of Assistive Technology information

The SETC focuses specifically on the implementation of AT in K-12 classrooms
WHAT IS UDL?

“Universal Design for Learning (UDL) is an educational framework based on research in the learning sciences, including cognitive neuroscience, that guides the development of flexible learning environments that can accommodate individual learning differences.”
WHAT? Multiple Means of Representation
Flexibility in the ways information is presented,

HOW? Multiple Means of Action & Expression
Options for ways in which students respond or demonstrate knowledge and skills.

WHY? Multiple Means of Engagement
Options for the ways students can engaged with content.
KEEPING THE GOAL OF UDL IN MIND

**Increases** flexibility in the ways information is presented, in the ways students respond or demonstrate knowledge and skills, and in the ways students are engaged; and

**Decreases** barriers in instruction, provides appropriate accommodations, supports, and challenges, and maintains high achievement expectations for all students, including students with disabilities and students who are limited English proficient.

DIFFERENTIATION + UDL = SUCCESS FOR ALL

EQUALITY VERSUS EQUITY

In the first image, it is assumed that everyone will benefit from the same supports. They are being treated equally.

In the second image, individuals are given different supports to make it possible for them to have equal access to the game. They are being treated equitably.

In the third image, all three can see the game without any supports or accommodations because the cause of the inequity was addressed. The systemic barrier has been removed.
UDL is “frontloaded” in the initial design of curriculum instead of inserted into the structure of teaching once instruction has commenced. UDL is not a curricular adaptation or modification.
UDL MACHINE
<table>
<thead>
<tr>
<th>Identify Potential Barriers</th>
<th>Representation Expression Engagement</th>
<th>Identify Options &amp; Tools</th>
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MATH GAMES

Multiple Means of Representation and Expression!
Universal Design...

"the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design"

... addresses the needs of **all learners** with accessible design of products + environments (adaptable, flexible features)

Assistive Technology...

“Any item, piece of equipment or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve the functional capabilities of children with disabilities.”

... any **thing** that supports a **child with a disability** to do **something** s/he can’t do with out it
Young Children Are Natural Explorers

Capitalize on naturally occurring learning opportunities!

The most important learning experiences often occur beyond the context of teacher-planned and directed activities (Sandall et al., 2002).
AN INCLUSIVE CULTURE

https://vimeo.com/100662393

Universal Design for Learning and inclusive classrooms

Linda Ojala and Room 3
Silverstream School

Success for All
every school • every child
ENGAGEMENT - RECRUITING INTEREST

• Observe young learners at work
• Think about learners as individuals
• Respect differences
• Give children choices
• Make meaningful connections
• Provide a balance between novel and the familiar
ENGAGEMENT - LEARNING THROUGH PLAY

Play is...
✓ Pleasurable
✓ Intrinsically motivating
✓ Process oriented
✓ Freely chosen
✓ Actively engaging
✓ Creative

A Research Summary on Play and Learning Dr. Rachel E. White
WHAT IMPACTS ENGAGEMENT?
ENGAGEMENT — SUSTAINING ATTENTION
THINGS THAT IMPACT ENGAGEMENT

• Difficulty level
• Perceived success
• Persistence & Resilience
• Groupings of students
• Length of activities
• Distractions – choices of materials and layout
• Environmental set up
UDL APPLIED TO CLASSROOM GAMES
MATH GAME — PETE THE CAT AND HIS FIVE GROOVY BUTTONS

Target Skills:

• Counting to 5
• 1:1 correspondence

Potential Barriers?
<table>
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<th>Identify Potential Barriers</th>
<th>Representation/Expression Engagement</th>
<th>Identify Options &amp; Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential for distraction due to material management</td>
<td>Engagement</td>
<td>Tray for rolling dice</td>
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<td>Container for buttons</td>
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<tr>
<td>Dice only represented one way</td>
<td>Representation</td>
<td>Multiple dice options – dots &amp; numbers, enlarged dice</td>
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<tr>
<td>Response only represented in one way.</td>
<td>Expression/Engagement</td>
<td>Strips with buttons numbers with dots 1-5 (numbers 1-5 too?)</td>
</tr>
<tr>
<td>Students with motor challenges and children with complex bodies would not be able to participate. No low-tech or high-tech way for them to participate</td>
<td>Expression &amp; Engagement</td>
<td>Spinner</td>
</tr>
</tbody>
</table>
TOOLS FOR GAMES: DICE

Apps:
• Dice Roller Simulator
• Dice Roller

https://padlet.com/krleslie12/5tuafisxns6c
TOOLS FOR GAMES SPINNERS

- Carnival Wheel Spinner
- Cardboard DIY prize wheel
- WinSpin
- Winner Spinner
Each young learner processes information differently.

Some will understand and retain it better

by seeing it,

some by hearing it,

some by touching it,

and others will learn best using a combination of means.
EARLY LEARNING EDUCATORS ARE GREAT AT MULTIPLE MEANS OF REPRESENTATION!

Example: LEARNING ABOUT VEHICLES

• **See and Hear:** Hear others singing “The Wheels on the Bus” song along with seeing the teacher’s visuals, listen to teacher reading “Away We Go!” while looking at illustrations in book or on Smart Board (adapted books). Watch a video clip about vehicles. Use an app like Sound Touch that shows a wide range of vehicles.

• **Touch:** Play with vehicles they get from the “magic bag”

• **Move:** Model playing with vehicles - ramps/race tracks/switches with cars/app driven car
MULTIPLE MEANS OF REPRESENTATION

REACH ALL YOUR LEARNERS BY PROVIDING TWO CRITICAL THINGS:

MULTIPLE LEVELS OF COMPLEXITY

AND

MULTIPLE FORMS OF COMMUNICATION
MULTIPLE LEVELS OF COMPLEXITY.

- Model the steps for completing a task while verbally describing them.

- Read a phrase with a key vocabulary word in a storybook and then stop and show a vocabulary picture card, state the word, and define it.

- Repeat and restate key concepts in different ways so that all students understand.

- Break instructions into discrete steps: “First, select the color of paper for your name card. Second, select the first letter of your name from the letters on the table. Third, glue the letter on the first space on the name card.”
COMMUNICATION AND LITERACY

Multiple means of representation

Talking switches with page text recorded

Adapted books

Audio books

Pictello app for storytelling and accessible books

Big Mack for repeated lines
LITERACY AND AAC

Attainment Company

www.attainmentcompany.com/tell-me-program
MULTIPLE FORMS OF COMMUNICATION
VISUAL SUPPORTS

https://www.teachingchannel.org/video/visual-cues-in-the-classroom

This Photo by Unknown author is licensed under CC BY.
MULTIPLE FORMS OF COMMUNICATION EXPRESSION

Core vocabulary board
Caveat for emerging communicators!

Activity based board

https://www.youtube.com/watch?v=DXCnnIAl0oA Video About Making Activity Boards
PARTICIPATION

Step-By-Step with Levels Voice Output

Social Exchanges
Scripted Language
Songs
Knock Knock Jokes
Classroom Routines (weather, calendar, etc.)

AUGMENTATIVE ALTERNATIVE COMMUNICATION (AAC)
MULTIPLE FORMS OF COMMUNICATION EXPRESSION & REPRESENTATION

Visuals created by Bernadette Nguyen, SLP
UDL AND IMAGINATIVE PLAY

https://goalbookapp.com/toolkit/strategy/imaginative-play
MULTIPLE MEANS OF EXPRESSION

Multiple Acceptable Formats for Making Responses

Every learner approaches a lesson differently, so make sure that your activity plans provide multiple options for responding to your questions. These might include verbal responses, gestures, drawing, finger plays, songs, and writing.

Multiple Acceptable Levels of Complexity for Responding

Allow for various levels of complexity and length in your learners’ responses, to reflect and respect their different preferences, strengths, and abilities.
ARE WE PROVIDING MULTIPLE MEANS OF EXPRESSION?

LEARNING ABOUT VEHICLES

- **Create:** Draw and paint and paste together vehicle pictures; write and dictate labels and stories about vehicles

- **Verbalize using technology:** Record personal vehicle stories (model then the kids record.) Low tech or high tech

- **Manipulate:** Sequence vehicle stories. Put together duplo vehicles

(Think about the objective, then provide choices for expression. Remember the UDL Machine)
EXPLORE AN AREA OF INTEREST

UDL Related Articles

- Creating engaging learning environments
- UDL & Out-door Play
- Integrating Principles of UDL in Early Childhood (curriculum)
- UDL & Toy Selection

Highlight 3 take-aways
10-MINUTE BREAK
SHARE YOUR TAKE-AWAYS
Top 10 UDL Tips for Designing an Engaging Learning Environment
Integrating Principles of Universal Design Into the Early Childhood Curriculum

How can teachers of young children ensure that ALL children have meaningful opportunities to learn? Implement these recommendations that have shown to be effective in today's diverse learning settings.

Laurie A. Dinnebeil, Mary Boat, and Youlmi Bae
UDL AND OUTDOOR PLAY
PLAY AND TOY SELECTION
KEEPING UDL PRINCIPLES IN MIND
| UDL Principle                | Principle Definition                                                                                                                                                                                                 | Design Applied to toy                                                                                                                                                                                                 | Toy Example |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| 1. THE TOY IS APPEALING    | The design appeals to children’s sensory (sound, vision, touch) abilities & preferences. The design communicates necessary information effectively, regardless of the user's sensory abilities. | Use multiple modes (visual, sound and texture) to highlight access and differentiate responses.                                                                                                                                                                                   | ![Image](image.jpg) |
### UDL PRINCIPLES OF PLAY WHEN CONSIDERING TOYS

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<td>2. HOW TO PLAY WITH THE TOY IS CLEAR</td>
<td>A simple design makes a toy’s use easy to understand regardless of the user’s experience, knowledge, language skills, or current concentration level</td>
<td>Non-complex, intuitive designs are best; e.g. well defined access areas with consistent responses. Controls should be obvious and accessible.</td>
<td><img src="image" alt="Toy Example" /></td>
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<td>3. THE TOY IS EASY TO USE</td>
<td>All children can use equivalent ways for playing with the toy. Physical effort is minimized. The design is useful and marketable to children with diverse abilities. The design can be used efficiently and comfortably with a minimum of fatigue.</td>
<td>All children should use the same/equivalent means of access when playing with the toy. The access and output features of the toy should appeal to a variety of interests and needs of all children. Physical effort should be minimized with light to moderate force for</td>
<td><img src="image1.png" alt="Image of a set of colorful toys" /></td>
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<tr>
<td>Equitable Use Low Physical</td>
<td></td>
<td></td>
<td><img src="image2.png" alt="Image of a bath toy" /></td>
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<td>Flexible Use Size and Space for Approach and Use</td>
<td>A variety of actions can be used to play with the toy. It can be used in different positions; the toy can adjust to the child. The design accommodates a wide range of individual preferences and abilities. Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user’s body size, posture, or mobility.</td>
<td>The toy includes adaptable features for a range of users. Output is varied; e.g. light + sound, vibration + sound, etc. or output can be controlled; e.g. volume + light control, height, etc. Toy can be used in a variety of positions (sitting, standing, playing on the floor or on a supporting surface). Toys with flat bottoms are most stable. Buttons, levers, etc. are positioned appropriately for reach.</td>
<td><img src="image" alt="Toy Example" /></td>
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<td>5. THE TOY PROMOTES DEVELOPMENT</td>
<td>The toy is interesting to the child. It is easy to use yet encourages exploration and discovery. It is challenging and fun!</td>
<td>The toy encourages imagination and social play. It promotes discovering new ways to play (i.e. cause/effect, building, pretending) and stimulates physical or mental activity.</td>
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<tr>
<td>6. THE TOY CAN BE PLAYED WITH IN DIFFERENT WAYS</td>
<td>The toy appeals to children at varying play stages and abilities. It promotes use for more than one purpose.</td>
<td>Toy appeals to individuals at varying age + developmental levels. It is appropriate for several ages. The toy promotes use in more than one way (e.g. bug jar can be a shape bucket, a “pool” for dolls, a “purse” or “tool box”)</td>
<td><img src="image" alt="Toy Example" /></td>
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Universal Design Principles for Play:

National Association of the Education of Young Children:
https://www.naeyc.org/resources/topics/play

Universal Design for Learning in Early Childhood Inclusive Classrooms:
RESOURCES

Universal Design for Learning and Outdoor Play


Universal Design for Learning and Imaginative Play

Adapted books from PrAACticalAAC.org: https://praacticalaac.org/strategy/literacy-for-everyone-through-adapted-books/

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UDL is not just for children with disabilities; it also supports the diversity of learners found in classrooms today.

From Engaging Young Engineers, by Angela Stone-MacDonald, Kristen B. Wendell, Anne Douglass, & Mary Lu Love

If you just provide content in **one way**, only the students who can obtain access to it in that way will benefit from it.

*From Universal Design for Learning in Action, by Whitney Rapp*

UDL IS NOT A CHECKLIST OF THINGS TO DO. IT'S A NEW LENS FOR THINKING ABOUT EVERYTHING [YOU] DO.

Your UDL Lesson Planner. by Patti Kelly Rattabi
Brookes Publishing Co. | www.brookespublishing.com
>> Learn more: bit.ly/UDLplanner