Universal Design for Learning:
Meeting the Needs of All Students

SPIN Conference

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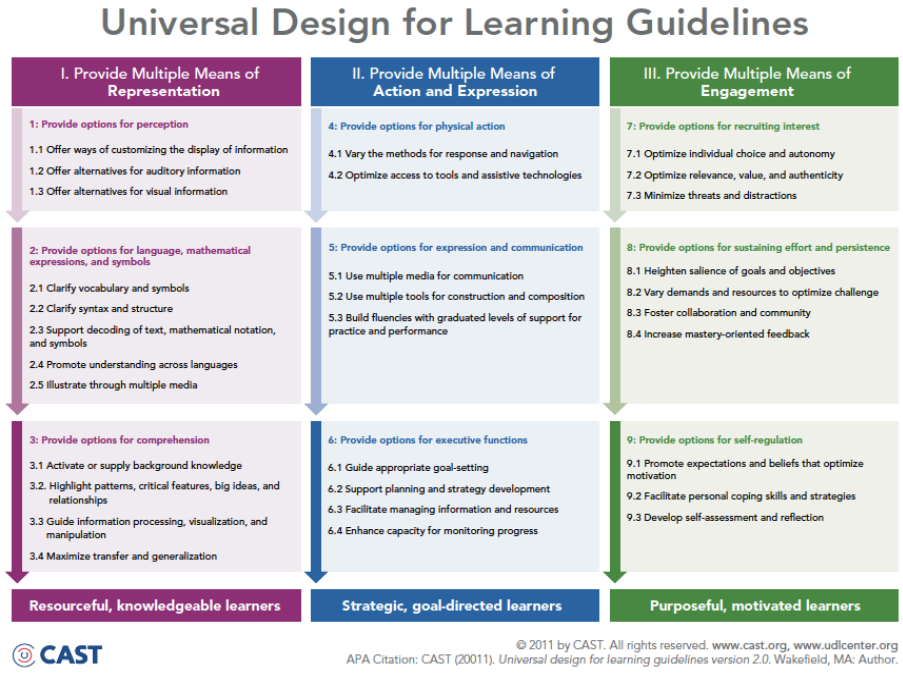
Key Questions for Today

1. What is Universal Design for Learning (UDL)?

2. How can UDL support my child's/student's learning needs?

3. What are some UDL-related resources I can use?

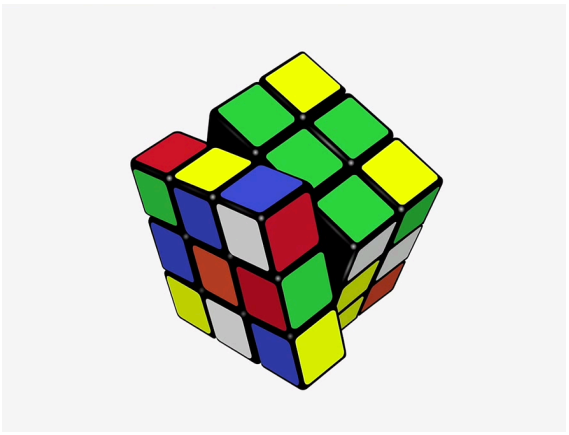
What is Universal Design for Learning?



Learner Variability

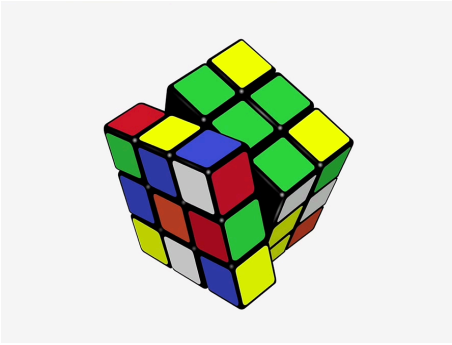
- Dr. Todd Rose: Variability Matters
- https://www.youtube.com/watch?v=8WClnVjCEVM

- What is **one thing that was interesting** to you in Dr. Rose's video?

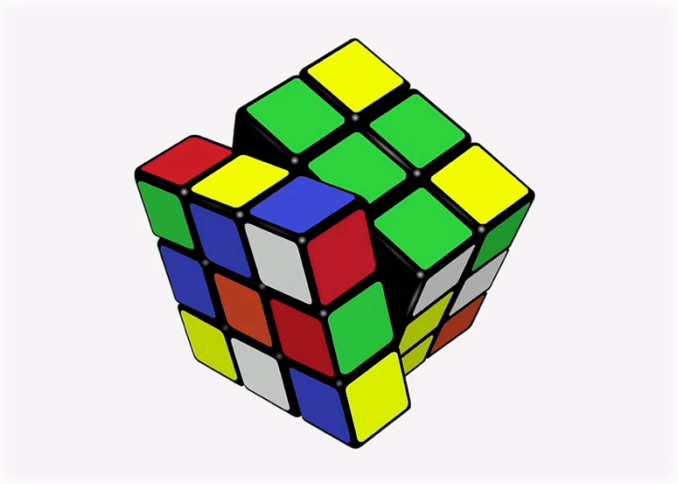


Key Points from the Video

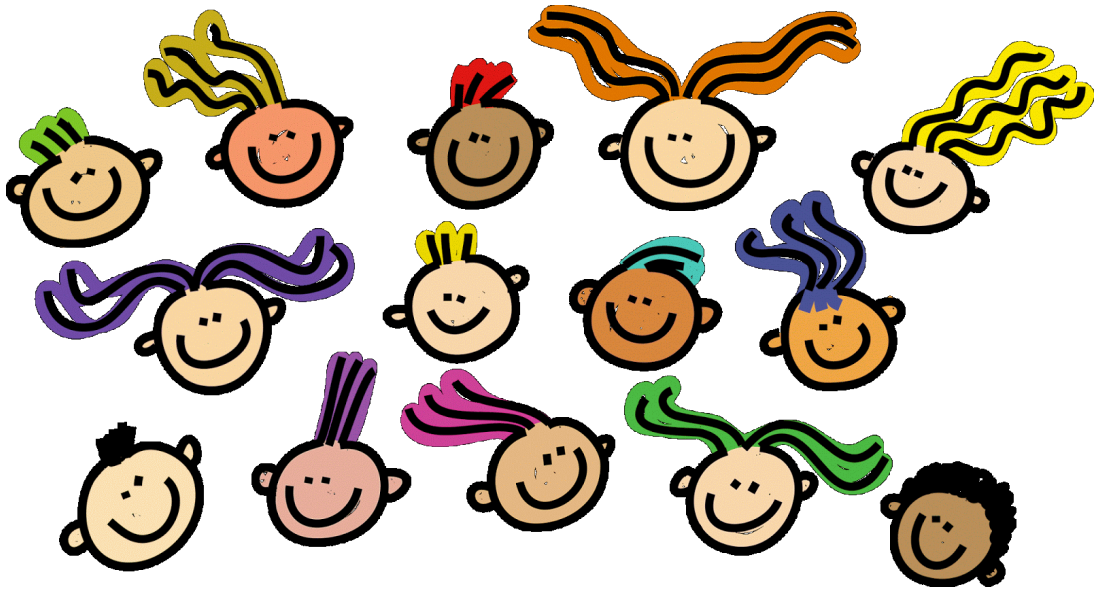
- We see **physical differences** (shoe size) and therefore design for it
- We do not see **differences in the brain**, but we know they are there
- We can **design for those learning differences**

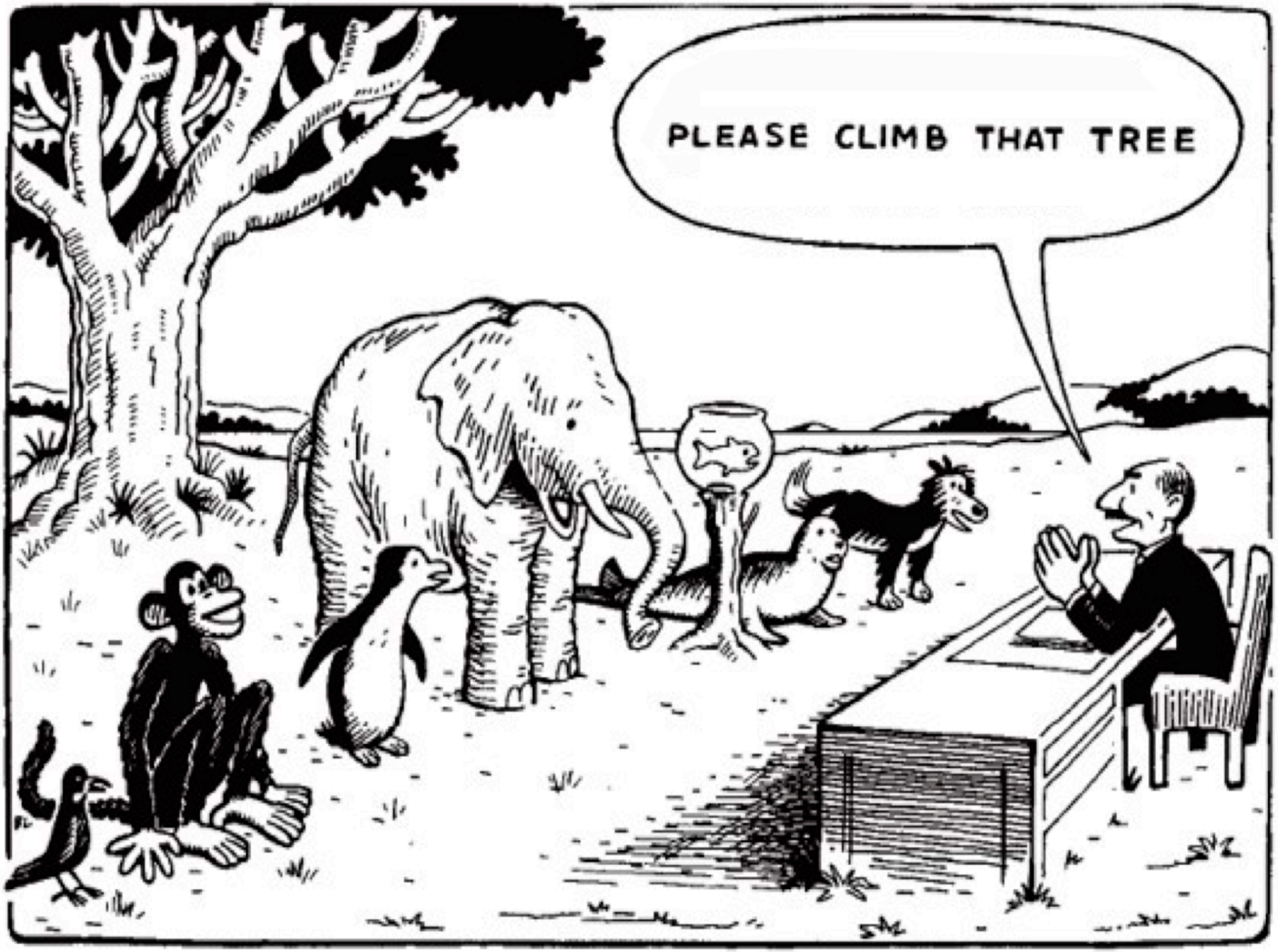


- T.R. Raman could access a braille Rubik's cube
  - But why have **two different cubes**?
  - Can we **include the options in one cube**?



How can we **design lessons to** address the Learner Variability?




PLEASE CLIMB THAT TREE

What is UDL?

- ✓ A set of principles for **curriculum development** that gives ***all students equal opportunities to learn***

Provides Flexibility

- Presentation of information
- Student response and Expression of knowledge
- Student Engagement

Reduces Barriers in Instruction

- Built-in appropriate Supports
- Built-in Accommodations
- Built-in Challenges

High achievement expectations for ALL students

(The Higher Education Opportunity Act of 2008)

- Today's classrooms include many **diverse learners**
- **Every learner is unique**: **One size does not fit all**
- Schools need to find ways to better meet the needs of diverse students, so they can access curriculum and be accountable for progress in it.
- UDL provides **flexibility to instruction**

Background

Universal Design (UD):

Physical Accessibility for ALL

Architecture

Universal Design for Learning (UDL):

Learning Accessibility for ALL

Education

Who Benefits?

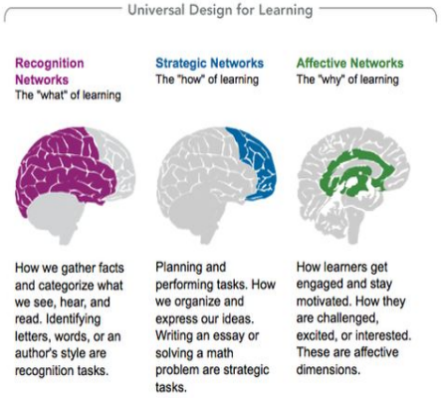
Video Captioning

Ramp & Automatic door

UD & UDL

- Add the **"Learning"**
- Considering **barriers** in the learning environment
- Reducing or eliminating barriers by building in options for **"cognitive access"**

- National Center on Universal Design for Learning: http://www.udlcenter.org/



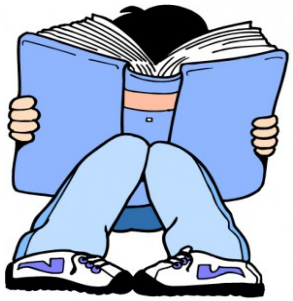
Goal of UDL

- To provide access to **the greatest number of students possible**

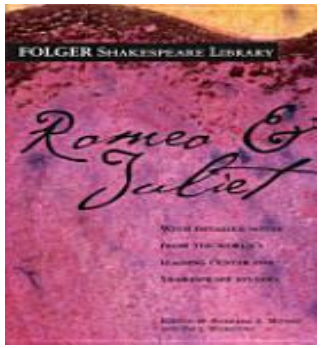
1. Multiple Means of Representation

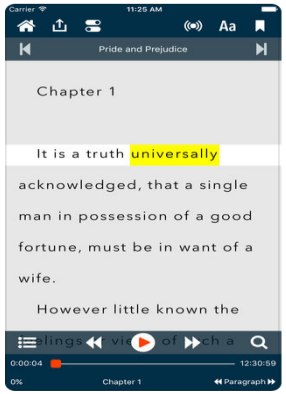
- **Presenting information and content in multiple formats** so that all students can access it

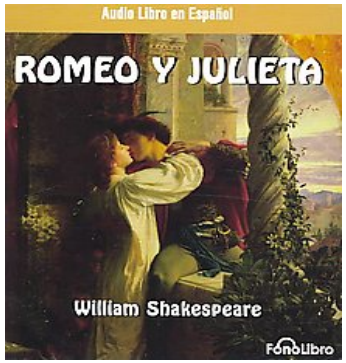
- Examples
  - Provide alternatives for accessing info (e.g., audio, video)
  - Provide or activate background knowledge in multiple ways
  - Highlight big ideas & Support memory

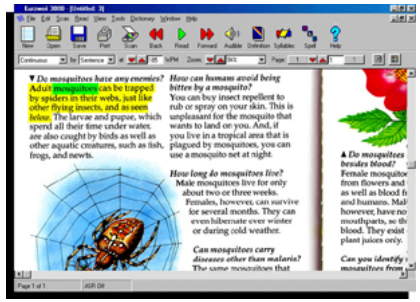


Use same material, but make it accessible

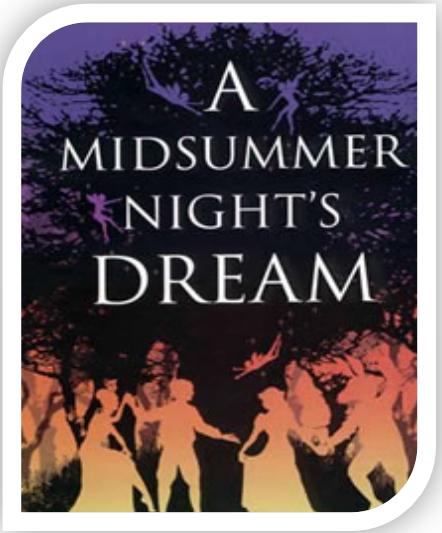






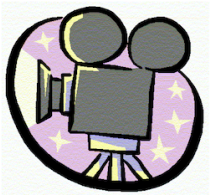


Different levels of material, but students can answer the same questions



2. Multiple Means of Action & Expression

- Allowing students **alternatives to express or demonstrate** their learning
- Examples
  - Provide options for physical expression (e.g., keyboard instead of pen)
  - Provide options for completing assignment using different media (e.g., text, speech, film, music)
  - Opportunities to practice



Examples

- Written response
- Verbal response
- Recording response
- Visual art project
- Multimedia: PowerPoint, iMovie, Glogsteredu
- Provide flexible Models, ongoing feedback & supports

3. Multiple Means of Engagement

- **Stimulating students' interests and motivation** and **challenging them appropriate** to learn in a variety of ways

IRIS UDL module

Examples

- Flexibility in **use of tools to access information**
- **Choice** in means of expression
- **Vary levels of challenge and support** to prevent frustration or boredom
- Tie work to **real-world examples**
- Teach **self-assessment and reflection** (e.g., checklist)
- Flexible **grouping** strategies
- Provide options that encourage **collaboration and communication**

Context (Environment) Also Matters!

- For professional (job-related) communication, I prefer

Face-to-face **Phone** **E-mail**

- For personal communication (with friends & family), I prefer

Face-to-face **Phone** **E-mail**

UDL

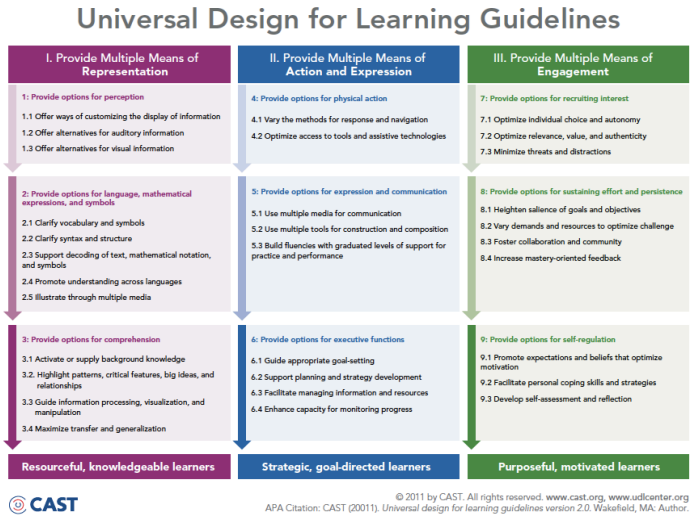
- Build in **flexible ways** to learn
- Let student **make choices and have autonomy**
- Different ways to **reach the goal**
- **Provide supports** along the way

Students benefit from learning activity that include choices and flexible options.

UDL Guidelines

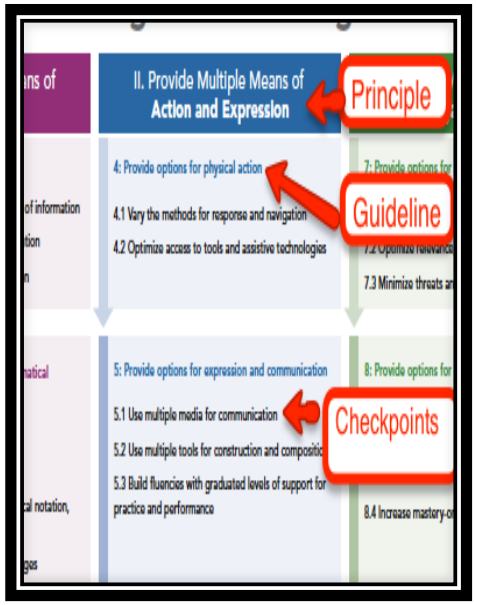
Highlight or circle anything that jumps out at you

Write down 1 or 2 words that describe UDL



UDL Guidelines

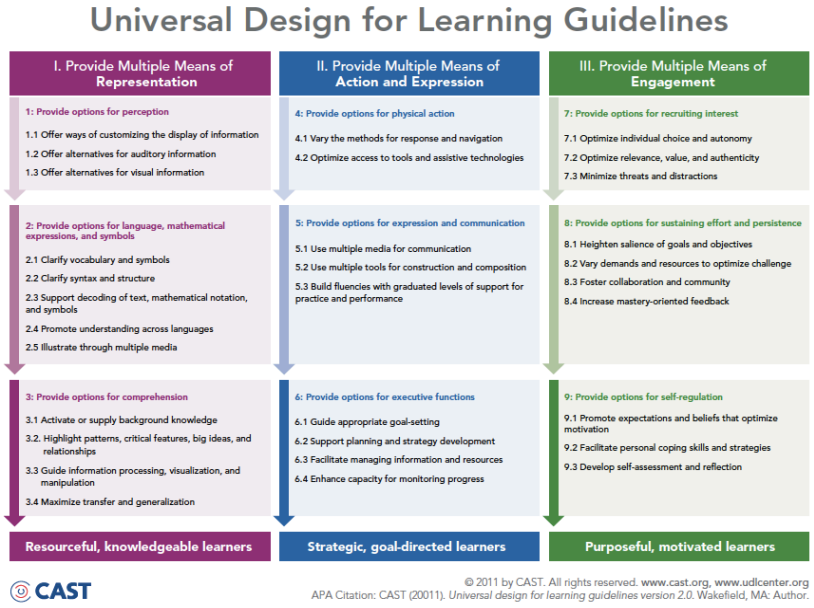
- **3 Principles**
  - ✓ Representation
  - ✓ Action/expression
  - ✓ Engagement
- **9 Guidelines** under the principles
- **31 Checkpoints** to define guidelines



Let's see an example of a project

- 5th grade inclusive social studies class
- Native Americans (e.g., Woodlands, Eskimo, Pueblo)
- Work in pairs or independently
- Make a choice on the Native Americans group
- Create a virtual museum (e.g., text, audio, video, picture)
- Make own decision: how many slides to create; only set up a minimum numbers

Let's Make Connections with UDL



Let's Make Connections with UDL

- Provide multiple options to expression
  - Give students options to express what they know (e.g., audio, picture, text, video)
- Provide multiple means of engagement
  - Students picked the topic that is interesting to them.
  - Students picked how they work (independently vs. in pairs)
  - Foster collaboration
  - Vary demands and resources to optimize challenges

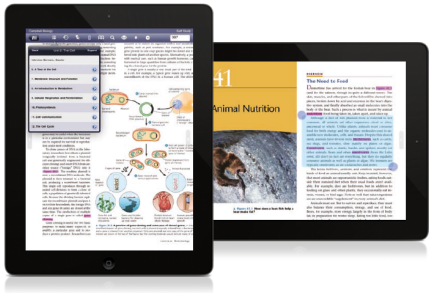
UDL & Technology Resources

- UDL guidelines help you to create **flexible and engaging lessons** for all students
- Many UDL guidelines can be addressed by **using technology**
  - ✓ Integrate **flexible options**
  - ✓ **Provide scaffolds** during the learning process
  - ✓ Design **creative activities** that integrate choice and option

Let's Explore
Some Technology Resources!

Reading Resources

- Decoding text
- Comprehending text

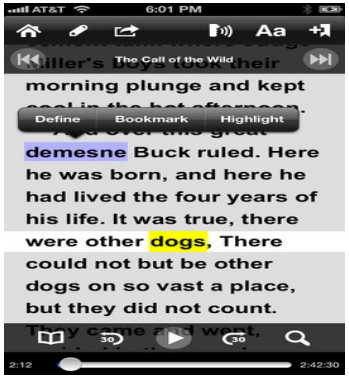


Alternate Format Texts: Audio/E-text

- **Audio text and e-text:** Download free audio and ebooks; helpful for people with a visual impairment, dyslexia, or struggling readers to access text.
- Teachers can download lots of textbooks and popular ELA books to use for their students. There is also a mobile device app (Read2Go) compatible with those sites.
  - **Bookshare:** https://www.bookshare.org/cms/
  - **Project Gutenberg:** https://www.gutenberg.org

Text-to-speech

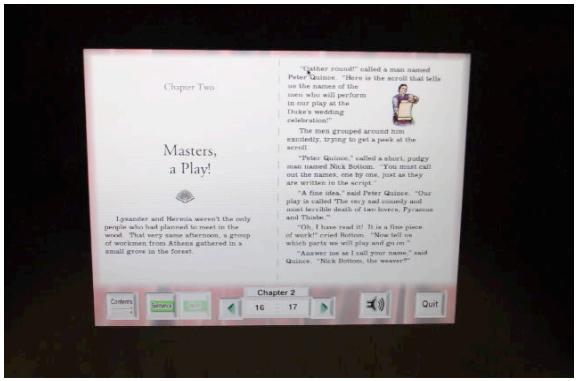
- **Read and Write Gold:** provide supplementary tools for both reading and writing. It is free for teachers: https://tinyurl.com/y7a9qdvn
- **Natural Reader:** Free text-to-speech program for both Window and Mac: https://www.naturalreaders.com/
- **Built-in text-to-speech function to read**: Computers recently published have the built-in accessibility feature.
- **Text-to-speech & OCR apps**
  - VoiceDream Reader ($14.99)
  - ClaroSpeak+ ($ 6.99)



Computer books

- **Start-to-finish:** Books for older struggling readers who need age appropriate topics with low levels of vocabulary, less language complexity, and other supports for comprehension (e.g., text-to-speech, highlighting). http://donjohnston.com/stflibrarytitles/

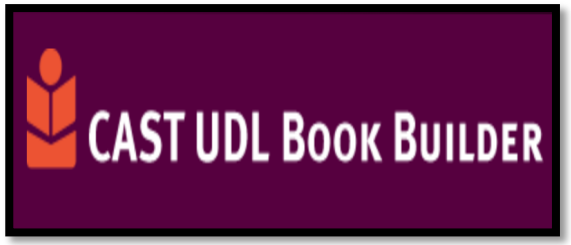
- **Raz-kids.com:** The award-winning website that delivers hundreds of interactive, leveled e-books for K-5 students. Students can listen to books for modeled fluency, read books for practice, and the record themselves reading, so teachers can monitor their progress. https://www.raz-kids.com/

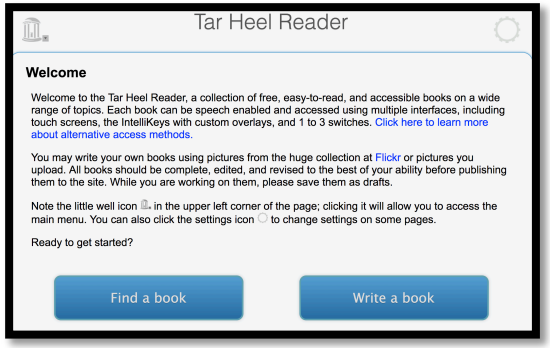


Create Your Own Books

- **CAST Book Builder:** Can create, share, publish and read digital books that engage and support diverse learners (e.g., text-to-speech, embed comprehension support) http://bookbuilder.cast.org/

- **Tar Heel Reader:** A free website of books created by teachers and students. The website has some basic reading supports (text to speech, color contrast). Teachers can also use the site to create books of their own or with students. It is easy to create an e-book with audio and pictures. https://tarheelreader.org/ (Code: Literacy!)





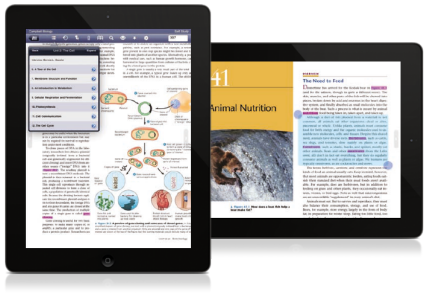
Google Chrome Tools

- **Mercury Reader:** Mercury Reader is an “add-on” that works with your Google Chrome web-browser (Google Chrome Extensions) to change text characteristics. With Mercury Reader, users can reduce clutter on a web page and focus on the main text that he/she is trying to read. https://tinyurl.com/y878utw5

- **Dictionary & Google Translate**
  - https://tinyurl.com/oor2hsm (Dictionary)
  - https://tinyurl.com/bhkkcnw (Translate)

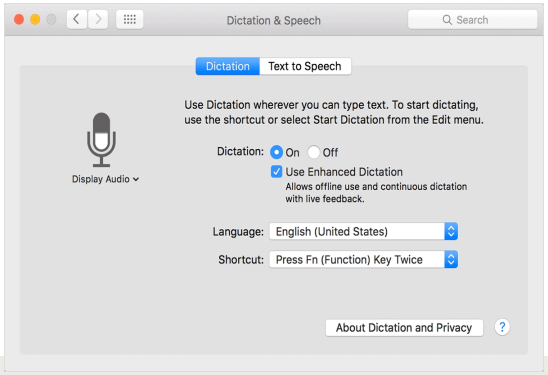
Writing Resources

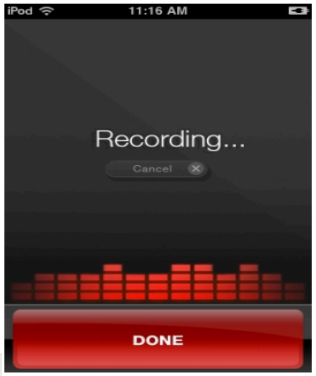
- Planning what to write
- Drafting thoughts
- Mechanics
- Spelling

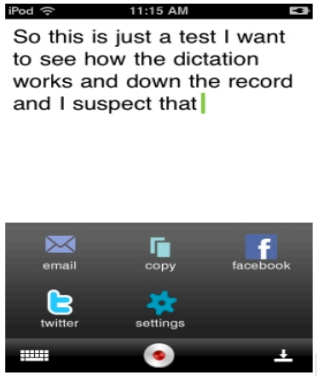


Dictation (Speech-to-Text)

- **Dictation Software**
  - Coverts spoken words into written text
- **Example tools**
  - Dragon dictation
  - Dragon Naturally Speaking
  - Built-in Dictation functions (Windows & Mac)







Recording Pens/Notes

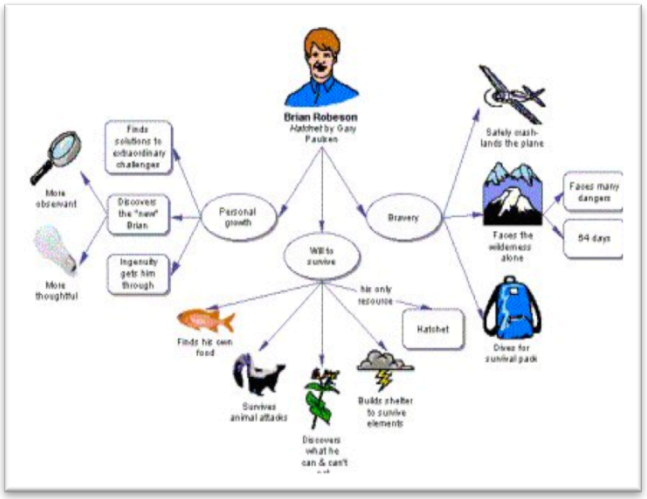
- **Livescribe Echo Pen:** This pen allows users to take notes as well as record audio https://www.livescribe.com

- **VoiceNote II:** Google Chrome App https://tinyurl.com/o4xd39p

Graphic Organizers

- Brainstorming, Organizing, Planning

  - **Kidspiration (K-4th):** http://www.inspiration.com/Kidspiration
  - **Inspiration (5-12th):** http://www.inspiration.com/
  - **Poppet:** https://popplet.com/



Audio Recording Tools

- **Vocaroo:** http://vocaroo.com/

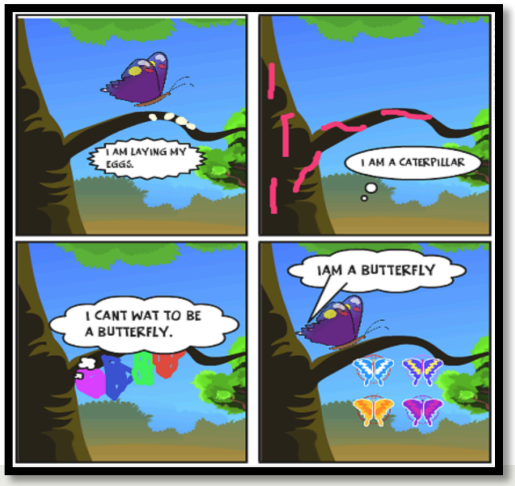
- **Audacity**: http://audacityteam.org/

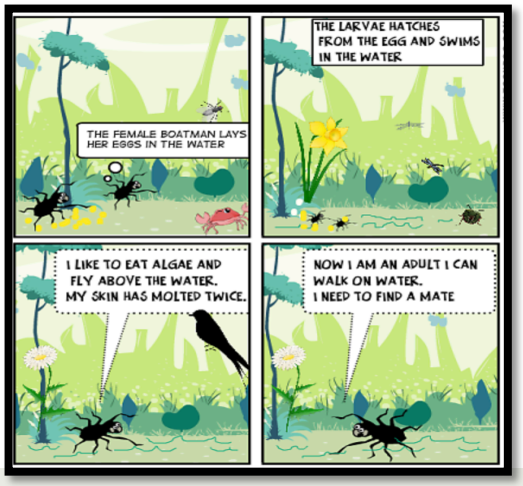
VOKI

- http://www.voki.com/
  - Students can express themselves through the use of avatars.
  - Students can create their own avatars and express their thoughts using text or audio.
  - Easy to share (e.g., Website, Blog, E-mail, etc.) & Voki app is available
  - Student Examples:
    - Content review: https://tinyurl.com/ybazedu7
    - Reading fluency: https://tinyurl.com/y73tpced

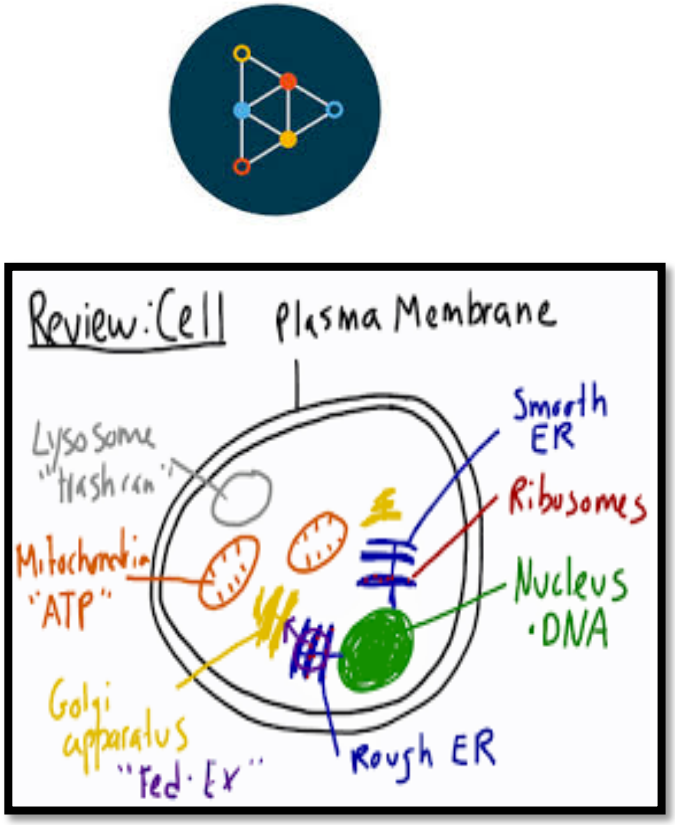
ToonDoo

- **ToonDoo:** http://www.toondoo.com/
  - Easy to create a comic strips and cartoons
  - Examples
    - Making ToonDoos to show what students have learned about insects lifecycles (https://tinyurl.com/ycjr3t85)





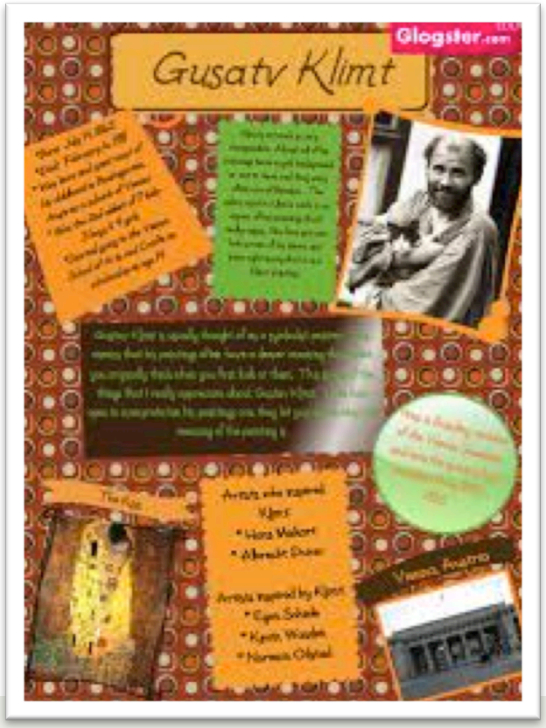
Educreations



- www.educreations.com
  - Web-based and Mobile app-based interactive whiteboard
  - Use various options (e.g., video, audio, text, drawing) to express knowledge
  - Record and replay what students created; easy to share
- Example lessons: http://tinyurl.com/nrjdn3d

Glogster

- https://www.glogster.com/
  - Online tool for creating virtual posters.
  - Students can combine text, images, music, and video in their posters
  - Example: Life Cycle of a Frog http://tinyurl.com/p2vslzs



ToonTastics 3D

- https://tinyurl.com/jvyucwq (App Website)
- https://tinyurl.com/y9yj3hyh (Example)
  - Students can draw, animate, record their voice, and share their own 3D cartoons
  - Create own backgrounds and characters with the drawing tools
  - Create own story, re-tell story, assess students' knowledge on topic taught

UDL Tool Resources

- **Free Technology Toolkit for UDL in all classrooms:** http://udltechtoolkit.wikispaces.com/
- **Web 2.0. Cool Tools for teachers:** http://cooltoolsforschools.wikispaces.com/Presentation+Tools
- **CAST UDL Free Learning Tools:** http://www.cast.org/our-work/learning-tools.html#.Vf2pGyBViko

A Parent Advocacy Brief from
National Center for Learning Disabilities
The power to hope, to learn, and to succeed.

Parent Advocacy Brief

A Parent's Guide to Universal Design for Learning (UDL)

Most parents will agree that both teaching and learning today are full of enormous challenges. Teachers face classrooms full of students with a wide ranges of abilities, speaking an array of languages, and coming from very diverse backgrounds. Students face increased learning expectations as the nation's schools work to improve their academic achievement and enhance their long-term success.

Millions of students also face special learning challenges brought about by **learning disabilities (LD)**. Almost three million students in America's schools receive special education services because of an identified learning disability. For these students, learning in today's environment is daunting, even when provided with specialized instruction, accommodations, and assistive technology.

Fortunately, there is a new approach to teaching and learning that can reduce these challenges, for all students, not only for those with LD. That new approach is called **Universal Design for Learning (UDL)**. It is a concept that, if embraced by the field of education, can dramatically change the school experiences and success of students with LD by making broad changes to how information is presented to all students and the ways in which all students are able to show what they know. The application of UDL principles in the development of curriculum and assessments can broaden the horizons for students with LD and shift the focus from a "student deficit" approach to a "student success" approach. Understanding UDL and how it can benefit students with LD is the focus of this Parent Advocacy Brief.

What is Universal Design for Learning (UDL)?

Universal Design for Learning (UDL) is a research-based framework for designing curricula—that is, educational goals, methods, materials, and assessments—that enable all individuals to gain knowledge, skills, and enthusiasm for learning. This is accomplished by simultaneously providing rich supports for learning and reducing barriers to the curriculum, while maintaining high achievement standards for all students.

(Source: www.CAST.org)

See pages 9-12 for a look at how UDL can be applied to instruction.

A Parent Guide to Universal Design for Learning

This Parent Advocacy Brief will help parents learn the basics about the UDL approach and it offers helpful tips for talking with your school about it.

http://www.cpacinc.org/wp-content/uploads/2009/12/ParentsGuidetoUDL.pdf

QUESTION?

If you have any questions, please do not hesitate to contact me!

Min Ok: okmin@hawaii.edu