There is no “typical” student. How can we design courses that engage diverse students and provide mechanisms for students to accurately demonstrate their learning. Universal Design for Learning (UDL) helps us build courses accessible to all students. UDL encourages course designs to empower students in how they acquire information and demonstrate learning. Open Educational Practices (OEP) can be a key strategy to help establish UDL in your courses. We will look at course designs that increase student choice, encourage critical thinking, and improve learning. When paired with Backwards Design, UDL and OEP strategies also help us build assignments that more accurately measure student learning outcomes (SLO).This workshop will demonstrate how these frameworks can be used to design effective and engaging online learning activities and assessments

Can pull from: https://docs.google.com/presentation/d/1CoTtbMCk-XnsW6LLCJFPOe8C3Va83FcR/edit#slide=id.p17

We trade off:

1. Intro - & intro to ULD - Amanda (this section is the why)
    a. Q&A / Discussion
    b. 20 min (1:40)

THE HOW’s

1. Multiple means of representation - tied to OER - Suzanne
    a. Q&A / Discussion
    b. 20 Q&A (2:00)
2. Multiple means of action and expression - tied to SLOs & backwards design - Amanda
    a. Q&A / Discussion
    b. 20 Q&A (2:20)
3. Multiple means of engagement & final wrap - tied to OEP - Suzanne
    a. 20 Q&A (2:40)

Provide multiple means of representation: give learners various ways of acquiring information and knowledge (text, video, audio)

OER

Provide multiple means of action and expression: provide learners alternatives for demonstrating what they know (essay, diagram, table, outline)

SLO; backwards design

Provide multiple means of engagement: tap into learners' interests, challenge them appropriately, and motivate them to learn. (authentic, intrinsic/extrinsic motivation)

OEP

UDL, SLO, OEP
the alphabet soup of good course design

Amanda Taintor
Suzanne Wakim

Introduction to Universal Design for Learning

AKA UDL

Learning Outcomes

Understand how basic UDL principles relate to Open Educational Practices,Open Educational Resources and Student Learning Outcomes

Lay the foundational knowledge for Open Educational Practices and first steps to implementation

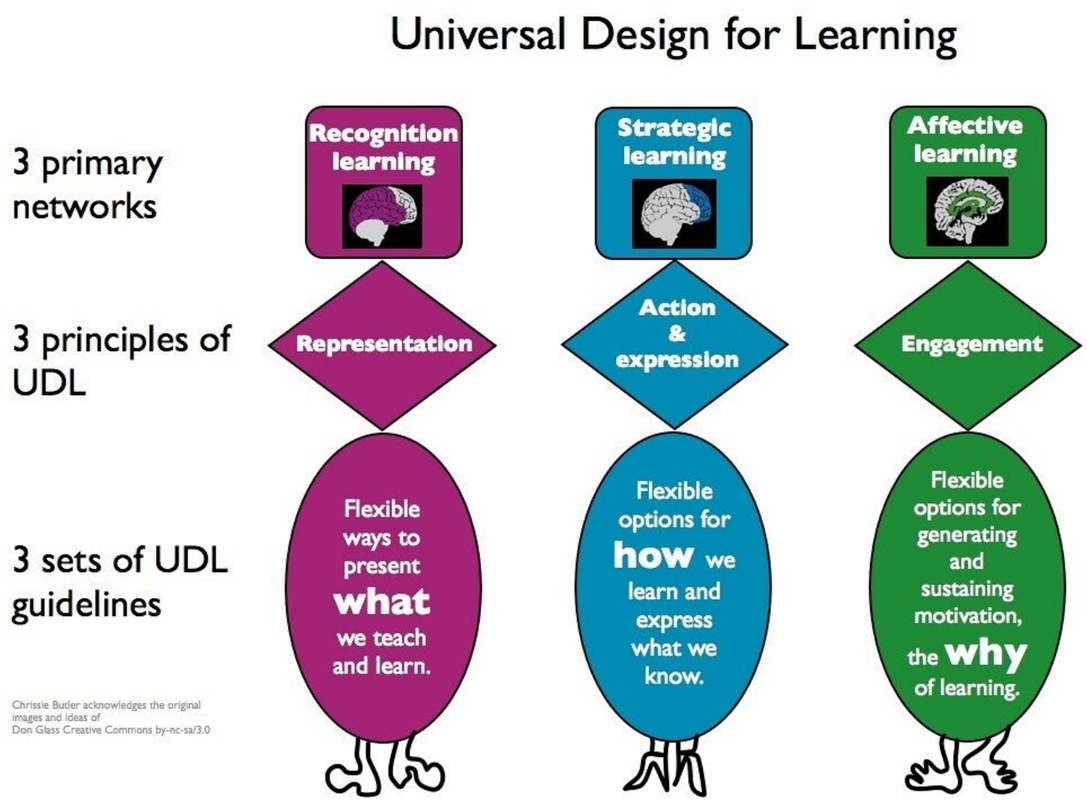
Describe how backward design, Student Learning Outcomes and becoming expert learners are connected

Un-Packing UDL

The Myth of Average……

Image adapted from mcmurryjulie from Pixabay

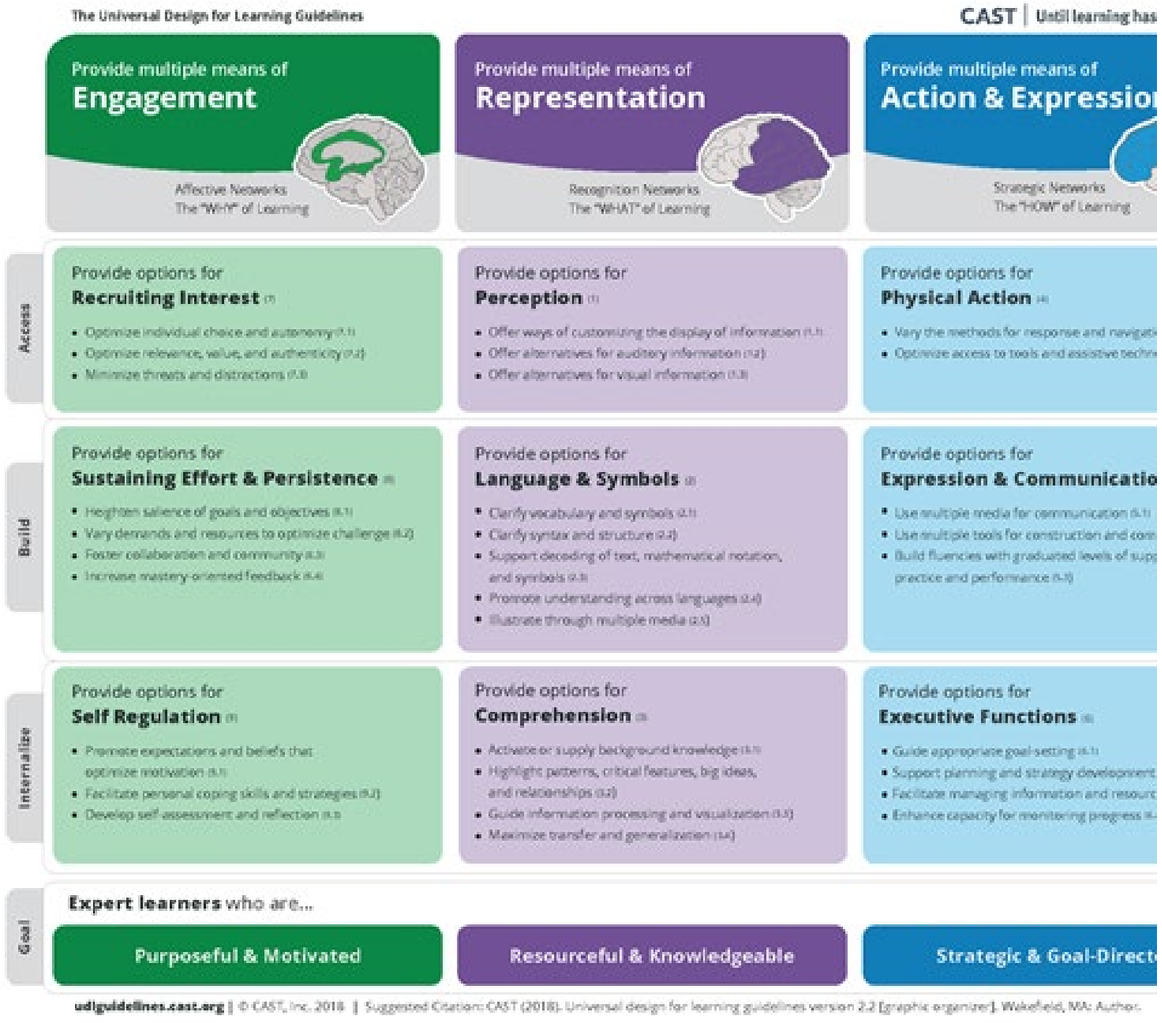
Universal Design for Learning



*“Education should help turn novice learners into **expert learners**—individuals who want to learn, who know how to learn strategically, and who, in their own highly individual and flexible ways, are well prepared for a lifetime of learning.*

Universal Design for Learning (UDL) helps educators meet this goal by providing a framework for understanding how to create curricula that meets the needs of all learners from the start.”

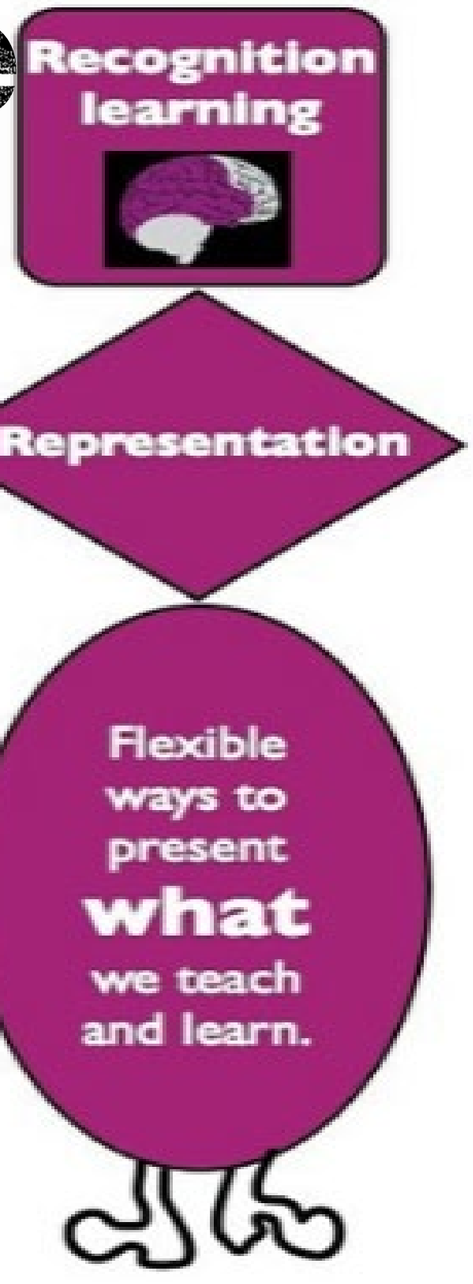
What is Universal Design for Learning - UDL



Universal Design for Learning

(http://www.cast.org/our-work/about-udl.html)

Provide Multiple Means of Representation



OER and giving learners various ways of acquiring information

Suzanne Wakim

Multiple Means of Representation

The enzyme used for this process is DNA polymerase. ("poly" means many "mer" means pieces and "ase" tells me this is an enzyme). So, the name tells me this is an enzyme ("ase") that binds many ("poly") pieces ("mer") of DNA to each other. There are a number of other enzymes involved in this process as well (as you can see below). Some enzymes open the DNA strand, others copy the strand, and others fill in any gaps.

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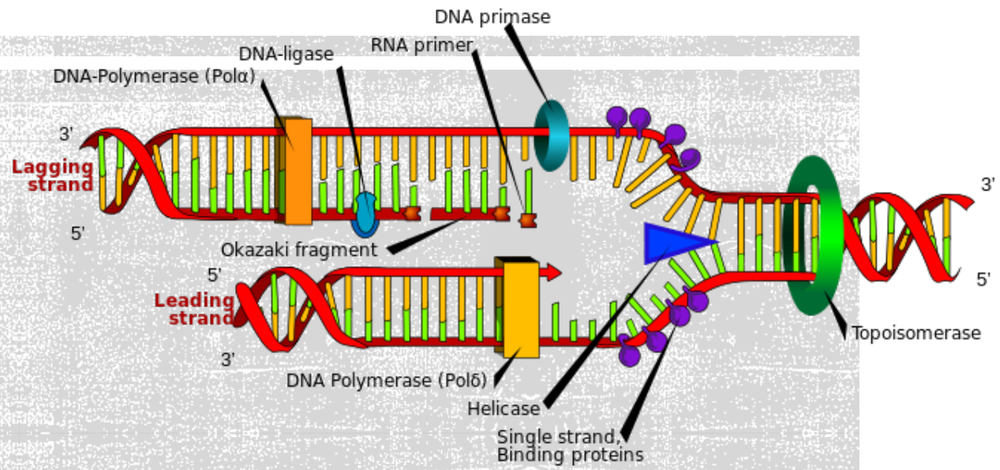

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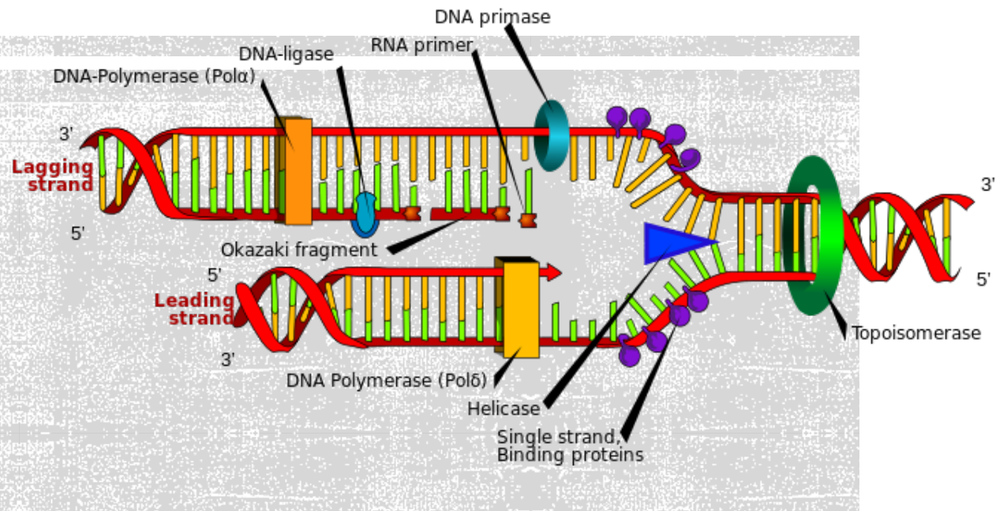

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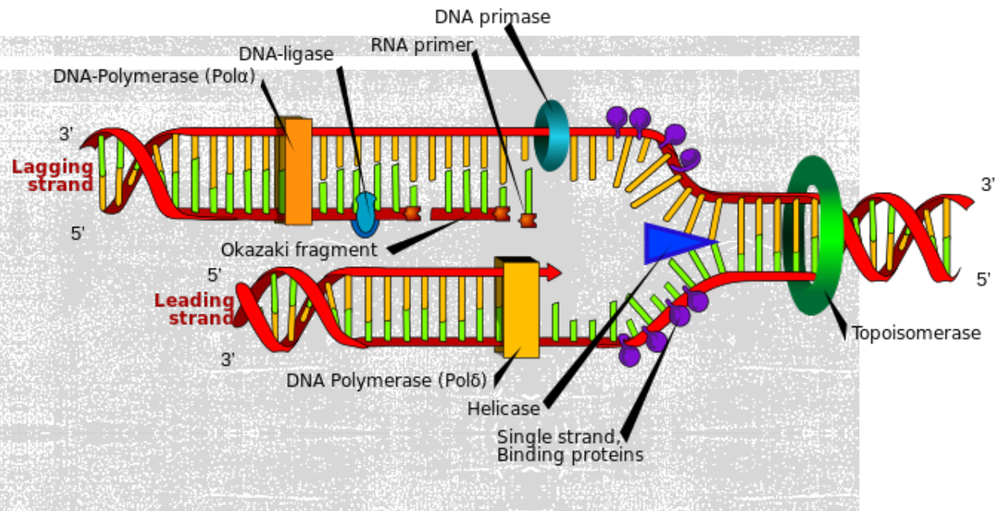

1. Helicase unwinds DNA strands
2. Topoisomerase prevents supercoiling
3. SSBP prevent reattachment
4. RNA primase adds RNA primer
5. And so on...

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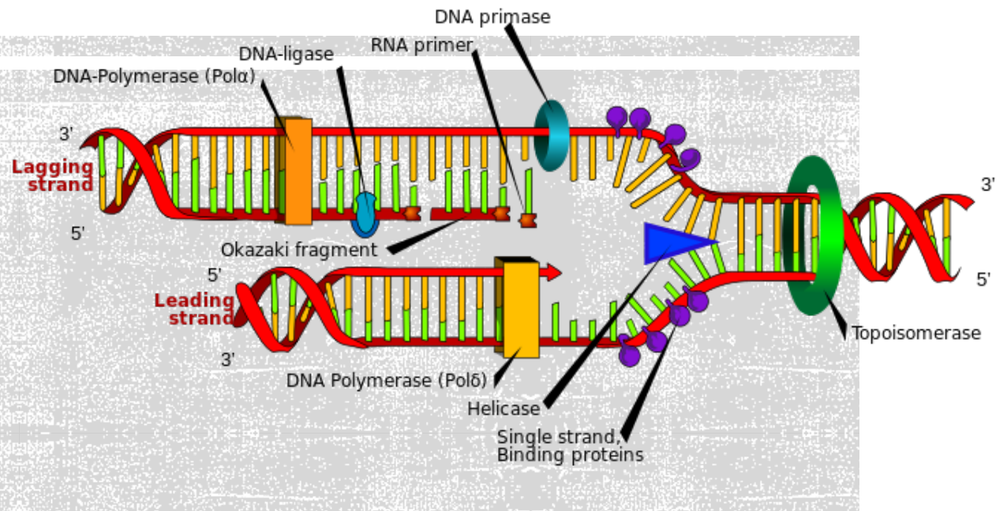

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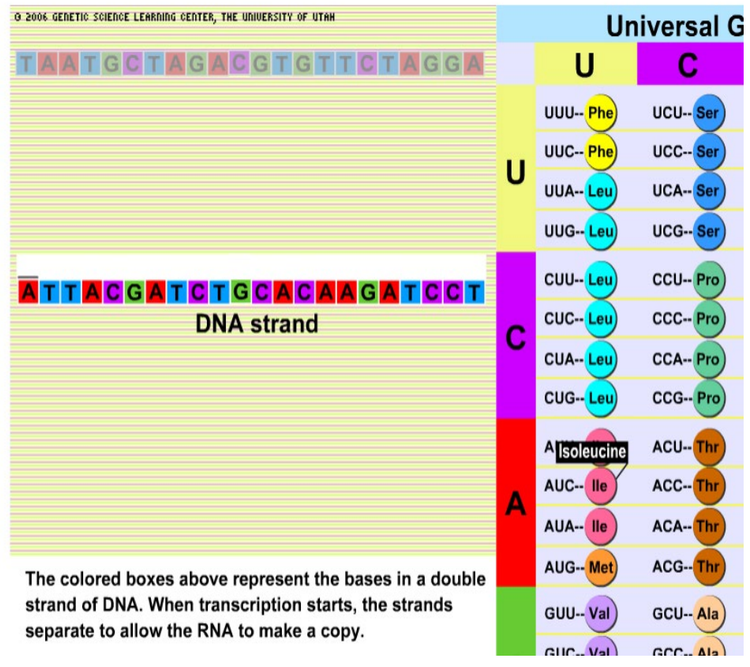

1.2 Learning Links: Chemistry

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Textbook Links

CK-12 - Chemistry

CK-12 - Nutrition

Open Stax chapter on chemistry

Other Links

Khan Academy; chemistry

Khan Academy; water

Khan Academy; carbon

An interactive periodic table

Practice building an atom

Water and solutions simulation

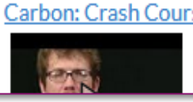
Test your water knowledge

Videos

Chemistry Basics

Atomic Structures

Carbon: Crash Course



1.2 Study Guide: Chemistry

What do I need to know for this week?

Study Questions:

1. Define the following terms:
   a. Atom, molecule, organic
   b. Polar, non-polar
   c. Hydrophobic, hydrophilic, amphipathic
   d. Hydrogen bond, covalent bond, ionic bond
   e. Homeostasis
   f. Monomer, polymer
2. Draw a molecule of water
   a. Explain why water is polar and how this polarity results in the formation of hydrogen bonds.
   b. What type of molecules are hydrophilic? What type of molecules are hydrophobic?
   c. Explain why the surface tension of water allows small insects to "walk on water".
   d. Explain why ice floats on liquid water.
   e. Explain why charged molecules (ions) dissolve in water.
   f. What are 2 other characteristics of water that are important for living organisms?
3. What does pH measure?
   a. What happens to the concentration of H+ as pH increases? What happens to the concentration of H+ as p
   b. Why are buffers important?
   c. How do buffers work?
4. List the 4 important macromolecules for living organisms.
   a. For each explain why it is important.
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5. What is the difference between a monosaccharide, disaccharide, and polysaccharide (how many carbon rings c
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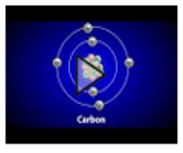
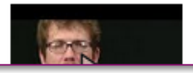


Carbon: Crash Course



Customized OER Text

Free Resources Text and Interactive

Free Online Videos

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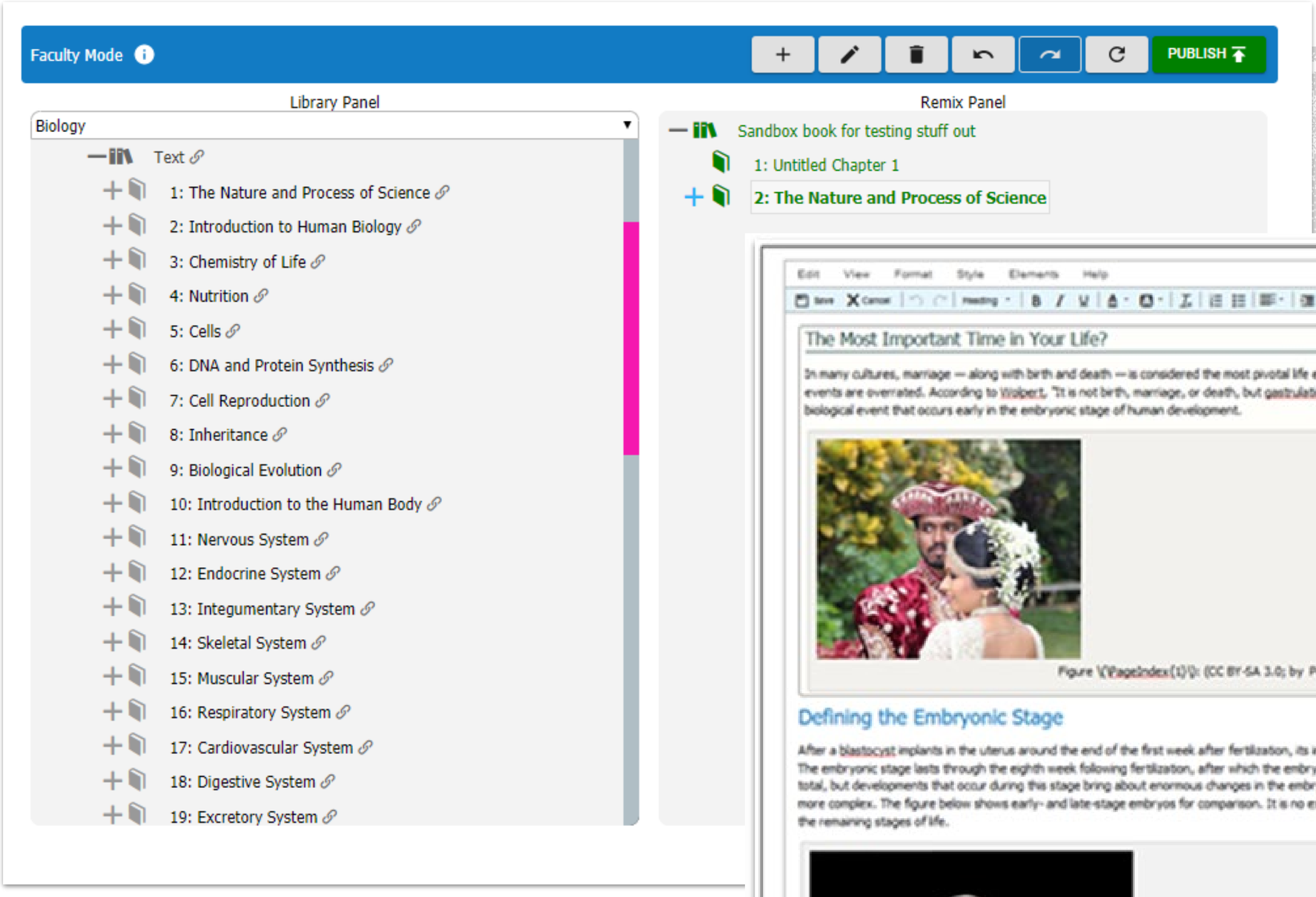
Curated and Customized Resources

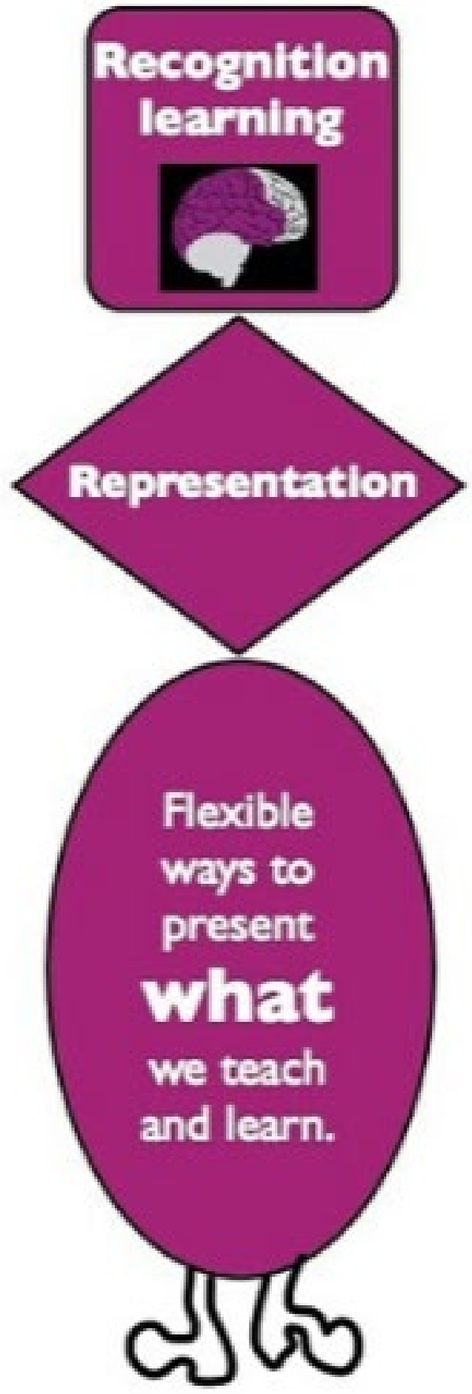


Personalize for OUR students - increase relevance and engagement

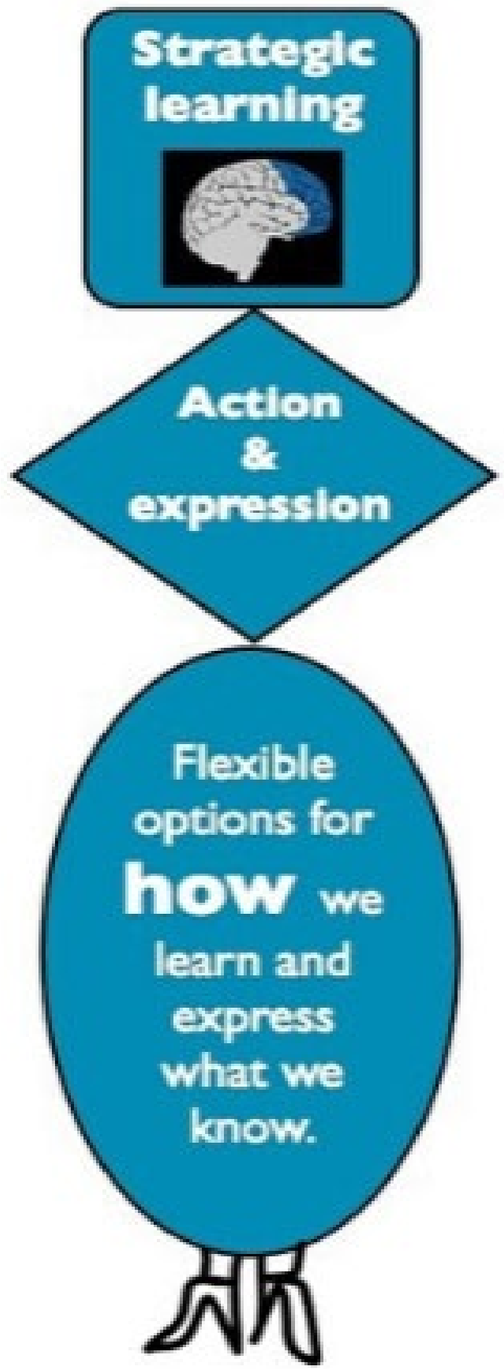
Provide Multiple Means of Representation

OER and giving learners various ways of acquiring information

Q & A Time



Provide Multiple Means of Action and Expression



SLO and Backward Design: Flexible options for HOW we learn and express what we know

Amanda Taintor

Multiple Means of Action and Expression

- UDL emphasizes the importance of building expert learners in any context.
- To foster expert learners support relevant goal-setting
- Setting the route

Photo by Markus Winkler on Unsplash

Multiple Means of Action and Expression

- **Effective Learning Goals**
  - Separating the means from the ends
  - providing UDL options in the materials, methods and assessments
  - Addressing variability in learning

Photo by Dillon Winspear on Unsplash

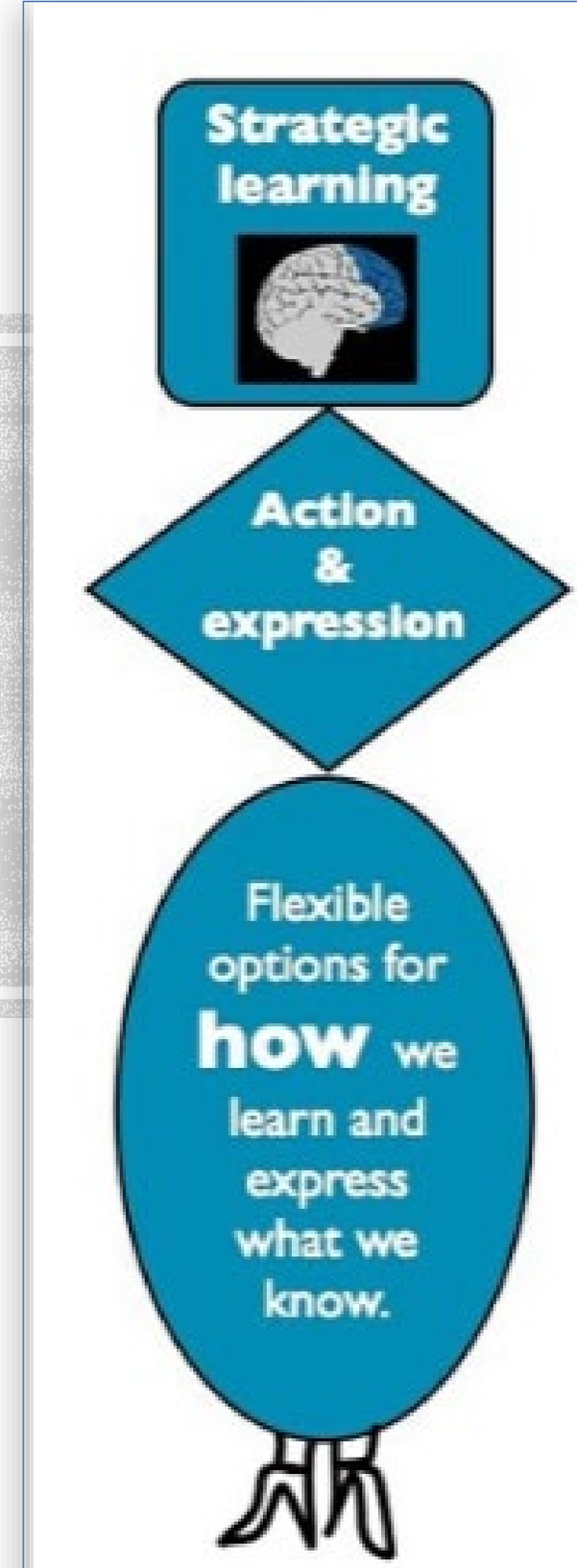
Alternatives

- Provide open-book quizzes: **What does a timed test assess?**
- Use a computer program, software for creating drawings, Mind-mapping software for outcome
- Demonstrate process of working a complex problem: **Allow students to take a video of themselves solving a problem and talking through their thought processes**
- Provide a choice of problems for students to complete to demonstrate mastery of a learning objective
- Co-Create assessments with students to demonstrate knowledge.
  - Students can:
    - Write questions for future quizzes, exams
- Co-Create captions for complex figures and diagrams to include in future work: **What would this demonstrate?**
- Create open-ended questions that allow creativity in response and submission type

Provide Multiple Means of Action and Expression

SLO and Backward Design: Flexible options for HOW we learn and express what we know

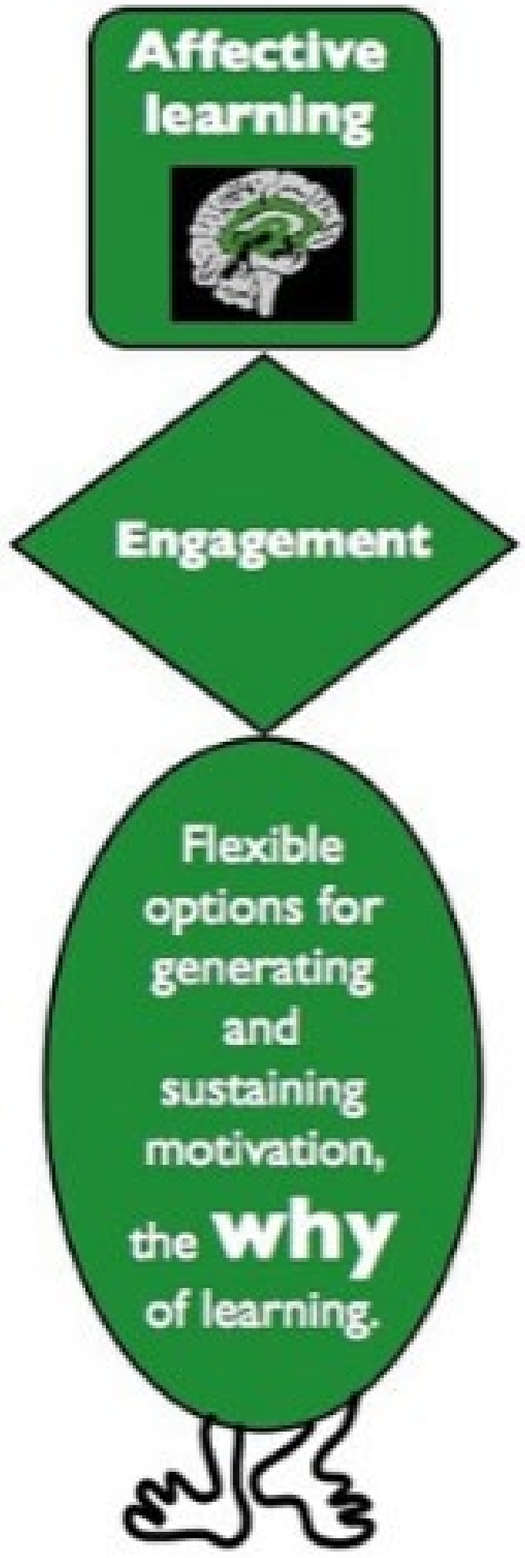
Q & A Time



Provide Multiple Means of Engagement

OEP Tapping into Students Interests

Suzanne Wakim



Optimize individual choice and autonomy

Heighten salience of goals and objectives

Optimize relevance, value, and authenticity

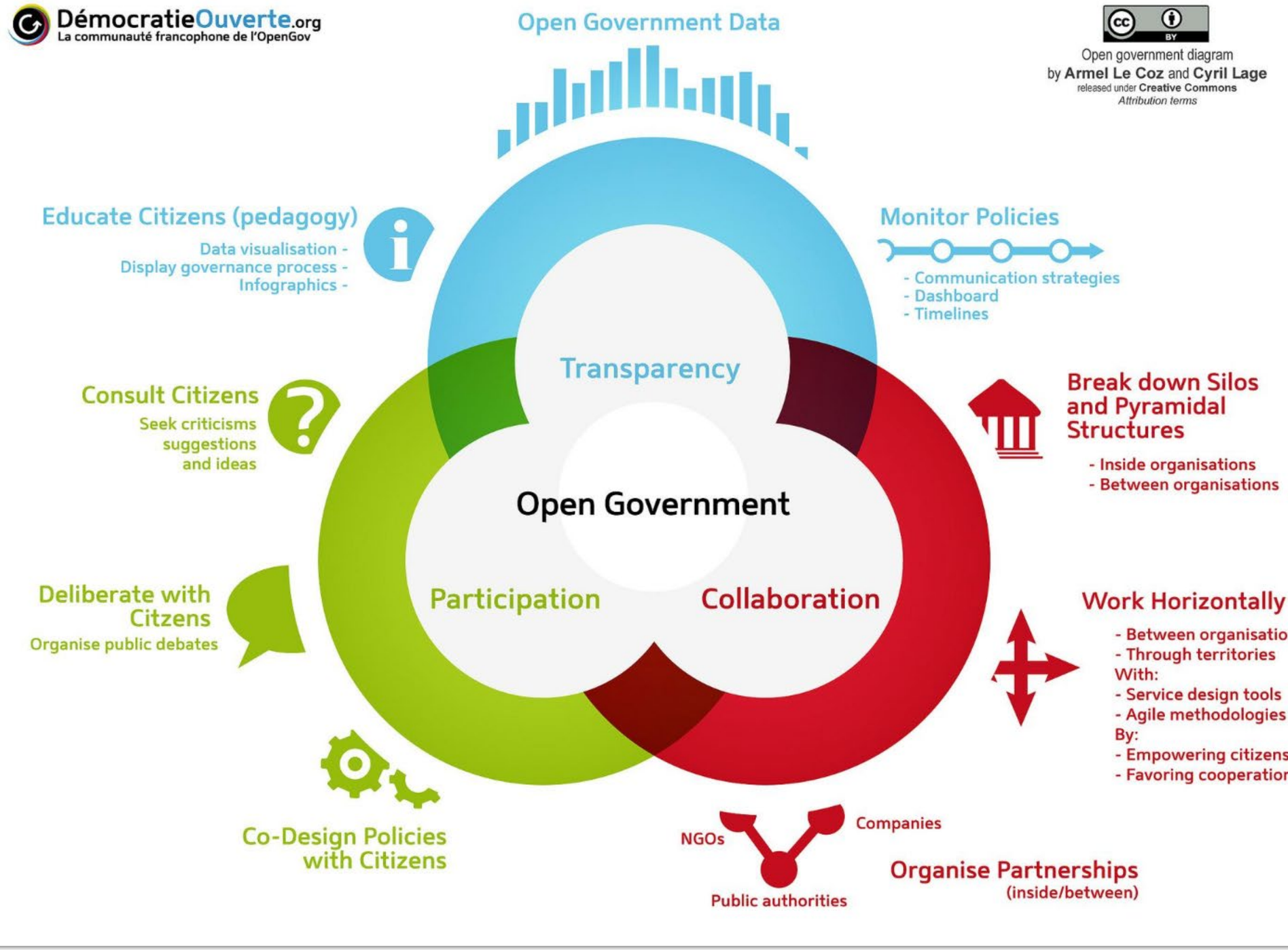
Vary demand and resources to optimize challenge

Foster collaboration and community

Promote expectations and beliefs that optimize motivation

Multiple Means of Engagement

OEP


DémocratieOuverte.org
La communauté francophone de l'OpenGov
Open government diagram
by Armel Le Coz and Cyril Lage
released under Creative Commons
Attribution terms
Open Government Data
Monitor Policies
- Communication strategies
- Dashboard
- Timelines
Educate Citizens (pedagogy)
Data visualisation -
Display governance process -
Infographics -
Transparency
Consult Citizens
Seek criticisms
suggestions
and ideas
Break down Silos and Pyramidal Structures
- Inside organisations
- Between organisations
Open Government
Participation
Collaboration
Deliberate with Citzens
Organise public debates
Work Horizontally
- Between organisations
- Through territories
With:
- Service design tools
- Agile methodologies
By:
- Empowering citizens
- Favoring cooperation
Co-Design Policies with Citizens
NGOs
Companies
Public authorities
Organise Partnerships
(inside/between)

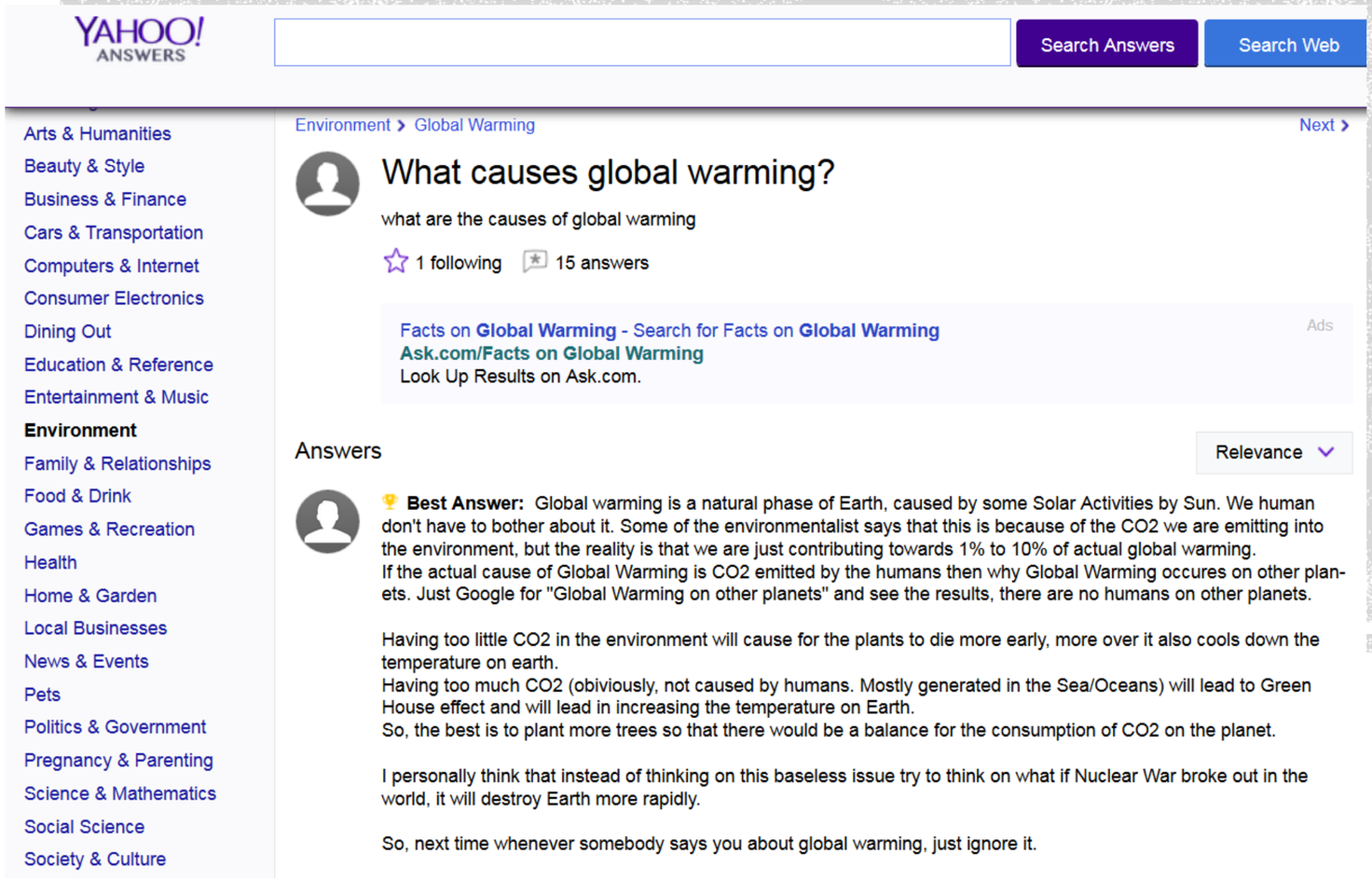
Collaborative Syllabus Design: Students at the Center

"Democratically co-creating learning outcomes with students, based on their goals for the class, situates them at the center of your pedagogy." - Christina

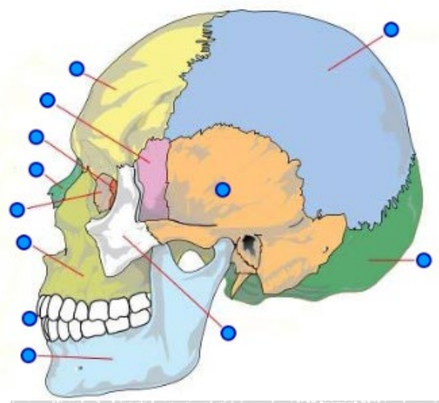
Open Educational Practices - Transparency

Open Educational Practices - Participation

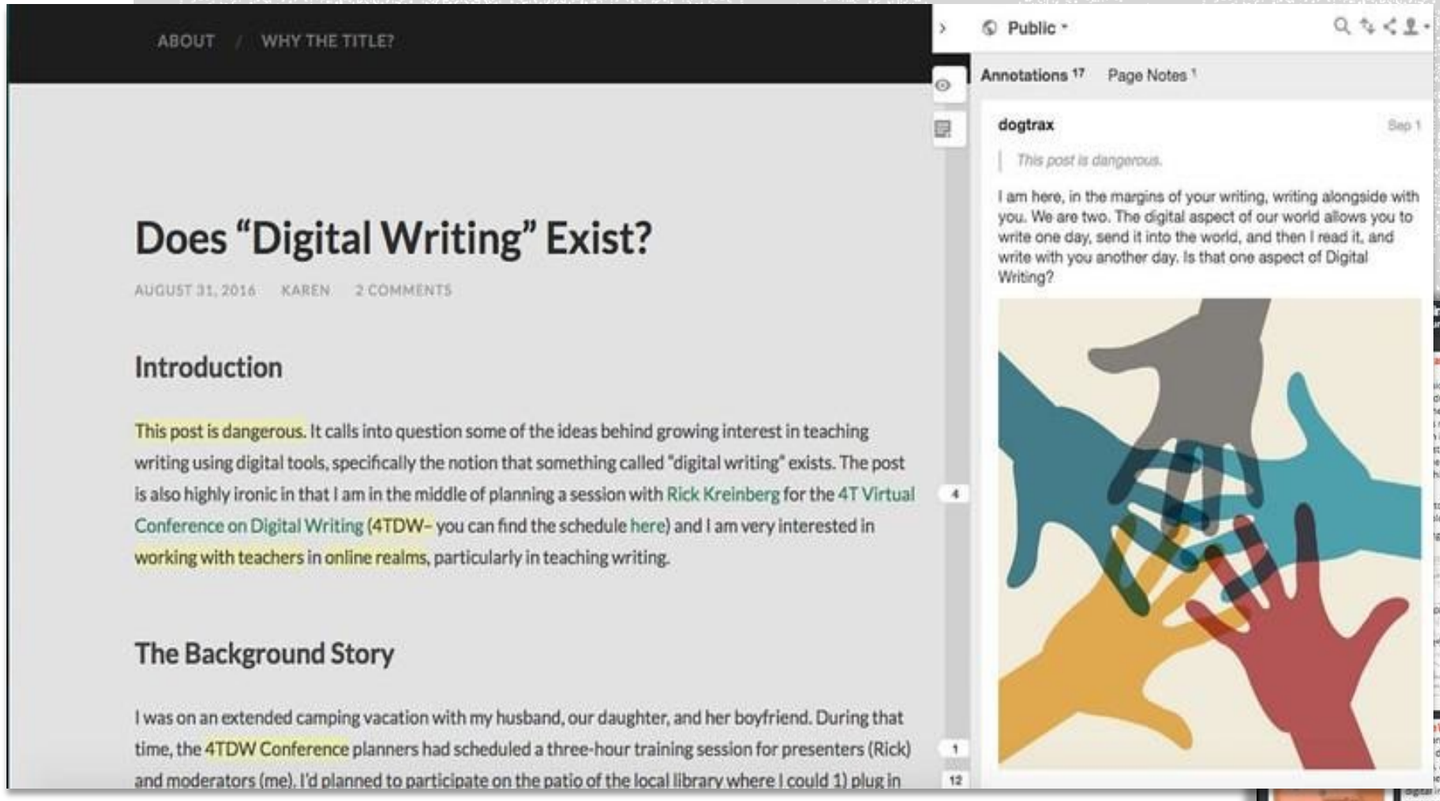
- Co-design the course with students
- Living Assignments

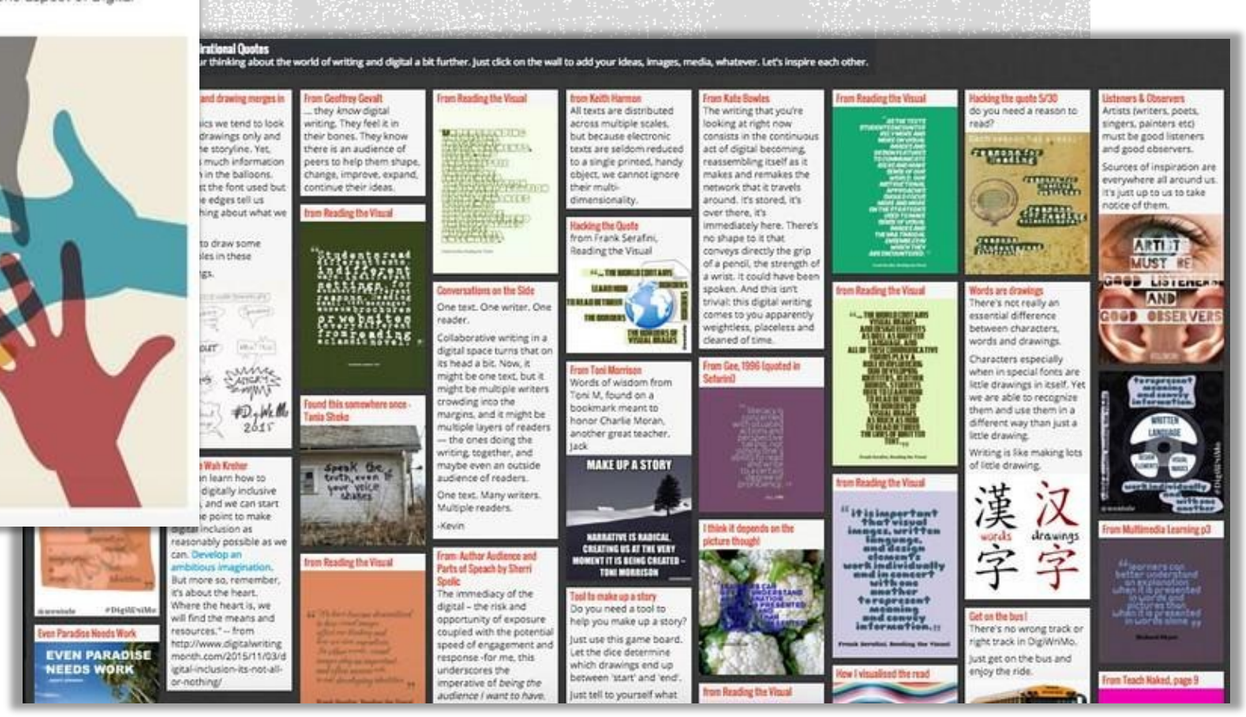


Temporal



Open Educational Practices - Collaboration





UDL-SLO-OEP


Equality
Equity
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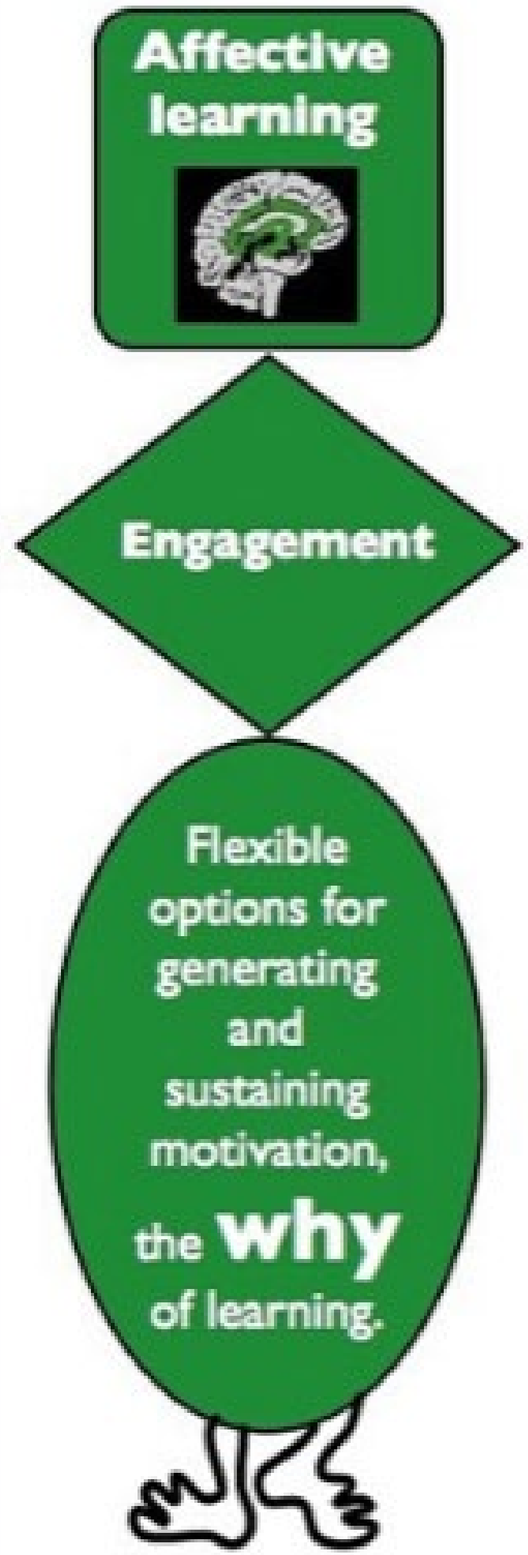
Provide Multiple Means of Engagement

OEP Tapping into Students Interests

Q & A Time



Contact Information

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ASCCC OERI Project Lead

SLO Coordinator

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Suzanne Wakim

Coordinator of Distance Education, Open Educational Resources, and Student Learning Outcomes - Butte College

ASCCC OERI Regional Lead

wakimsu@butte.edu