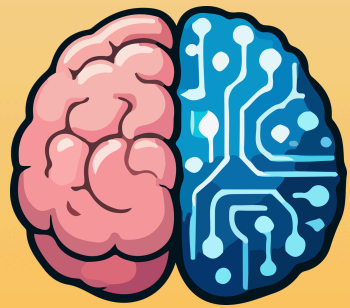


AI Powered Inclusion

Empower Your Teaching with UDL & AI



*AI for
Educators
Conference*

Shannon Hagen

DISTRICT INCLUSIVE ED TECH
COORDINATOR
SD71 COMOX VALLEY



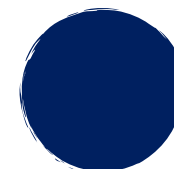
shannon.hagen@sd71.bc.ca



<https://learn71.ca/>



[@ShannonHagen14](https://twitter.com/ShannonHagen14)



[shannonhagen888](https://www.instagram.com/shannonhagen888)



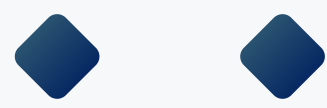
Follow Along . . .



<https://bit.ly/aipoweredudlitcea26>

<https://bit.ly/tceahandout26>

Learning Intentions



◆ UDL Made Simple

- Discover Universal Design for Learning (UDL) and its three core principles—in clear, teacher-friendly language.
- Get practical with:
 - Guiding Questions to spark reflection
 - Strategies you can use right away
 - Concrete Applications for your classroom

◆ AI Assistance

- Identify barriers and variability
- Use AI-powered prompts to bring UDL strategies to life
- Create an AI UDL Companion



What is UDL? Universal Design for Learning Explained (3 minutes)

Novak Educational Consulting

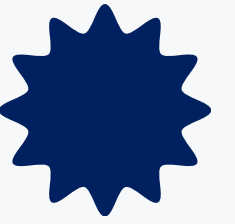
Universal Design for Learning



Dr. Katie Novak

Watch on  YouTube

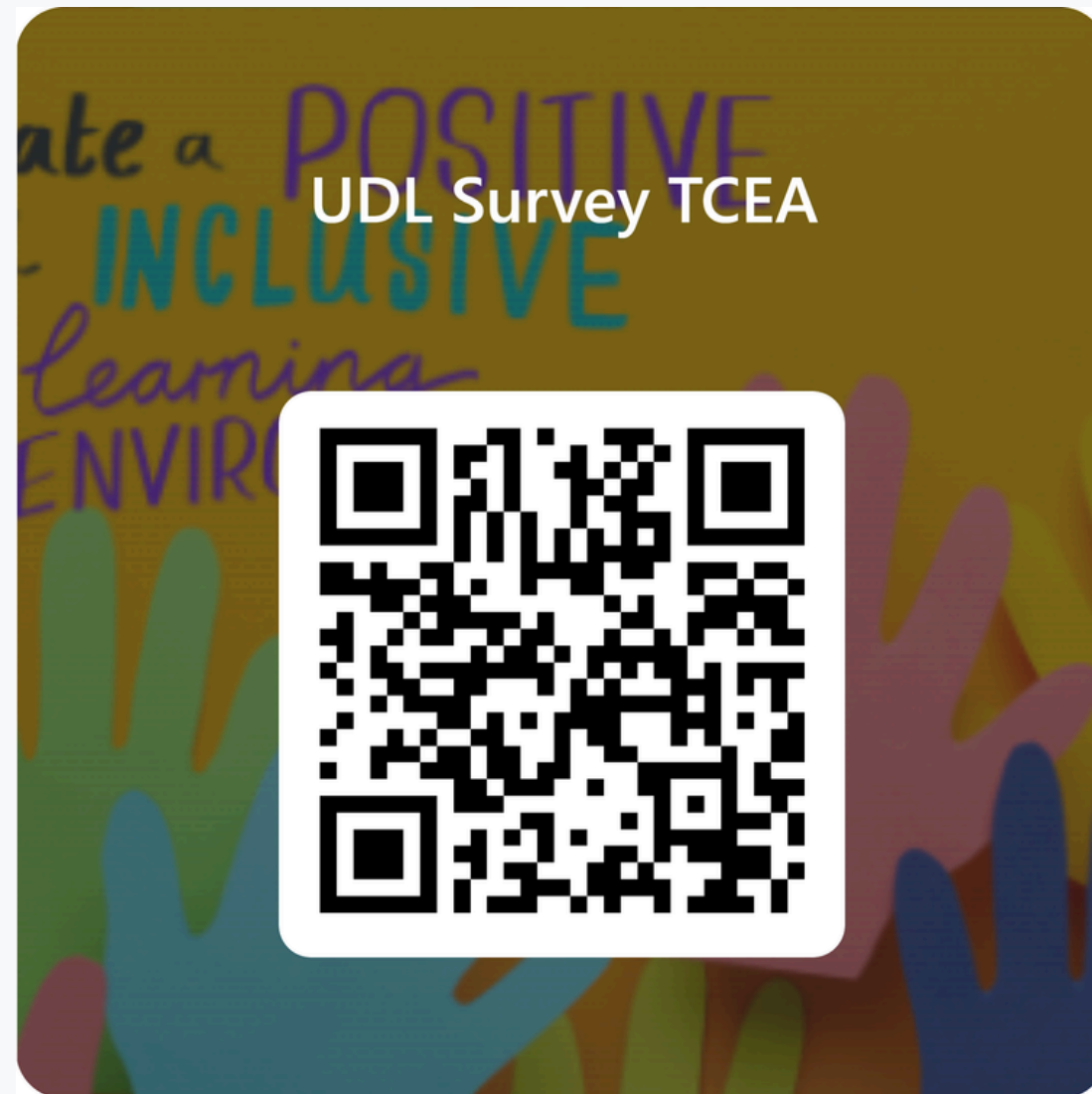
Survey



What do you think might take the longest when trying to make learning (resources) more accessible?

A dark blue rounded rectangle containing a white checklist with four items. The first and third items are checked with a white checkmark, while the second and fourth are unchecked.

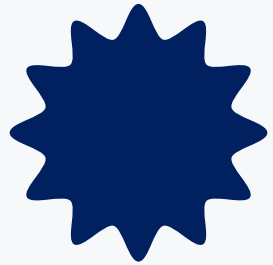
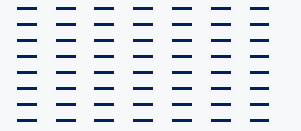
- ☒ _____
- ☐ _____
- ☒ _____
- ☐ _____



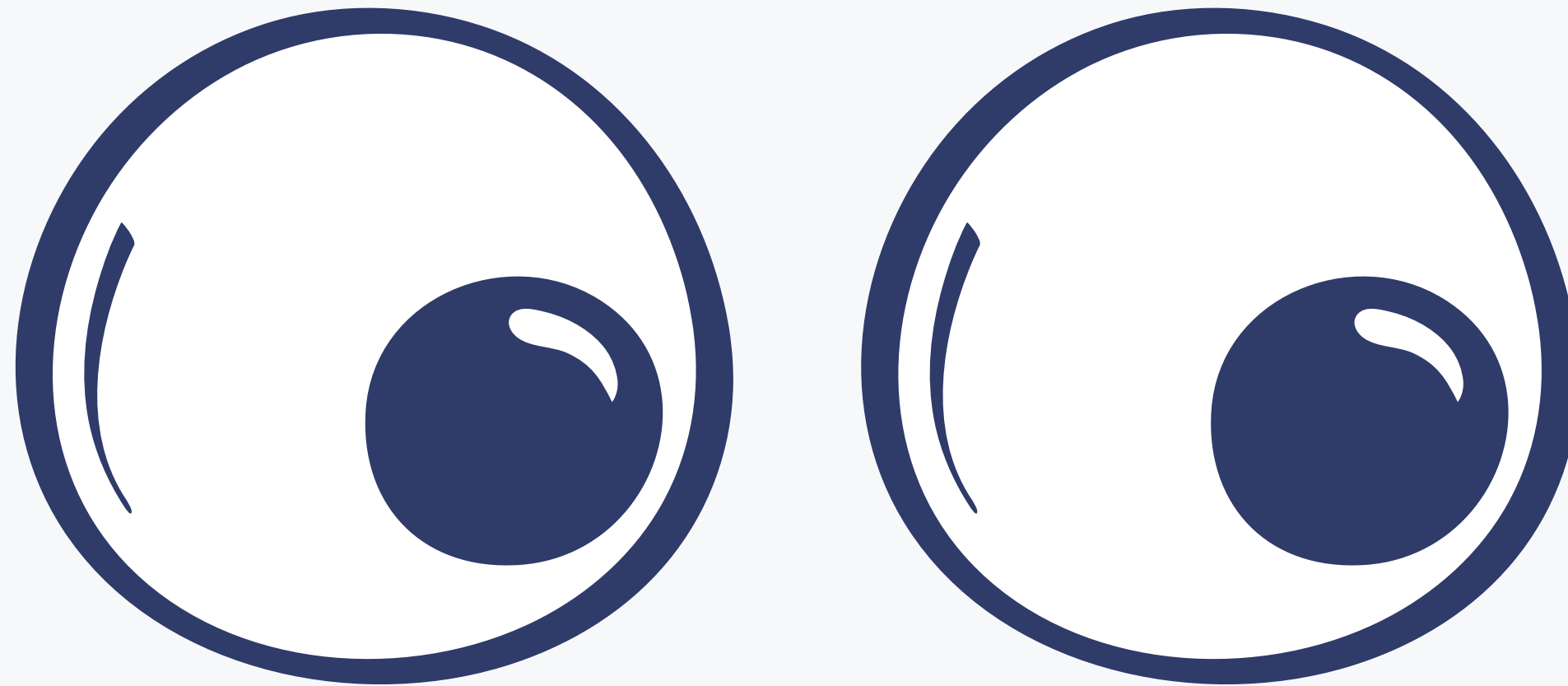
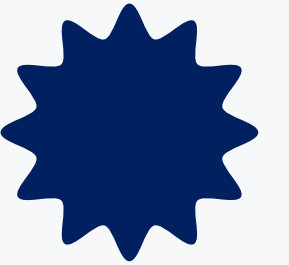
<https://bit.ly/udl-tcea-survey>



Survey



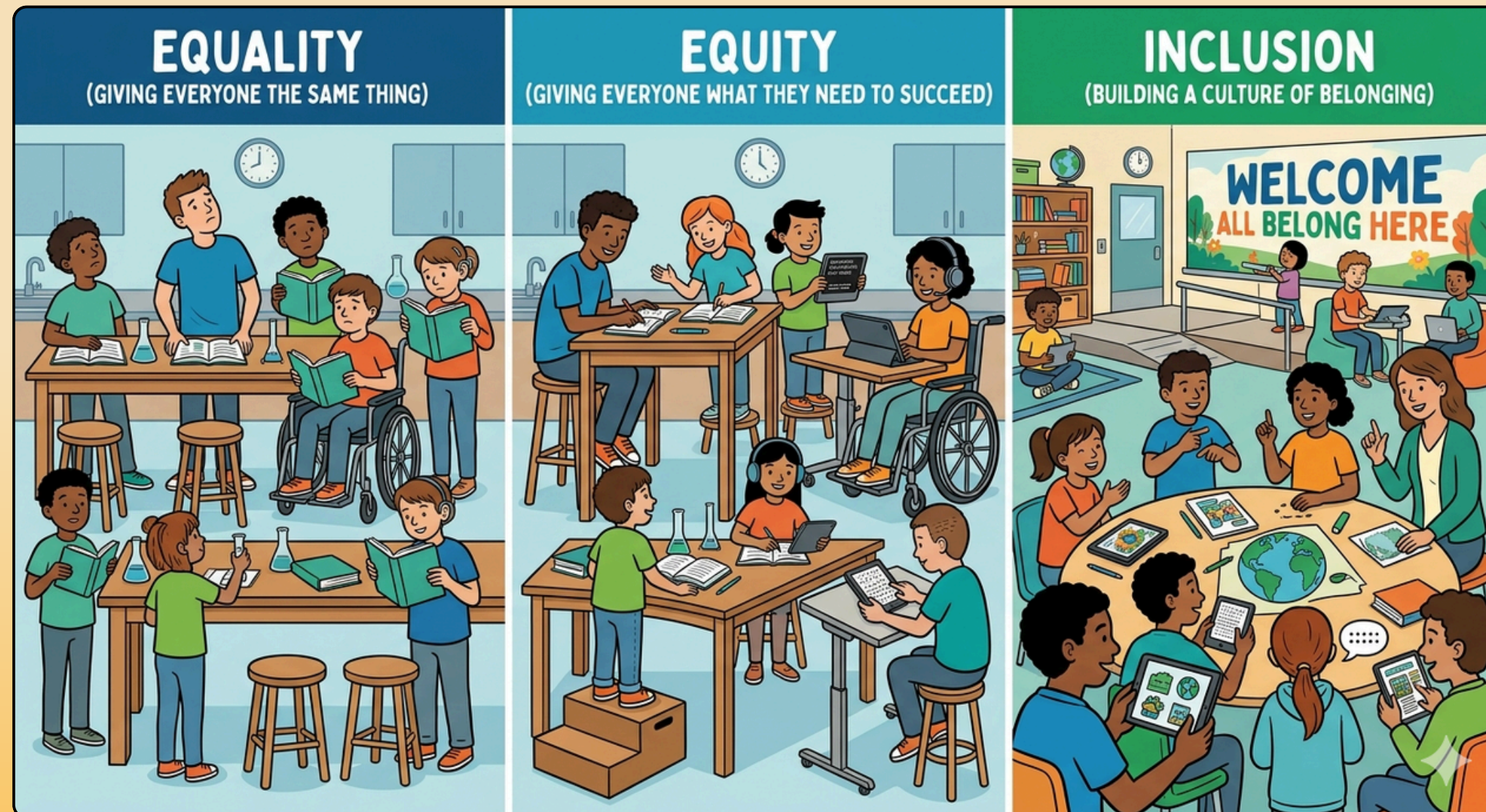
“What takes you the longest when trying to make learning more accessible?”





INCLUSIVE

An inclusive learning environment is a setting in which every student, regardless of their diverse abilities, backgrounds, and learning styles, can access, participate in, and benefit from the educational experience.



Created with the help of Gemini Image creator

This approach acknowledges and values the diversity of learners and seeks to make education more equitable, engaging, and effective for everyone.





“ — *The goal of UDL is learner agency that is purposeful & reflective, resourceful & authentic, strategic & action-oriented.*

~CAST

UDL TENENTS . . .



Variability is the rule, not the exception.

All students can work toward the same firm goals with flexible means and adequate support.

All students can build learner agency when barriers are removed.

(Novak, 2023)

UDL IS GOOD PEDAGOGY. . . BUT IT'S INTENTIONAL



Guiding Principles

<https://udlguidelines.cast.org/>

AFFECTIVE NETWORKS:
THE **WHY** OF LEARNING



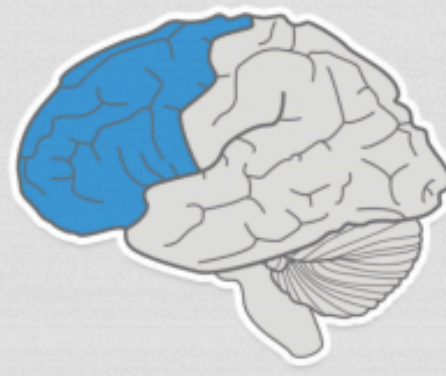
Engagement

RECOGNITION NETWORKS:
THE **WHAT** OF LEARNING



Representation

STRATEGIC NETWORKS:
THE **HOW** OF LEARNING



Action & Expression



ENGAGEMENT **Why**

Provide multiple ways to motivate and challenge learners.



REPRESENTATION **What**

Provide multiple ways to present information and knowledge.



ACTION & EXPRESSION **How**

Provide multiple ways to enable learners to demonstrate their learning and skills.



Engagement

◆ "... motivation to learn"



“ How can I engage ALL students in my class? ”

“ Offering choice and relevancy. ”



clear objectives | autonomy | relevancy
feedback/reflection | community & collaboration



ENGAGEMENT – “THE WHY”

“... MOTIVATION TO LEARN”

Provide multiple ways to motivate and challenge learners.

HOW CAN I ENGAGE ALL STUDENTS IN MY CLASS?



GUIDING QUESTIONS

- In what ways do I give students choice and autonomy?
- In what ways do I make learning relevant to students?
- Am I providing timely feedback?
- In what ways is my classroom accepting and supportive of ALL students? (Encouraging community and collaboration)

EXAMPLES

Use Choice Boards, Explore Boards, to offer choice, differentiate learning options, provide student agency and activate prior knowledge.
Microsoft Word, PowerPoint hyper linked, Canva

Figure out the hook. Design lessons to help students regulate their own learning by increasing motivation and effort?
Survey students about their interests and understanding of the content presented to them.
Make connections to real world and relevant examples.
EXAMPLES: KWL Charts (Whiteboard), music, intro videos, games, Microsoft Forms.

State learning goals clearly and in a way that feels relevant to students.
Connect learning to competencies NOT “activities” with accompanying rubrics.
Provide success-focused checklists and timely teacher feedback: FAST= *Frequent, Accurate, Specific, Timely*.

Options for individual or partner work, peer reviews and self-assessment, digital collaboration, real life application for tasks, sharing with a wider audience.
Roles for partner/group work clearly established.



Representation

◆ "... comprehend presented information"



“ How can I present information in ways that reach ALL learners? ”

“ Creating multiple formats. ”



varied formats | multi-modal options
digital access | accessible content



REPRESENTATION – “THE WHAT”



“... comprehend presented information”
Provide multiple ways to present information and knowledge.

HOW CAN I PRESENT INFORMATION IN WAYS THAT REACH ALL LEARNERS?

GUIDING QUESTIONS

- How have I varied my formats? (i.e. considered options for how I present texts, pictures, and charts)
- Have I made sure the digital formats I’ve made available are OCR and have a readable font?
- Have I included multi-modal content? (text, audio, video)
- What options do I provide for students who need support engaging with printed texts and/or with auditory learning.

EXAMPLES

Digital Text, Text Preferences, Text to Speech, Translation Tools, Dictionary and Picture Dictionaries

Immersive Reader, Read Aloud, Windows + H, Open Dyslexic Font (font choices)

ARC BC Universal Design Website for Inclusive and Accessible Content Creation Recommendations.

Ebooks, EText, Audio Books

Alternate format options, Sora, Research Databases w/ Built-in Accessibility tools

Videos with Closed Captioning, Infographics and Charts with Alt Text

Microsoft ClipChamp, Live Captioning, YouTube Closed Captioning

Accessible Documents with Canva, Book Creator (templates)

Offer Vocabulary Banks, Visuals, Key Concept Highlighting, Simplification of Language or Summaries

Microsoft Learning Tools, AI Tools, Text Level Options (Diffit, Microsoft Reading Progress, Read Works), OneNote Math Options



Action & Expression



“... keep on task & express learning”



“

How can I offer students effective methods to demonstrate their learning?

”

“

Providing varied output options.

”



flexible timing and pacing | EOL options | assistive tech
scaffolds | executive functioning support



ACTION AND EXPRESSION – “THE HOW”

“... NAVIGATE LESSONS & EXPRESS LEARNING”

Provide multiple ways to enable learners to demonstrate their learning and skills.



HOW CAN I OFFER PURPOSEFUL OPTIONS FOR STUDENTS TO SHOW THAT THEY KNOW?

GUIDING QUESTIONS

- Have I found ways to provide flexibility with timing and pacing?
- Have I considered methods aside from paper-and-pencil tasks for students to show what they know?
- Am I providing students access to assistive technology (AT)?
- Have I used scaffold strategies and supports where needed?

EXAMPLES

Offer Organization and scheduling task breakdown support
Tasks/ assignments with checklists, to-do lists, calendars, dates, with flexibility and redo options.
Outlook, Goblin Tools, Brightspace Release Options, Brightspace Checklists, Activity Feed

Offer options for how students demonstrate knowledge
Written, oral, video, graphic
Canva, Book Creator, Graphic Organizers, Clipchamp, Podcasts, Brightspace Capture Web

Options for written output, audio comments, Speech-to-Text (Windows + H), Word Prediction (Windows, Typing/ keyboards, spell and grammar check, calculators, sentence starters, story webs and concept mapping tools
Edge Annotation, Office 365/ Windows, Editor, LMS built-in Accessibility tools

Use of checklists, rubrics, and graphic organizers to simplify and break down long-term goals into reachable short-term objectives.
Use of the Course Homepage as a “one-stop shop” for easy access to materials, dates, and messaging.
Use of a communication tool to provide timely assistance and feedback.



REFLECTION

- Offering choice and relevancy.
- Creating multiple formats.
- Providing varied output options.

UDL AND YOUR OWN PRACTICE

Consider which pieces you are already incorporating in your practice.

Consider what you could do differently to **INTENTIONALLY** create a UDL-designed learning space.

What would you need in order to feel comfortable/confident in doing this?





“ —
"When a flower doesn't bloom, you fix the environment in which it grows, not the flower."

~Alexander Den Heijer

FIXING THE “ENVIRONMENT”

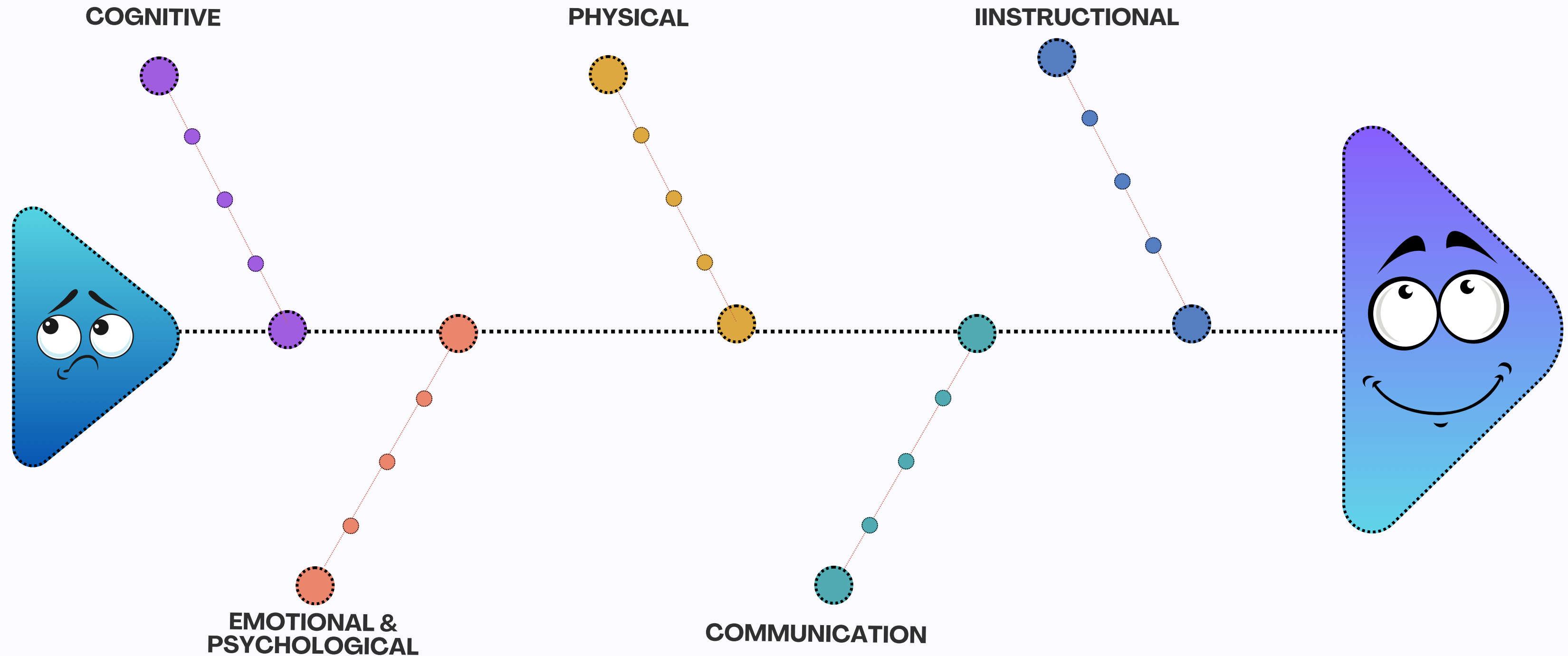


RECOGNIZING VARIABILITY

**IDENTIFYING AND REMOVING
BARRIERS**



Remove the Barrier Fishbone Diagram



On the left of the fish's "rib bones", identify specific barriers under each heading that students may encounter in their learning environment, which may prevent them from being successful learners.

This information can be used when exploring the use of prompts to address these barriers.

COMMON BARRIERS IN EDUCATION

A suggested list of barriers students may encounter which prevent them from being successful learners.

Cognitive Barriers	Emotional & Psychological Barriers	Physical Barriers	Communication Barriers	Instructional Barriers
• Learning disabilities • Memory difficulties • Attention disorders <i>ADHD</i> • Processing speed challenges	• Anxiety and stress • Lack of motivation • Lack of engagement • Low self-esteem • Low Self-confidence • Fear of failure	• Vision impairments • Hearing impairments • Mobility challenges • Chronic illness or fatigue	• Limited language proficiency <i>ESL</i> • Speech and language disorders • Limited vocabulary or comprehension skills	• One-size-fits-all teaching methods • Inaccessible learning materials • Insufficient support

ENVIRONMENTAL BARRIERS

- Noise and distractions
- Inadequate learning spaces
- Limited access to technology or resources
- Socioeconomic factors poverty, unstable housing

AI POWERED INCLUSION



UNIVERSAL DESIGN FOR LEARNING

Appropriate Use of AI in Education

Education without AI



Like riding a mountain bike, the human is in control, but also has no assistance. Sometimes the struggle inhibits learning.

Too Much Reliance on AI



Like riding a motorcycle, you can go really fast, but it is unpredictable and can even be dangerous.

Using AI as a Learning Partner

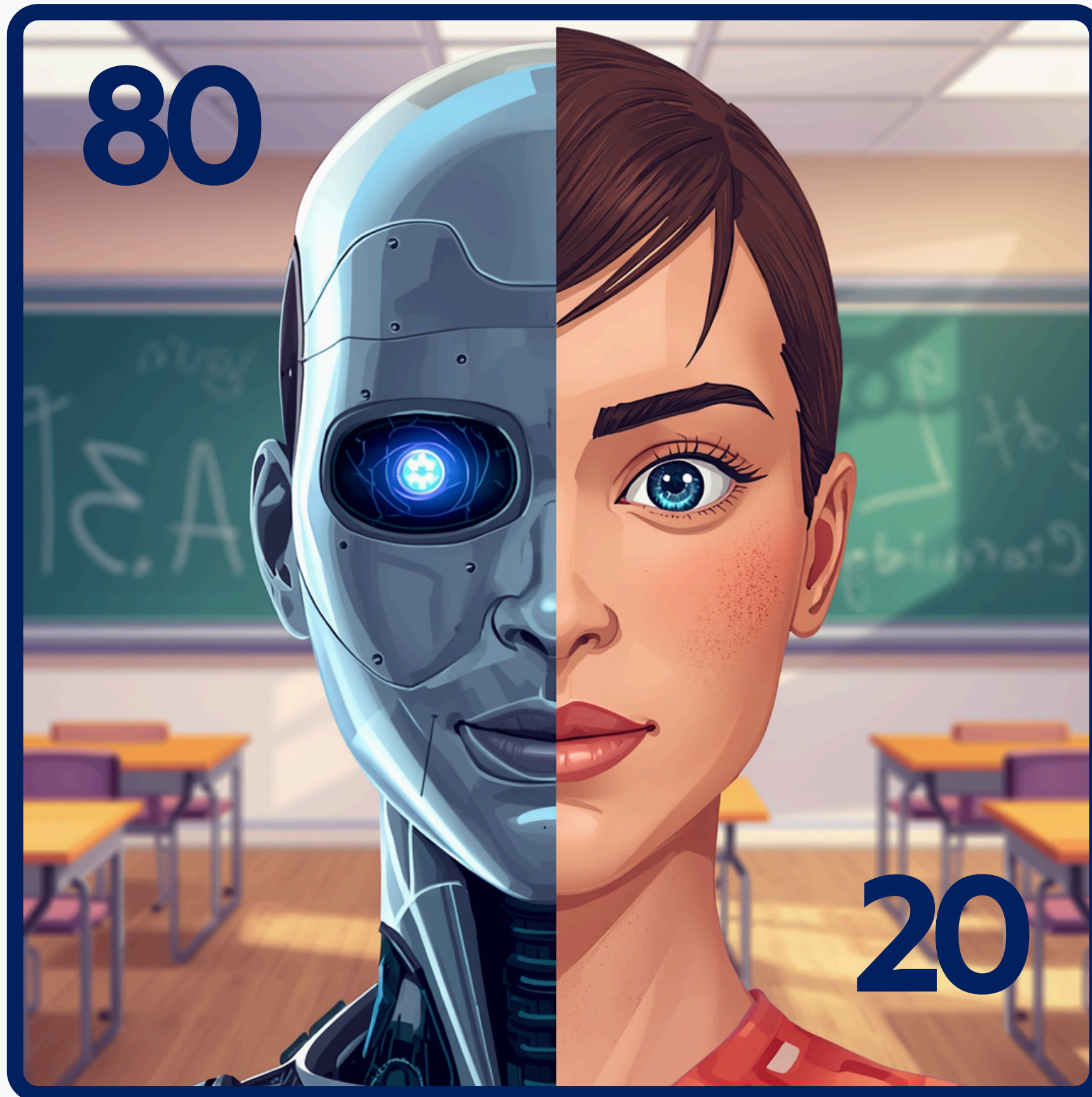


Like riding an E bike, the human is totally in control, but the E bike can reduce the struggle and result in more productive learning.

Analogy & Graphic- credit Vera Cubero (NCDPI)
Adapted by Shannon Hagen
GenAI image creator via Google Gemini Nano Banana



AI is Not Perfect



Created with the help of Gemini Image creator

80/20 Rule

- AI 80%
- You 20%
- Confirm, customize, personalize

Reviewing Checklist

- Read and review thoroughly
- Verify factual accuracy
- Tailor to your needs



BEST PRACTICE



Created with the help of Gemini Image creator

PII (personally identifiable information) should not be entered into any AI chatbot!

*Any **THREE** pieces combined provide enough information to identify the specific person.*

PII SAFE DATA COLLECTION

Redacting information on a Mac



CMD + F

Opens the “Find” panel.
Choose “Edit> Find>
Replace from the menu.
Replace specific text
(names) in a Word
document with
“student” or a generic
equivalent.



CMD Key + Shift + 4

Take a screenshot.
Click on the
thumbnail to open
Markup. Select the
Draw tool to draw a
line over any
personal information.



**Edge PDF Editor
& CMD + F**

Open PDF in Edge (right
click-Open with>Edge).
Use the CMD + F to
open the Find Bar.
Type personal info to
find > use “Draw” tool
to draw a line over any
of this information.

PII SAFE DATA COLLECTION

Redacting information on a Windows machine



CTRL + G

Find and Replace specific text (names) in a Word document.
[Replace name with "XXX"].



Windows Key + Shift + S

Take a screenshot > use the "Markup" tool to draw a line over any personal information.



Edge PDF Editor & CTRL + G

Open PDF in Edge > Use the CTRL + G to find all of the PII > use "Draw" tool to draw a line over any of this information.

PII SAFE DATA COLLECTION

Redacting information in Google Chrome environment



CTRL + H

CTRL + H
Find specific text
(names) in a Google
document → replace
name with
"XXX"



Windows Key + Shift + S

Take a screenshot >
use the "Markup"
tool to draw a line
over any personal
information.



**Chrome PDF Editor
& CTRL + F**

Open PDF in Chrome
> Use the CTRL + F to
find all of the PII >
use "Draw" tool to
draw a line over any
of this information.

Generative AI Prompts for Guiding Principles

Engagement



🔍 How can I motivate and connect with all the students in my class? ✕

- Connect the skill of [skill or topic] to [student interest or experience].
- Create [#] practice problems with answers about [skill] using the topic of [student interest].
- Summarize the parts of this video for a [#] grade level student. Break the summary into different timestamps.
- What are some visual supports or hands-on practice opportunities for [skill or topic]?
- What are some ways to build choice into a lesson on [competency or skill]?
- Create [#] ideas for collaboration with [skill or topic].
- List [#] projects a [student] could complete to demonstrate [skill, competency, topic].
- List [#] strategies to break down [task] for [student].

Representation



🔍 How can I present info in ways that reach all students? ✕

- What are barriers and misconceptions to understanding [skills] ?
- Break down [standard or skill] into smaller manageable chunks.
- Create prompts with increasing complexity for differentiation when teaching [skill].
- What are [#] resources of various mediums [desired mediums] about [topic]? Put in a table.
- Take this text, break it into key points, important vocabulary and tables to make it easier to understand.
- Provide alt text for this image.
- Differentiate this [lesson, unit, activity] for the variable of learners [description].
- Create a list of visuals to support vocabulary for [topic, content]
- Create alternate ways to introduce [topic].

Action & Expression



🔍 How can I offer options for students to show what they know? ✕

- What are real life applications of understanding [topic/skills]?
- What are [#] ways for [grade level] students to show an understanding of [skill]? Put in a [table].
- What are some ways to build choice into a lesson focusing on [standard or skill]?
- Break down the following [assignment] into step-by-step directions. Provide in a [checklist] format.
- Provide [#] accommodations for [lesson, assessment, task, skill] for [student].
- Provide [#] ways to assess [skill, topic, content, lesson, competency].
- Provide a [graphic organizer] for [skill, topic, task] for [student].
- Provide [#] questions/statements a [student] could complete for self reflection after completing [task, project, skill].

The Inclusive Teacher's AI Toolkit: A UDL-Aligned Prompt Guide

Structured AI prompts for accessible, engaging,
& supportive learning (K-12 & beyond)

The UDL Core

(Engagement, Representation,
Action & Expression)

Accessibility & Clarity First

The Barrier Check

Use AI to analyze handouts & slides for reading level, contrast, cognitive load, & ELL language demands.

Plain Language Rewrites

Transform complex instructions into clear, jargon-free text, using plain language and maintaining meaning.

Strategic Chunking

Reorganize dense text content into smaller sections with bulleted lists & headings for better note-taking.

Choice Board Generator

Create activities offering three paths, ensuring all options meet success criteria.

Multi-Format Representation

Present concepts via direct instruction, visuals, hands-on demonstrations, & language-supported versions.

Flexible Assessment & Expression

Allow varied outputs supported by scaffolded templates (sentence starters, graphic organizers).

The "Design Once, Adapt Many" Strategy

Adapt, Don't Recreate

Use UDL prompts to adapt current resources to support learner variability.

Vocabulary Support

Automatically identify key terms, generate student-friendly definitions, visual aids, & first-language connections.

Feedback, Reflection, & Connection

Growth-Focused Feedback

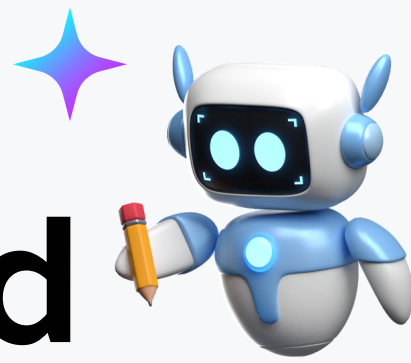
Generate encouraging, timely, and specific comments on next steps, with simplified versions for ELLs.

Self-Reflection Builders

Create prompts for written, oral, or visual reflection using "I can" statements to track progress.

Home-School Bridges

Translate classroom jargon into welcoming explanations for families to support learning at home.



UDL Aligned Prompt Pack



<https://bit.ly/udl-prompts>

1

ACCESSIBILITY & INCLUSION

2

CLARITY AND COMPREHENSION

3

LANGUAGE AND VOCABULARY SUPPORT

4

MULTIPLE WAYS OF REPRESENTATION

5

STUDENT CHOICE & EXPRESSION

6

FEEDBACK, REFLECTION & COMMUNICATION



Prompt Activity

Explore the UDL Prompt Pack in a variety of situations.



Own Context

What are some instances you can utilize the various prompts to help your learning space become more UDL aligned?

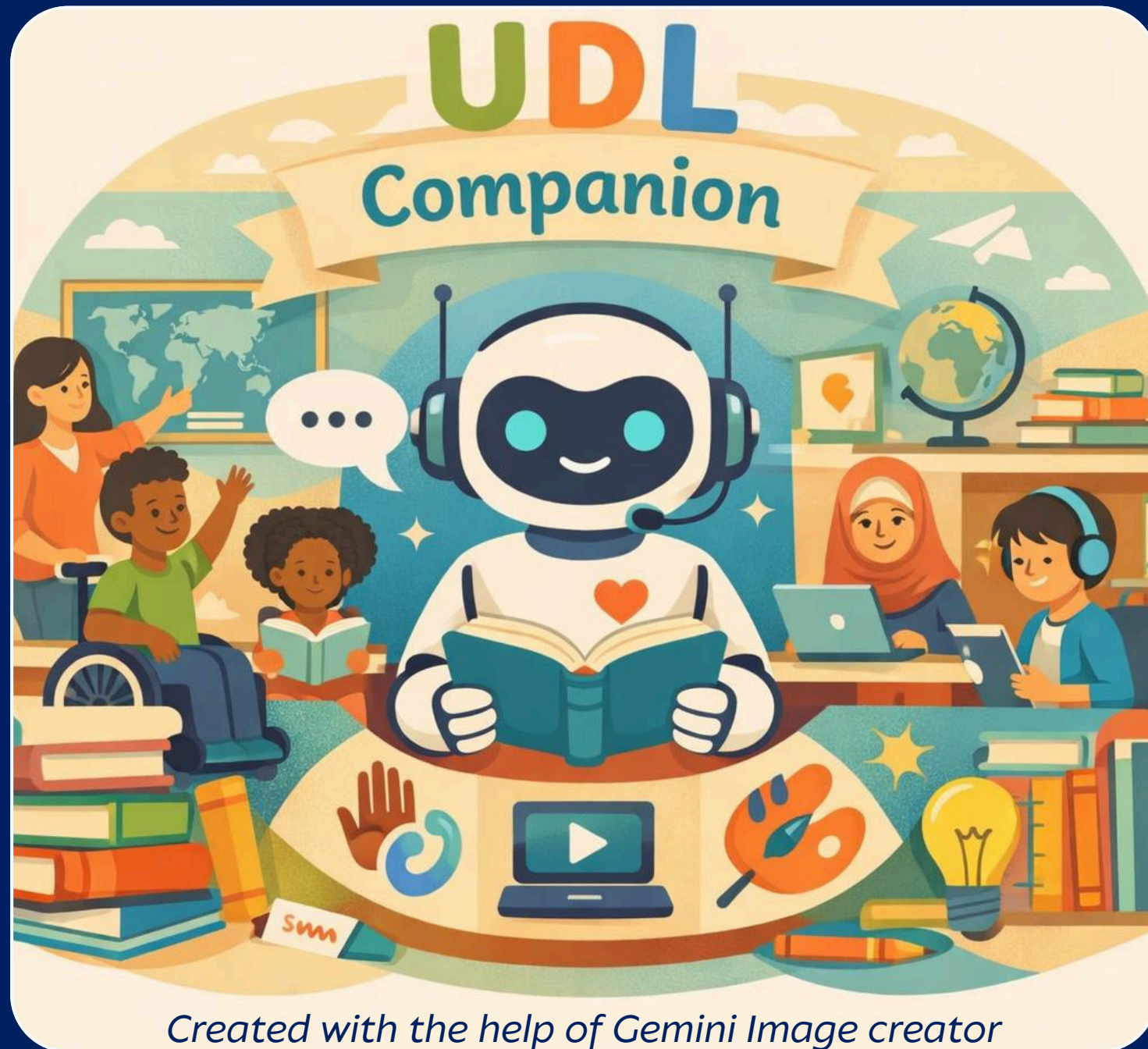
*Take a look at the various prompts available. Reflect on your specific use of them.
Use the "Remove the Barrier" worksheet as a reference if useful.*

Apply

Copy and paste one of the prompts from the prompt pack into a chatbot of your choice and test with one of your lessons, resources, activities or ideas.

View the results. Interact with the chatbot to get exactly what you need.

UDL Companion Agent / Gem



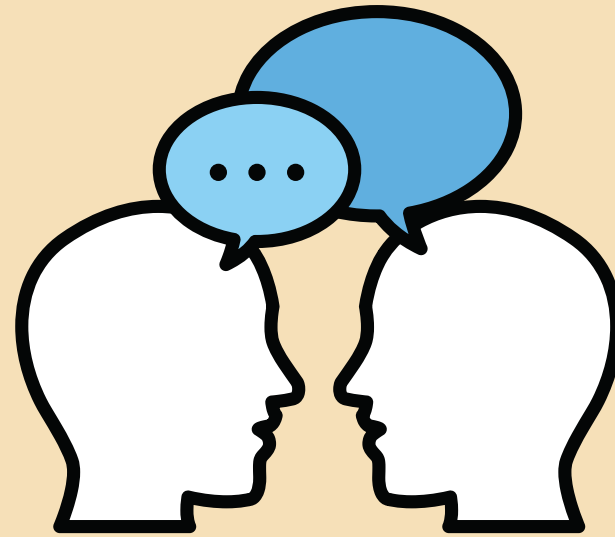
Support teachers in creating lesson plans, resources, activities and learning environments that align with Universal Design for Learning (UDL) principles, promoting inclusive and accessible learning experiences in K-12 classrooms.

[Script to Create Agent / Gem](#)





Share-Out



“Aha moment”

“Unexpected results”

“Favourite prompt”

“???????”

Questions?



Resources - UDL



[CAST - UDL](#)

All you need to know about Universal design for Learning.



[UDL Implementation Rubric](#)

Check how well you are implement UDL in your learning environment.



[UDL "Look Fors"](#)

What strong UDL practice looks like in action.



[UDL Flow Chart](#)

Use this flow chart to help create inclusive learning resources.



[Katie Novak UDL Resources](#)

Practical Tools to Help You Implement Universal Design for Learning and Inclusive Practices.



[UDL Padlet](#)

Padlet with collection of UDL specific project examples.



[Backward Design Templates](#)

Plan your lesson using the Backwards design template.



[ARC BC - Universal Design for Accessibility](#)

Six things to keep in mind when creating content with UDL.



[Accessible Colour Palette](#)

Website that contains colour palettes specifically designed with accessibility in mind.



[UDL Would You Rather](#)

Various options for student engagement in "Would you Rather" format.

Thank You Shannon Hagen

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SD71 Comox Valley

EMAIL

shannon.hagen@sd71.bc.ca

WEBSITE

<https://learn71.ca/inclusion-resources/udl/>

<https://learn71.ca/integrating-technology/ai-in-education/>

X

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