







## **Universal Design for Learning (UDL)**

Reduces barriers in curriculum design and instruction and provides appropriate supports and challenges through:

- 1. Flexible ways information is presented,
- 2. Flexible ways students <u>respond</u> or <u>demonstrate</u> knowledge and skills, and
- 3. Flexible ways students are <u>engaged</u> with curriculum and learning.



## **Curriculum designed with flexibility in:**

- Goals
  - the knowledge, concepts, and skills all students should master
- Assessment
  - Removing barriers to accurate measurement of knowledge and skills
- Teaching Methods
  - decisions, approaches, procedures, or routines that expert teachers use to accelerate or enhance learning
- Materials
  - media used to present learning content and what the learner uses to demonstrate knowledge







<b>Recruiting interest</b> Spark excitement and curiosity for learning	Sustaining effort and persistence Tackle challenges with focus and determination	<b>Self regulation</b> Harness the power of emotions and motivation in learning.
Optimize individual choice and	Heighten salience of goals and	Promote expectations and
autonomy	objectives	beliefs that optimize motivation
Optimize relevance, value, and	Vary demands and resources to	
authenticity	optimize challenge	Facilitate personal coping skills and strategies
Minimize threats and	Foster collaboration and	
distractions	community	Develop self-assessment and reflection
	Increase mastery-oriented	
linders	feedback	



We are	Entering Class	Teacher-led Whole Group Instruction	One-on-One Instruction	Small-Group Activities (Breakout Rooms)
Safe	Choose a distraction- free space     Use equipment     as intended     Use kind words     and faces	<ul> <li>Ask in chat if you need help</li> <li>Use kind words and faces</li> </ul>	Use kind words and faces	Use "stop-leave-talk" when you hear disrespect     Encourage others to participate     Use kind words and faces
Respectful	<ul> <li>Video on at all times</li> <li>Audio off</li> <li>Use chat with classmates for first 5 minutes</li> </ul>	<ul> <li>Video on at all times</li> <li>Audio off</li> <li>Answer questions in chat box on cue</li> <li>Answer polls promptly</li> </ul>	<ul> <li>Video on at all times</li> <li>Audio on</li> <li>Listen attentively</li> <li>Answer questions out loud on cue</li> </ul>	<ul> <li>Video on at all times</li> <li>Audio on</li> <li>One speaker at a time: wait or use chat to respond when others are talking</li> <li>Respect others' cultures, opinions, and viewpoints</li> </ul>
Responsible	Be on time and ready to learn     Start class charged or plugged in     Have materials ready	Ask questions (voice or chat) when you have them     Be present – avoid multitasking	<ul> <li>Ask questions out loud when you have them</li> <li>Try your best</li> <li>Be present - avoid multitasking</li> </ul>	Encourage each other to stay on topic     Complete the work together     Use 'Ask for Help' button if you have questions     Be present - avoid multitasking

<b>Perception</b> flexible content that doesn't depend on a single sense like sight, hearing, movement, or touch.	Language & Symbols Communicate through languages that create a shared understanding.	<b>Comprehension</b> Construct meaning and generate new understandings.
Offer ways of customizing the display of information	Clarify vocabulary and symbols Clarify syntax and structure	Activate or supply background knowledge
Offer alternatives for auditory information	Support decoding of text, mathematical notation, and symbols	Highlight patterns, critical features, big ideas, and relationships
Offer alternatives for visual information	Promote understanding across languages	Guide information processing and visualization
Flinders	<u>Illustrate through multiple</u> media	Maximize transfer and generalization

Physical Action Interact with accessible materials and tools.	<b>Expression &amp; Communication</b> Compose and share ideas using tools that help attain learning goals.	<b>Executive Functions</b> Develop and act on plans to make the most out of learning.
Vary the methods for response and navigation	Use multiple media for communication	Guide appropriate goal-setting
		Support planning and strategy
Optimize access to tools and assistive technologies	Use multiple tools for construction and composition	<u>development</u>
		Facilitate managing
	Build fluencies with graduated levels of support for practice	information and resources
	and performance	Enhance capacity for
		monitoring progress



## What is differentiation?

How can it be applied in face-to-face and online learning environments?

Where does UDL fit with differentiation?

# Differentiation is NOT... Simply "different" activities or assignments Individualised assignments for each student Only for students with specific "labels" Static ability grouping 'Watering down' the curriculum Only reactive adjustment Evident in every activity on every day A particular strategy or set of strategies A new idea! (or an isolated initiative)

## Differentiation

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"It means that teachers proactively plan varied approaches to **what** students will learn, **how** they will learn it, and/or **how they will show** what they have learned, **in order to increase the likelihood that each student will learn as much as he or she can, as efficiently as possible.**"

Tomlinson, C. A. (2003). *Fulfilling the promise of the differentiated classroom*. Alexandria, VA: ASCD.

	<b>3 Pillars of Differentiation</b>						
	PHILOSOPHY		PRINCIPLES		PRACTICES		
	<ul> <li>Embracing responsibility for the <u>progress of every</u> <u>learner</u></li> <li>Teaching students based on where they <u>are</u>, instead of where they <u>should be</u></li> <li>Approaching teaching with a growth mindset</li> <li>Recognising and <u>removing</u> <u>barriers to inclusion</u> for marginalised students</li> </ul>		<ul> <li>High quality curriculum with clear learning goals</li> <li>Inclusive, growth-oriented learning environment</li> <li>Ongoing assessment to inform planning and teaching</li> <li>Flexible grouping &amp; classroom practices</li> <li>Respectful &amp; challenging tasks</li> </ul>		<ul> <li><u>Proactively</u> planning to address differences in students' readiness, interest &amp; learning profile characteristics</li> <li>Collaborating to support students with special educational needs</li> <li>Productive strategies and routines for leading and managing diverse classrooms</li> </ul>		
Flinders Jarvis, J. (2015). Inclusive classrooms and differentiation. In <i>Learning to Teach in the Secondary School</i> (pp. 154-171). Cambridge University Press.							



# What do we know about students & learning?

Readiness	Learning Profile Characteristics
Learning experiences must provide appropriate challenge (and appropriate support) given each student's current knowledge, understanding and skill in order to facilitate learning	<ul> <li>Providing a balance between different ways of working allows students to draw on their relative strengths and preferences to facilitate access to curriculum</li> </ul>
nterests	Learning Environment
Attending to students' current and developing interests may facilitate <b>motivation</b> and capitalise on	<ul> <li>Effective learning is more likely to occur when students feel safe, supported, and valued, and when the focus is on personal growth rather than performance relative to others.</li> </ul>





Provide a **meaning-rich curriculum** that is designed to engage learners and built around **clearly articulated learning goals** known to both teacher and students. Use **persistent formative assessment** to ensure that teacher and students alike are aware of student status relative to the specified learning goals, and that teacher and students alike know what next steps are most likely to propel a given learner forward.

## **Key principles of differentiation**

Offer each student a positive, secure, challenging, and supportive learning environment.

Work with students to create and implement classroom management routines that allow both predictability and flexibility. Plan learning experiences based on formative assessment information to attend to whole-class, small-group, and individual differences in readiness, interest, and approach to learning.



Tomlinson, C. A., & Murphy, M. (2015). Leading for Differentiation: Growing Teachers who Grow Kids. Alexandria, Virginia: Association for Supervision and Curriculum Development.

3 Strategies and Practices for a Differentiated Learning Environment



# **#1: Develop quick, efficient formative assessment routines to inform differentiation**

Preassessment	Formative Assessment	Summative Assessment	
<ul> <li>Where is each student starting out in relation to the learning objectives?</li> <li>What are the different points of entry among the group of students, and what does this mean for my planning?</li> <li>What interests do students bring to this topic that I could draw</li> </ul>	<ul> <li>How are <i>individual</i> students progressing in relation to the learning objectives?</li> <li>To what extent are <i>individual</i> students working at appropriate levels of challenge?</li> <li>How can I adjust learning tasks, groups, and/or resources to provide a better fit for individual</li> </ul>	<ul> <li>To what extent did each student achieve the learning objectives?</li> <li>To what extent did each student show progress/ growth through the unit?</li> <li>How can I use this information to plan future learning opportunities?</li> </ul>	
upon to "hook" them into the unit?	students and to address patterns of need?	Adapted from Tomlinso	







Exit Card Examples: Definitions						
•	In your own words, define <b>irony.</b>	<ul> <li>In your own words, define opportunity cost.</li> </ul>				
•	Give an example of irony from something we read last term.	<ul> <li>Give an example of opportunity cost at work in your own life.</li> </ul>				
•	Give an example of irony from politics or the media.	<ul> <li>Why is the concept of opportunity cost so important to understanding Economics?</li> </ul>				
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## Science

- Draw a diagram to show the life cycle of a butterfly. Label all the parts of your diagram.
- OR Put these pictures in order to show the life cycle of a butterfly
- OR Place the labels onto the correct stages in the diagram...

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## Using Technology to Support Formative Assessment

What opportunities can you see to leverage technology to support your ongoing assessment of students *in a way that can inform differentiation*?

- Watch and respond to a lecture or video online (forum post, blog entry, video diary, quick quiz, complete a graphic organiser on a fillable pdf)
- Complete a survey about personal interests and preferences (GoogleForms, SurveyMonkey, etc.)

https://www.youtube.com/watch?v=2Y0Gm02XGis

- Students show and explain a piece of work in a short video
- Set up polls

https://www.educatorstechnology.com/2018/02/17-of-best-surveys-and-polls-creation.html

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# #2: Differentiate when selecting resources for a unit of work

Collect a range of texts and resources reflecting...

- different levels of complexity
- different interests
- different formats/ text types related to common concepts or content

This is a great opportunity to expose advanced students to new text types, complex ideas, advanced language, etc.

In an online environment, this is where you can include links, videos, podcasts, images, more foundational readings, more advanced readings, etc.



## Plan differentiated supports...

PIE CHART

**Product cards** can be kept in a designated place in the room to remind students of the elements and quality criteria of a product they may be working on independently.

- Tip sheets
- FAQs
- Worked examples (at different levels)
- Instructional videos or audio
- 'Think aloud' demonstrations
- Glossaries
- Range of graphic organisers
- Mini-workshops
- Highlighted texts
- 'Fill in the blanks' notes

Parts	Attributes
title	Bold • Legible • Summarizes the major idea
circle	Large enough to hold all of the information • Round
lines	Divide slices into sizes that match amounts • Meet in The center of the pie • Separate slices of the pie
slices	Make up parts of the whole • Show amounts of the whole Triangular/pie shaped
labels	Brief • Easily understood • Easy to see • Smaller than title • Used for each slice of the pie
background (optional)	May enhance the meaning • May support the main oncept • Uncluttered
negative space	Sets the border • Surrounds the circles and the lines
credits	Accurate • Complete • Unobtrusive

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## **#3: Differentiate questions or prompts**

Any time you pose questions for problem solving, reflection, small-group discussion, or inquiry, ask yourself whether the questions can be differentiated to address student readiness and/or interest...



# <text><list-item><list-item>

Courtesy Cindy Strickland

## **'Tiering' science reflection questions**

A. Select an important part of today's [experiment/demonstration] and change it in some way. What would happen in the [experiment/demonstration] with that change? Why? What would that show or prove? Be sure you identify a change that focuses on the "science" of what happened.

B. A classmate had to leave the room today just as the [experiment/demonstration] was beginning. Write that student a note explaining what happened, why it happened, and what practical use there is in the real world for what the [experiment/demonstration] shows us. You are this student's only hope for clarity! Be as helpful as possible.

Flinders

## Resources

CAST

http://www.cast.org/

http://www.cast.org/whats-new/remote-learningresources.html#.Xt4xf6hLibg

National Center on Education Accessible Materials

http://aem.cast.org/

Designing for Accessibility with POUR

https://www.youtube.com/watch?time\_continue=8&v=dzzlJQXmJIw&f eature=emb\_title



## Resources

Website with videos, short articles, links to differentiated resources using Tomlinson's framework:

http://differentiationcentral.com

Recommended text if you are looking for ways to incorporate technology to support differentiation:

Carbaugh, E. M., & Doubet, K. (2015). *The differentiated flipped classroom: A practical guide to digital learning*. Thousand Oaks, CA: Corwin Press. (eBook version available through eBooks.com)



Goa	al	Internalize	Build	Access	
Purposeful & Motivated	Expert learners who are	<ul> <li>Provide options for Self Regulation (9)</li> <li>Promote expectations and beliefs that optimize motivation (9.1)</li> <li>Facilitate personal coping skills and strategies (9.2)</li> <li>Develop self-assessment and reflection (9.3)</li> </ul>	<ul> <li>Provide options for Sustaining Effort &amp; Persistence (s)</li> <li>Heighten salience of goals and objectives (s.1)</li> <li>Vary demands and resources to optimize challenge (s.2)</li> <li>Foster collaboration and community (s.3)</li> <li>Increase mastery-oriented feedback (8.4)</li> </ul>	<ul> <li>Provide options for</li> <li>Recruiting Interest (7)</li> <li>Optimize individual choice and autonomy (7.1)</li> <li>Optimize relevance, value, and authenticity (7.2)</li> <li>Minimize threats and distractions (7.3)</li> </ul>	The Universal Design for Learning Guidelines Provide multiple means of Engagement Affective Networks The "WHY" of Learning
Resourceful & Knowledgeable		<ul> <li>Provide options for Comprehension (3)</li> <li>Activate or supply background knowledge (3.1)</li> <li>Highlight patterns, critical features, big ideas, and relationships (3.2)</li> <li>Guide information processing and visualization (3.3)</li> <li>Maximize transfer and generalization (3.4)</li> </ul>	<ul> <li>Provide options for Language &amp; Symbols (2.1)</li> <li>Clarify vocabulary and symbols (2.1)</li> <li>Clarify syntax and structure (2.2)</li> <li>Support decoding of text, mathematical notation, and symbols (2.3)</li> <li>Promote understanding across languages (2.4)</li> <li>Illustrate through multiple media (2.5)</li> </ul>	<ul> <li>Provide options for</li> <li>Perception (1)</li> <li>Offer ways of customizing the display of information (1.1)</li> <li>Offer alternatives for auditory information (1.2)</li> <li>Offer alternatives for visual information (1.3)</li> </ul>	Provide multiple means of Representation Recognition Networks The "WHAT" of Learning
Strategic & Goal-Directed		<ul> <li>Provide options for</li> <li>Executive Functions (6)</li> <li>Guide appropriate goal-setting (6.1)</li> <li>Support planning and strategy development (6.2)</li> <li>Facilitate managing information and resources (6.3)</li> <li>Enhance capacity for monitoring progress (6.4)</li> </ul>	<ul> <li>Provide options for</li> <li>Expression &amp; Communication (5)</li> <li>Use multiple media for communication (5:1)</li> <li>Use multiple tools for construction and composition (5:2)</li> <li>Build fluencies with graduated levels of support for practice and performance (5:3)</li> </ul>	<ul> <li>Provide options for</li> <li>Physical Action (4)</li> <li>Vary the methods for response and navigation (4.1)</li> <li>Optimize access to tools and assistive technologies (4.2)</li> </ul>	CAST Until learning has no limits Provide multiple means of Action & Expression Strategic Networks The "HOW" of Learning

udguidelines.cast.org | © CAST, Inc. 2018 | Suggested Citation: CAST (2018). Universal design for learning guidelines version 2.2 [graphic organizer]. Wakefield, MA: Author.

# Key Questions to Consider When Planning Lessons

# Think about how learners will engage with the lesson.

## Does the lesson provide options that can help all learners:

- regulate their own learning?
- sustain effort and motivation?
- engage and interest all learners?

# Think about how information is presented to learners.

### Does the information provide options that help all learners:

- reach higher levels of comprehension and understanding?
- understand the symbols and expressions?
- perceive what needs to be learned?

# Think about how learners are expected to act strategically & express themselves.

### Does the activity provide options that help all learners:

- act strategically?
- express themselves fluently?
- physically respond?

From: Universal Design for Learning: Theory and Practice Available at <u>udltheorypractice.cast.org</u> For print and accessible EPUB, contact <u>publishing@cast.org</u> or any book retailer.

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