

Making Space:

Using Universal Design for Learning (UDL) to Create Accessible and Inclusive Environments for Students with Neurodevelopmental Disorders (NDD)- Part 2

Agenda

Part 1 (morning)

- Objectives
- Introduction
- General Access and Barriers
- NDD
- Intro to UDL
- UDL framework
- UDL and NDD

Part 2 (afternoon)

- Welcome
- UDL Test
- UDL & Goal Setting
- UDL in practice
- Lesson Audits
- Case Practice
- Summary
- Questions

Objectives

Following this session, participants will leave with:

1. ...an understanding of the primary **elements of UDL** and how it can **enhance learning** for you, your students, and your colleagues and staff. (Part 1 & 2)
2. ...knowledge of the links between **support needs** of individuals with neurodevelopmental disabilities and **UDL components**. (Part 1)
3. ...ideas of how to **incorporate UDL** into your daily practice (Part 2)

Test Yourself

1. Should classroom lecture be used in instruction?
 - a. Yes, it has been proven over time to be effective
 - b. No, it is no longer an effective approach to teach
 - c. Sometimes, it can be effective when paired with other modes
2. Which is not a main component of UDL?
 - a. Motivation
 - b. Representation
 - c. Engagement
 - d. Action & Expression

3. Which of the following UDL component includes: Physical Action, Expressive Skills & Fluency, Executive Function
 - a. Engagement
 - b. Representation
 - c. Action & Expression
4. Which of the following UDL component includes: Recruiting Interest, Sustaining Effort and Persistence, & Self-regulation
 - a. Engagement
 - b. Representation
 - c. Action & Expression
5. Which of the following UDL component includes: Perception, Language, Expressions, & Symbols, Comprehension
 - a. Engagement
 - b. Representation
 - c. Action & Expression

Reflect

Take a minute to reflect on what you know and understand about UDL thus far.

- What have you learned?
- What do you want to know more about?

UDL & Goal Setting

- Goal importance
 - guides instruction
 - content
 - materials
 - activities
 - guides support/ allows for adaptation



Goal comparison

- A. Demonstrate understanding of the process, photosynthesis
 - B. Write a 5 paragraph paper describing the process of photosynthesis
-
- A. Write a persuasive essay
 - B. Handwrite a 2-page persuasive essay on recycling
-
- A. Demonstrate ability to simplify fractions (e.g., $6/8=3/4$)
 - B. Take an exam on simplifying fractions

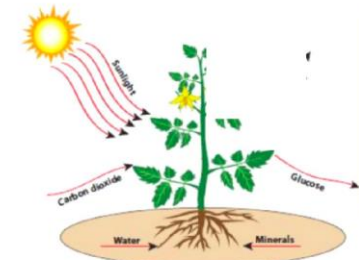
Goal: Demonstrate understanding of the process, photosynthesis

Demonstrate

- Write a paper describing the process including all key components
- Fill in a worksheet about the process
- Create a stop-action animation about the process
- Teach a simple photosynthesis lesson to a peer
- Design an experiment about photosynthesis

WHAT IS PHOTOSYNTHESIS?

Complete the paragraph using the words from the word box.



Oxygen
Sunlight
Glucose
Photosynthesis
Chloroplast
Water
Chlorophyll
carbon dioxide

_____ is the process by which plants produce their own food in the presence of _____, _____ and _____. Photosynthesis occurs in the organelle called _____ that's only found in plants. Plants contain a green pigment called _____ that absorbs sunlight. Energy from the sun, carbon dioxide from the atmosphere and water absorbed by the roots react to produce _____ that plants need to survive. _____ is a gas that is released into the environment for animals and humans to breathe.

LIVEWORKSHEETS

Sturdy, Clear, and Flexible Goals

Sturdy= strongly built

Clear= easy for various people to understand

Flexible= able to bend without breaking



NDD refresher

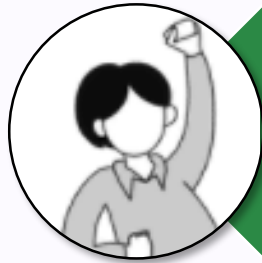
examples: attention-deficit hyperactivity disorder (ADHD), autism spectrum disorder (ASD), communication disorders, specific learning disorder, motor disorders and intellectual disability

Individuals often have difficulty with:

- Internal motivation/ engagement or initiation in planned learning tasks
- Taking in, understanding, synthesizing information via text, verbalization, or representative images
- Expressing their full understanding/ knowledge of course content

UDL Basic Elements

Multiple means of...



Engagement



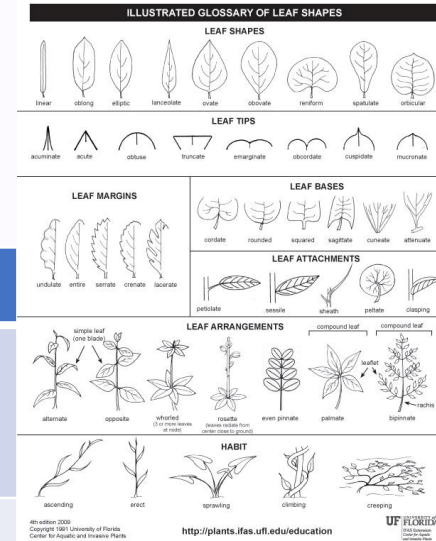
Representation



Action & Expression

Sample Brief Lesson Plan

Component	Details
Goal	Identify trees by their leaf (e.g., oak/ Ek; birch/ Björk; maple/ Lönn)
Introduction	<ul style="list-style-type: none"> • Different trees have different habitats and uses • Identifying trees can be helpful in understanding habitat and lumber usage
New Challenge	<ul style="list-style-type: none"> • Leaf characteristics can be used to identify trees • Practice using identification chart with one leaf
Summary	<ul style="list-style-type: none"> • Students practice identifying another leaf in groups
Application/ Evaluation	<ul style="list-style-type: none"> • Students collect leaves from home and identify
Evaluation	<ul style="list-style-type: none"> • Students take leaf identification test



Multiple Means of Engagement

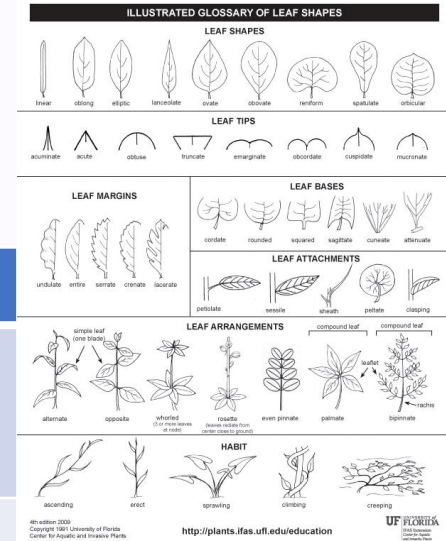
Recruiting Interest	Sustaining Effort and Persistence	Self-Regulation
Optimize individual choice and autonomy	Heighten salience of goals and objectives	Promote expectations and beliefs that optimize motivation
Optimize relevance, value, and authenticity	Vary demands and resources to optimize challenge	Facilitate personal coping skills and strategies
Minimize threats and distractions	Foster collaboration and community	Develop self-assessment and reflection
	Increase mastery-oriented feedback	



Engagement

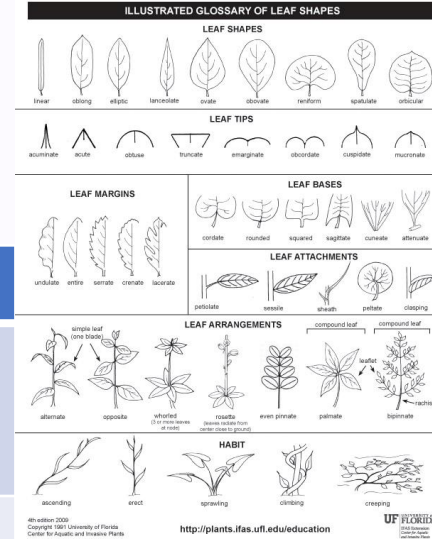


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Multiple Means of Representation

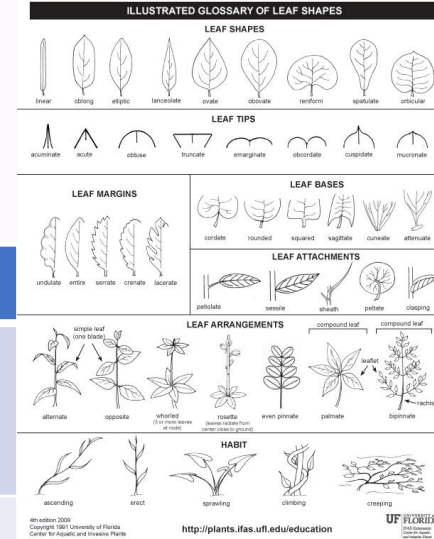
Perception	Language, Expressions, & Symbols	Comprehension
Offer ways of customizing the display of information	Clarify vocabulary and symbols	Activate or supply background knowledge
Offer alternatives for auditory information	Clarify syntax and structure	Highlight patterns, critical features, big ideas, and relationships
Offer alternatives for visual information	Support decoding of text, mathematical notation, and symbols	Guide information processing, visualization, and manipulation
	Promote understanding across languages	Maximize transfer and generalization
	Illustrate through multiple media	



Representation

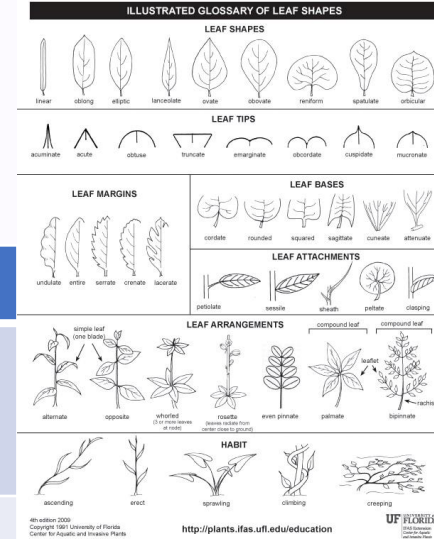


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Multiple means of Action & Expression

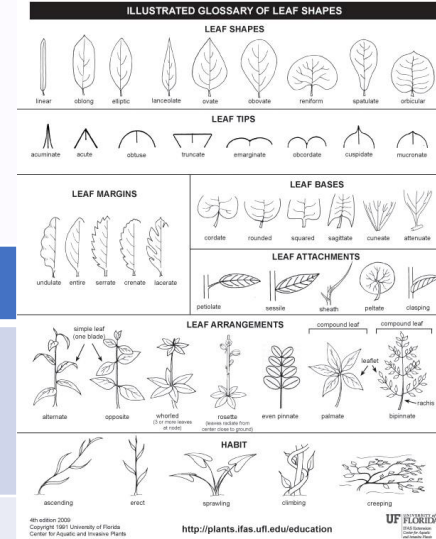
Physical Action	Expression & Communication	Executive Function
Vary the methods for response and navigation	Use multiple media for communication	Guide appropriate goal setting
Optimize access to tools and assistive technologies	Use multiple tools for construction and composition	Support planning and strategy development
	Build fluencies with graduated levels of support for practice and performance	Facilitate managing information and resources
		Enhance capacity for monitoring progress



Action & Expression

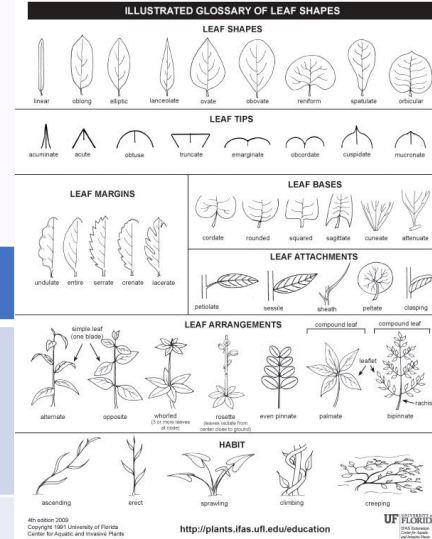


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UDL and rubrics

UDL: You are a new teacher at Main Street (Elementary/Middle/ High) School. You mentioned the benefits of inclusion within the Universal Design for Learning framework during your interview. The principal, Ms. Bond, was very intrigued and wants to know more. With your group, design a project (open-ended) showing how you would explain UDL to your principal including the rationale, structure, and benefits in a way that would convince her to implement it school wide.

	Insufficient					Partial						Sufficient-Excellent								
Rationale	Justification is neither clear nor concise AND/OR includes only one of the following points: brain basics, learner differences, & the need for flexible media					Justification is either clear or concise (not both) AND/OR includes all but one of the following points: brain basics, learner differences, & the need for flexible media						Includes a clear and concise justification for UDL including the following points: brain basics, learner differences, & the need for flexible media								
																	0	2	4	6
Structure	Description and basic ideas of UDL are neither clear nor concise AND/OR includes only one of the following: UDL origins, the three principles, & UDL application					Description and basic ideas of UDL are either clear or concise (not both) AND/OR includes all but one of the following: UDL origins, the three principles, & UDL application						Includes a clear and concise description of UDL and the basics of how it works including: UDL origins, the three principles, & UDL application								
																	0	2	4	6
Benefits	Case is neither clear nor persuasive AND/OR includes only one of the following: benefits for ALL students, benefits for teachers, & benefits for the school					Case is either clear or somewhat persuasive (not both) AND/OR includes all but one of the following: benefits for ALL students, benefits for teachers, & benefits for the school						Includes a clear and persuasive case for implementing UDL in a school including: benefits for ALL students, benefits for teachers, & benefits for the school								
																	0	1	2	3
Organization	Project includes only one of the following: appropriate transitions between ideas, apparent shared input and effort, a clear and cohesive message					Project includes all but one of the following: appropriate transitions between ideas, apparent shared input and effort, a clear and cohesive message						Project is well organized including appropriate transitions between ideas, apparent shared input and effort, a clear and cohesive message								
																	0	1	2	3
Overall Design/Enthusiasm	Project sufficiently addresses only one of the following: fits the task well, evidence of topic knowledge, and evidence topic interest in regards to future teaching					Project sufficiently addresses all but one of the following: fits the task well, evidence of topic knowledge, and evidence topic interest in regards to future teaching						Project as a whole fits the task well, includes evidence of topic knowledge, and contains evidence topic interest in regards to future teaching								
																	0	1	2	3

Examples from an open-rubric

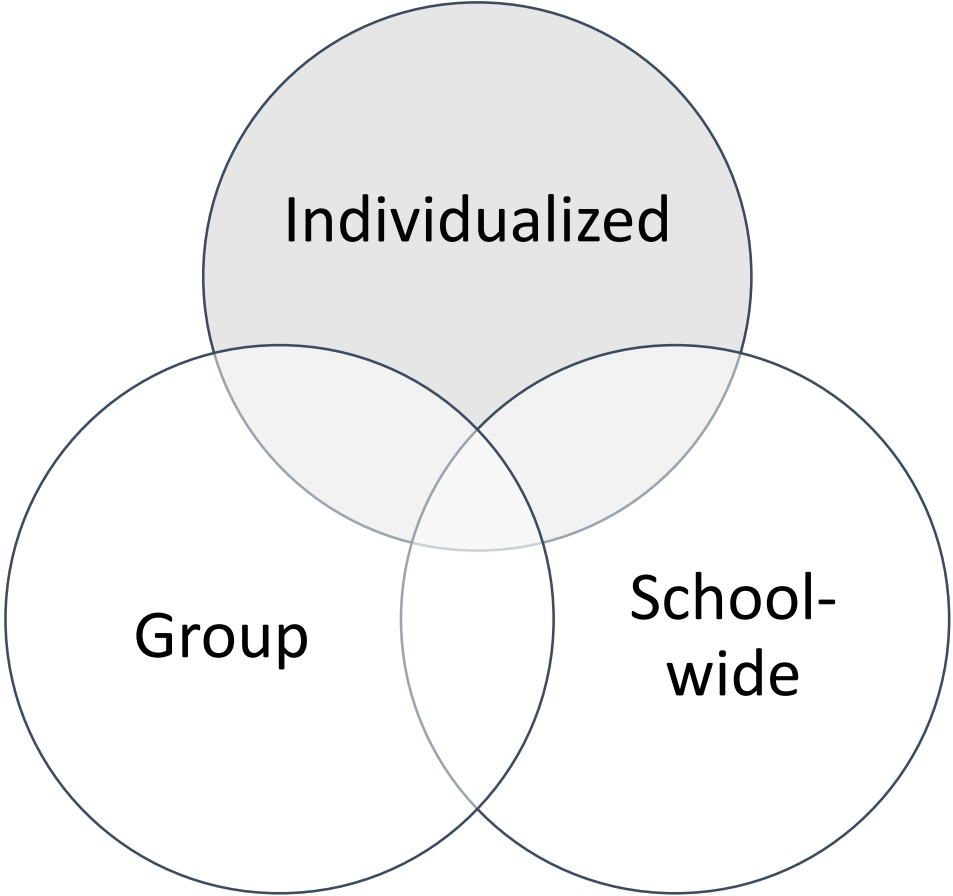
Disability:Other Health Impairment

Measureable Objective for Learning:By the end of our Presentation Plan students will be able to recognize qualifiers of Other Health Impairments, and recognize/describe two different types of OHI with 90% accuracy.

Time Allotted	Activity	Person Responsible	Materials
10	<p>Lecture- Defining/describing OHI, types of OHI will be defined and educational implications for the teacher will discussed</p> <p>Representation:Powerpoint</p> <p>Expression:Overview of OHI, such as definitions, examples, implications</p> <p>Engagement:Students will gain understanding of OHI that they may come across in the classroom</p>	Tori Andrea	Powerpoint First Sheet
5	<p>Split Lecture- Split class into two groups- Each group learning about a specific OHI, including characteristics and implications</p> <p>Representation:Posters</p> <p>Expression:Specific knowledge of Tourette's syndrome and ADHD by splitting the class into two groups</p> <p>Engagement:Students will be split into two groups then be told that they will have to teach their specific OHI to a member from the other group</p>	Tori Andrea	P T S A
5	<p>Activity- Each student will find a partner and educate them on the other OHI</p> <p>Representation:Students will learn auditory information from one another</p> <p>Expression:Facilitate managin information and resources by learning from one another</p>	Students	



Tools for Inclusion and Accessibility



Summary

- Importance of clear, sturdy, and flexible goals
- UDL is about initial design of lesson/ activity for wide accessibility
 - But, start with what you have and identify existing UDL
 - Look for gaps
 - Add more UDL components to fill gaps
 - *work with a partner to share ideas and resources
- UDL incorporation is a progression
- For student and adult learning
- UDL-centric instructional skills build stronger practice

Objectives

Following this session, participants will leave with:

1. ...an understanding of the primary **elements of UDL** and how it can **enhance learning** for you, your students, and your colleagues and staff
2. ...knowledge of the links between **support needs** of individuals with neurodevelopmental disabilities and **UDL components**.
3. ...ideas of how to **incorporate UDL** into your daily practice

UDL Resources

UDL in general: <https://udlguidelines.cast.org/>

- Engagement: <https://udlguidelines.cast.org/engagement>
- Representation: <https://udlguidelines.cast.org/representation>
- Action & Expression: <https://udlguidelines.cast.org/action-expression>

CAST Books on UDL:

https://publishing.cast.org/?utm_source=castsite&utm_medium=web&utm_campaign=none&utm_content=resources

UDL på Svenska:

- <https://udlguidelines.cast.org/binaries/content/assets/udlguidelines/udlg-v2-2/udlg-graphicorganizer-v2-2-svenska.pdf>
- <https://udlguidelines.cast.org/binaries/content/assets/udlguidelines/udlg-v2-2/udl-text-version-swedish.pdf>

Questions and Discussion

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