TEXAS EDUCATION AGENCY

MAKING YOUR CURRICULUM ACCESSIBLE TO ALL SPECIAL POPULATIONS – APPLYING UDL IN CTE SETTINGS

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OBJECTIVES

- Definition of Universal Design for Learning (UDL)
- Principles of UDL
- Examples – Principle I
- Examples – Principle II
- Examples – Principle III
- CTE UDL Master List

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DEFINITION

- **Definition:** Universal Design for Learning is an educational approach for designing curriculum for all learners. UDL is based on three principles:
- **Source:** Adapted from: http://www.cast.org/about/index.html

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PRINCIPLES

- Multiple means of representation, to give diverse learners options for acquiring information and knowledge
- Multiple means of action and expression, to give diverse learners options for demonstrating and acting upon information and knowledge
- Multiple means of engagement, to tap into learners' interests, offer appropriate challenges, and increase motivation

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REPRESENTATION

- Remove barriers to students' learning by providing the same information through different modalities.

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STRATEGIES FOR REPRESENTATION

- Provide Options for Perception
  - Change the contrast between background and text or image
  - Change the color you use for information or emphasis
  - Change the layout of visual or other elements
  - Use text equivalents such as captions or speech-to-text software (e.g. voice recognition) for spoken language
  - Use physical objects and models to teach abstract concepts.

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STRATEGIES CONT'D

- Provide options for language, mathematical expressions, and symbols.
  - Present key concepts in different forms for e.g. text and illustration, photograph, video etc.
  - Clarify complex syntax by offering simpler sentence alternatives
  - Pre-teach vocabulary and symbols such that they connect to students' life experiences and prior knowledge.

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STRATEGIES CONT'D

- Provide options for comprehension
  - Bridge key concepts with analogies and metaphors.
  - Use outlines, graphic organizers, unit organizer routines, concept organizer routines, and concept mastery routines to emphasize key ideas and relationships.
  - Use cues and prompts to draw attention to critical features.
  - Encourage the use of mnemonic strategies and devices (e.g., visual imagery, paraphrasing strategies, method of loci, etc.)

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VIDEO STRATEGIES

- Representation – In general
- Book on tape
- Graphic organizer
- Video simulations
- Decoding
- Using Simple Language

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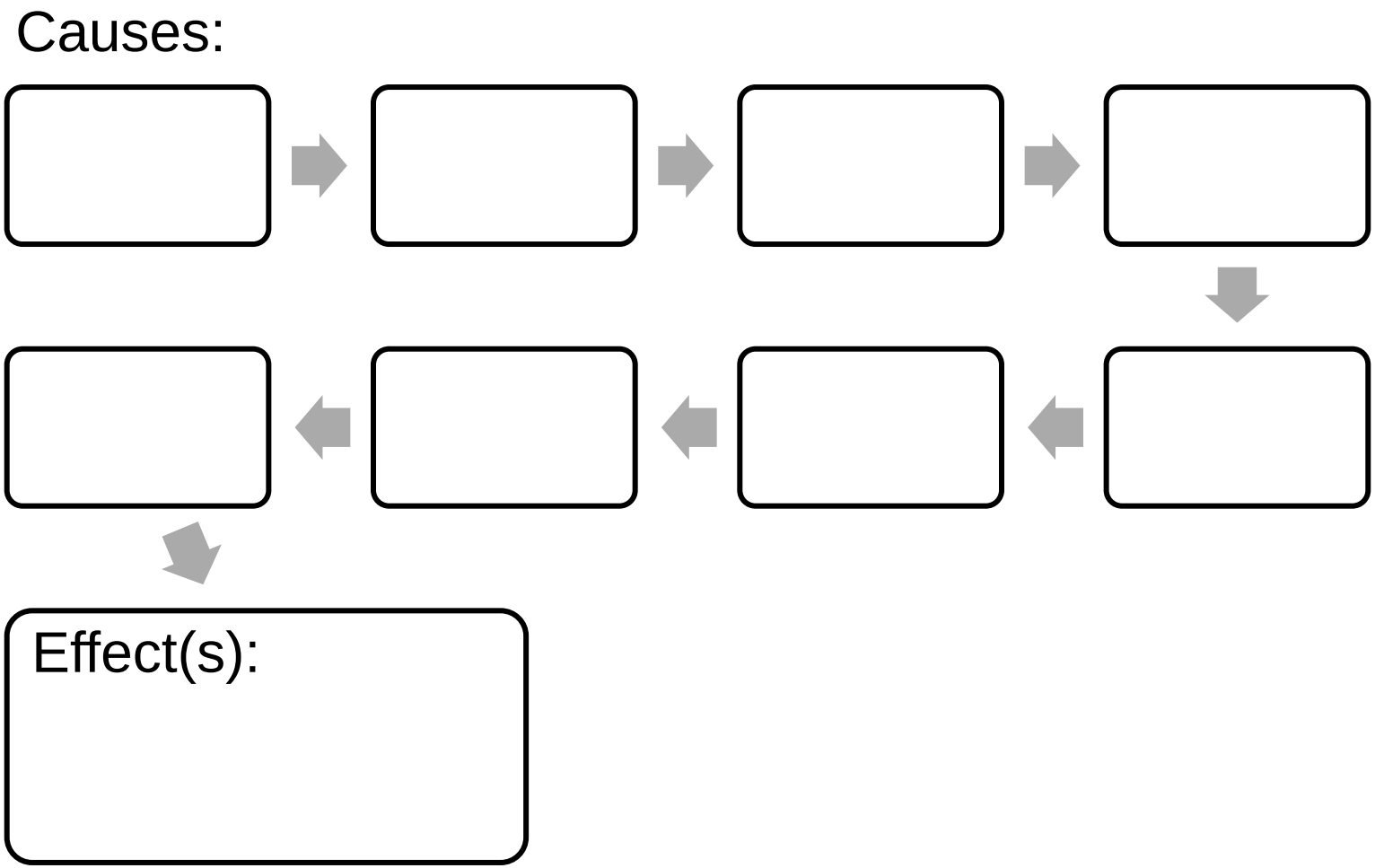
CAUSE AND EFFECT



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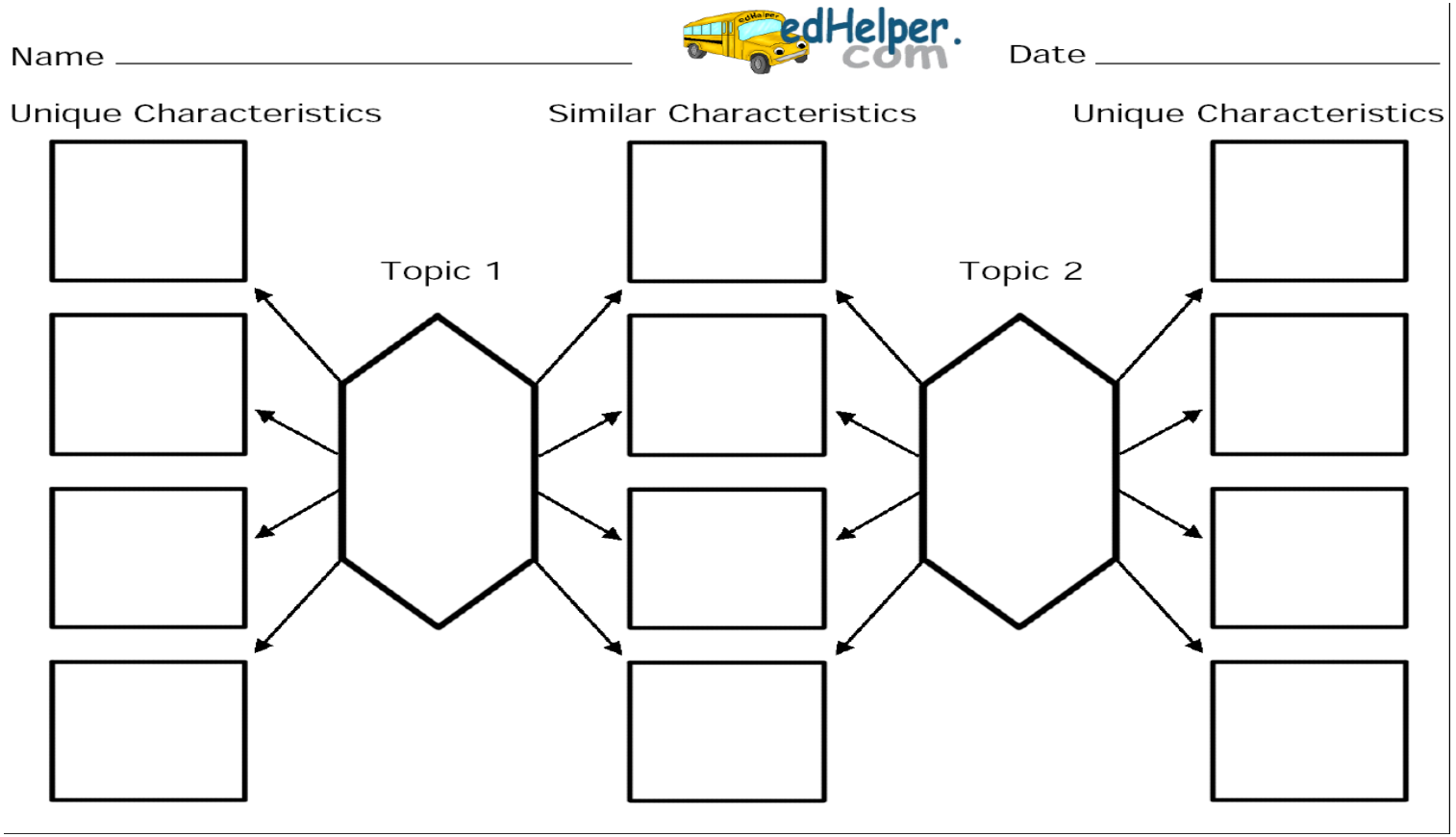
VENN DIAGRAM



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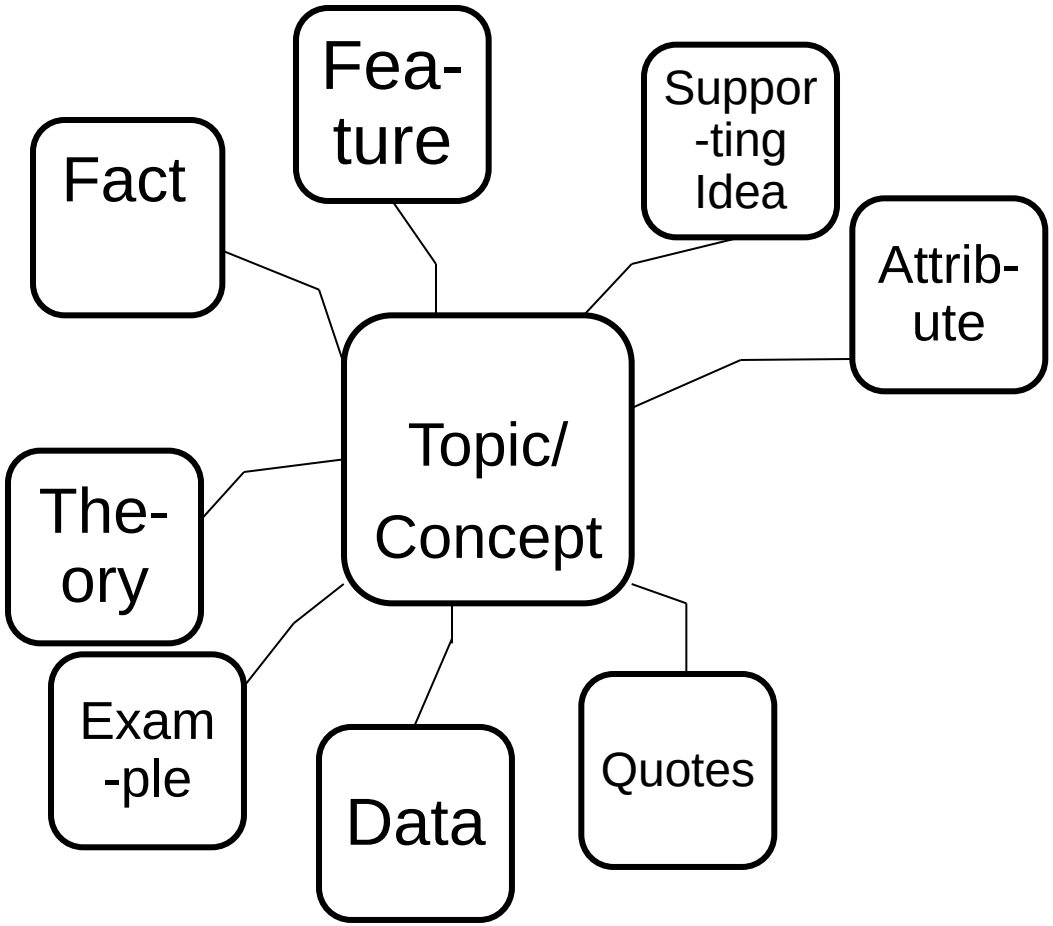
SPIDER MAP



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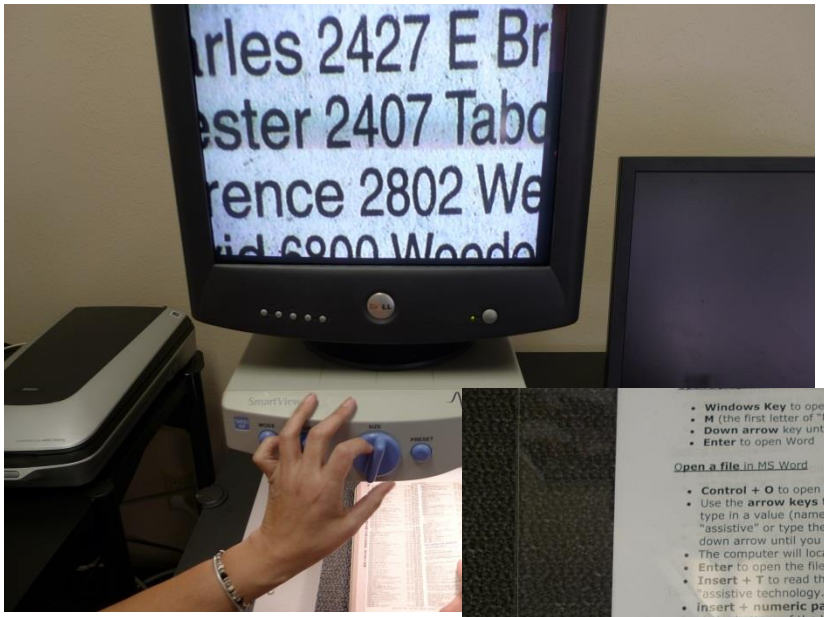
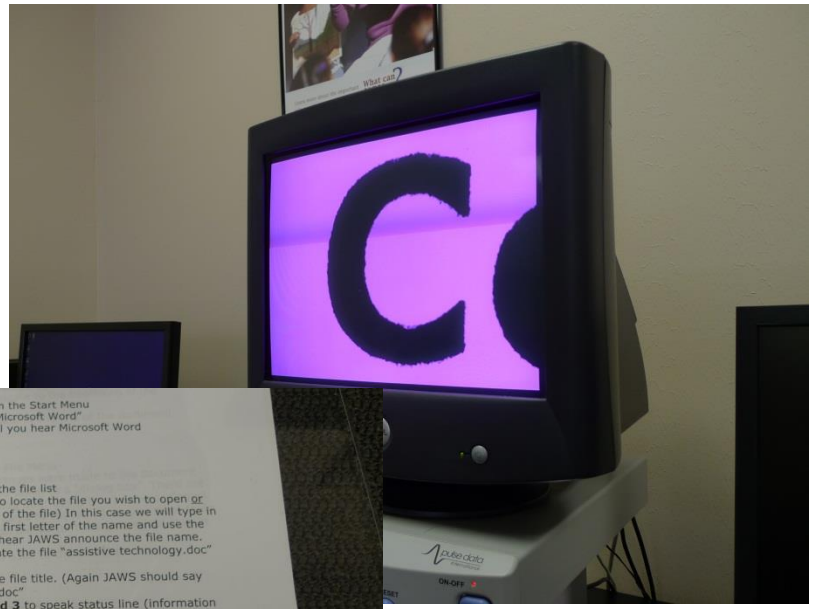
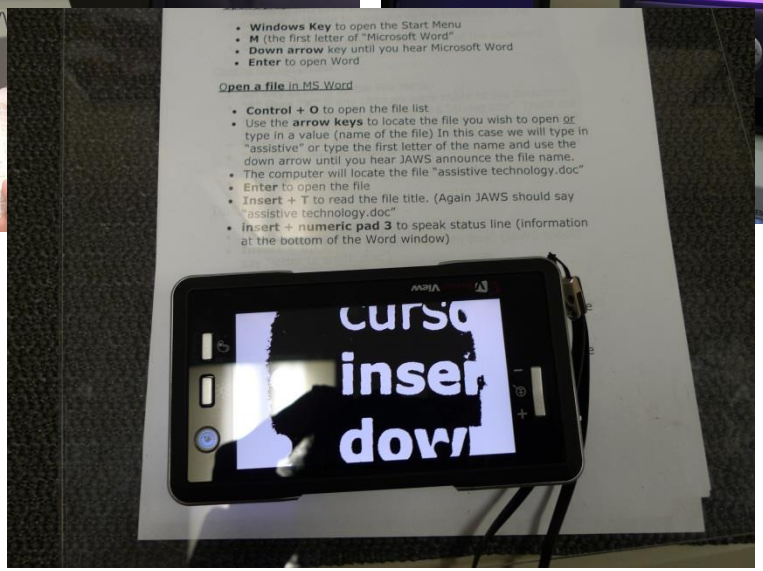
ASSISTIVE TECHNOLOGY (AT)







Magnifying – Screen and Handheld

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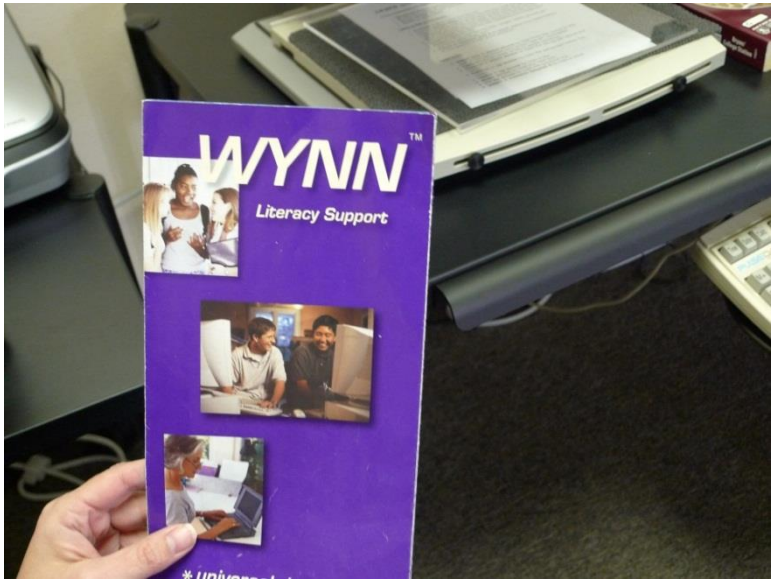
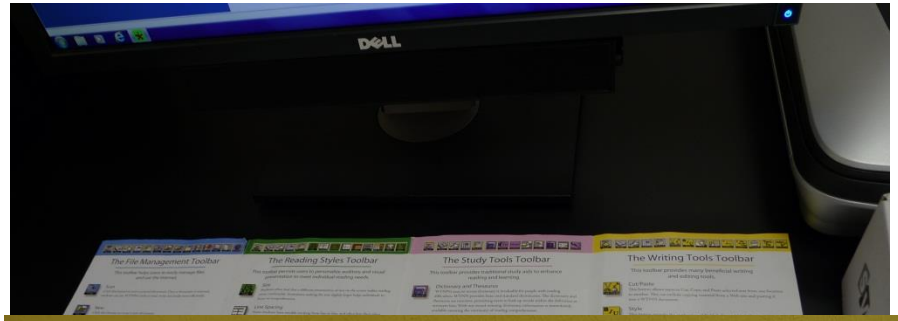
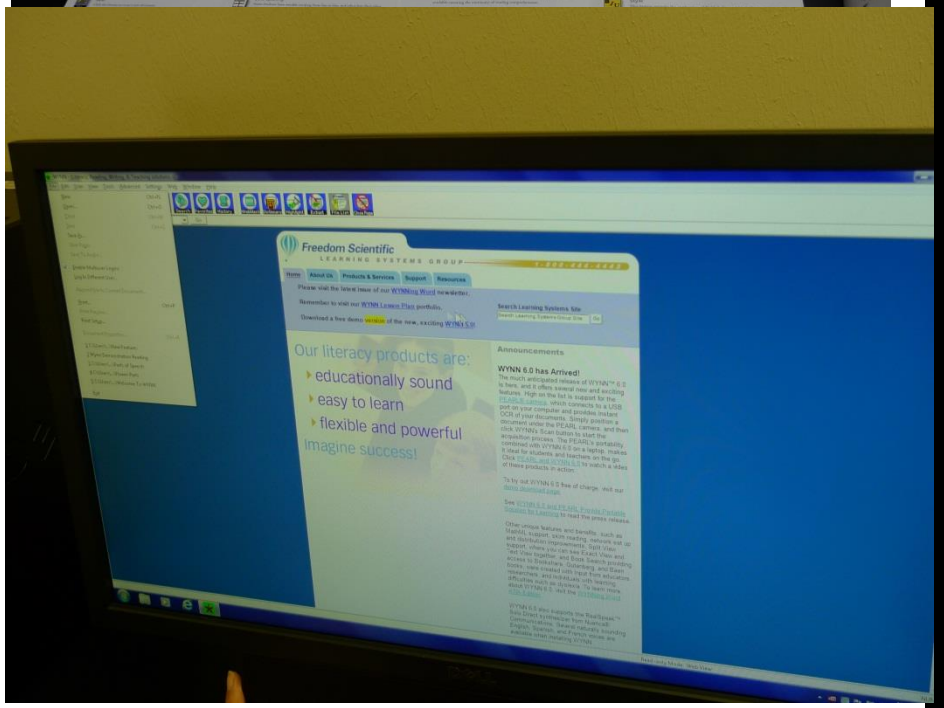
AT CONT'D







WYNN software that highlights in context as text is spoken aloud. Includes the ability to modify electronic files, scan pages, or create new documents

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AT VIDEOS

- Closed Circuit TV

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ACTION AND EXPRESSION

- Provide multiple and flexible means of expression to provide diverse students with alternatives for demonstrating what they have learned.

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STRATEGIES FOR ACTION AND EXPRESSION

- Provide options for physical action.
  - Provide opportunities for working with materials using hands.
  - Vary requirements for physically responding to or indicating selections among response types (e.g., marking with pen and pencil instead of using a mouse).
  - Provide opportunities for working with materials using a joystick or an adapted mouse.

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STRATEGIES CONT'D

- Provide options for expressive skills and fluency
  - Allow students to provide products using multiple media.
  - Provide opportunities for students to create models that demonstrate the same outcomes but use differing approaches, strategies, skills, etc.
  - Offer differentiated feedback (e.g., feedback that is accessible because it can be customized to individual learners).

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STRATEGIES CONT'D

- Provide options for executive functions
  - Model for students or demonstrate examples of the process and product of goal-setting.
  - Offer guides and checklists for scaffolding students' goal-setting.
  - Provide representations of progress (e.g., before and after photos, graphs and charts showing progress over time).

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VIDEO EXAMPLES

- Action and Expression – In general
- Using Realia
- Demonstrating
- Test Reviews
- Oral Explanation
- Build Models
- Encourage Participation

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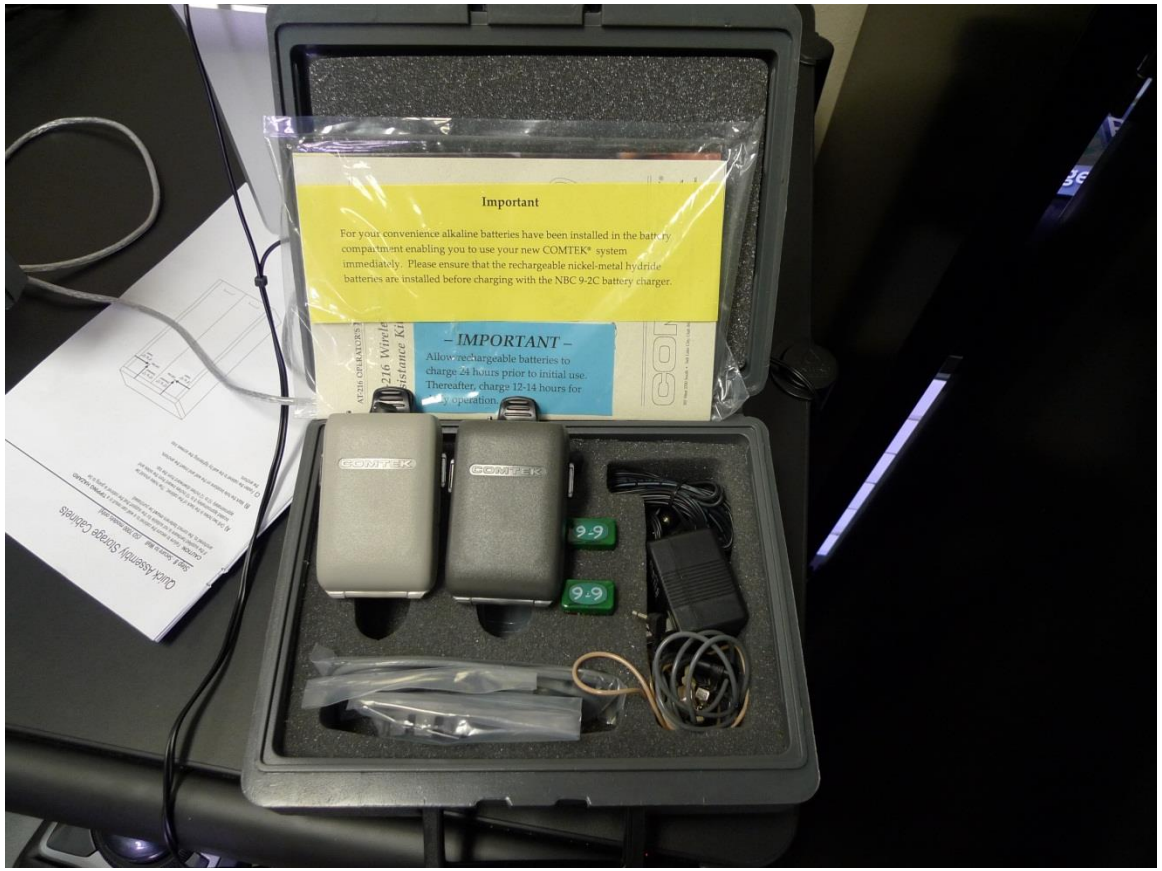
AT



Two way communication radios using FM technology. Also fits directly into individuals' hearing aid.

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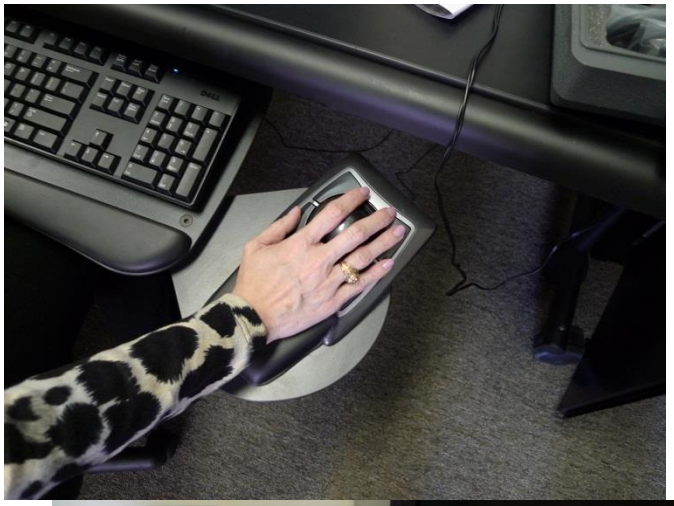

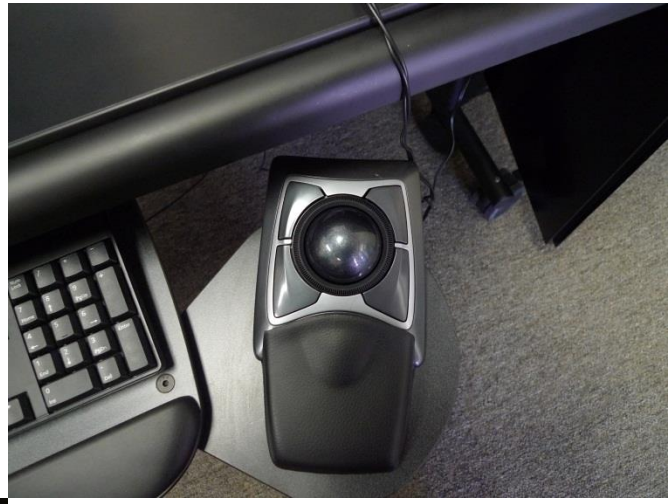

Adapted mouse types

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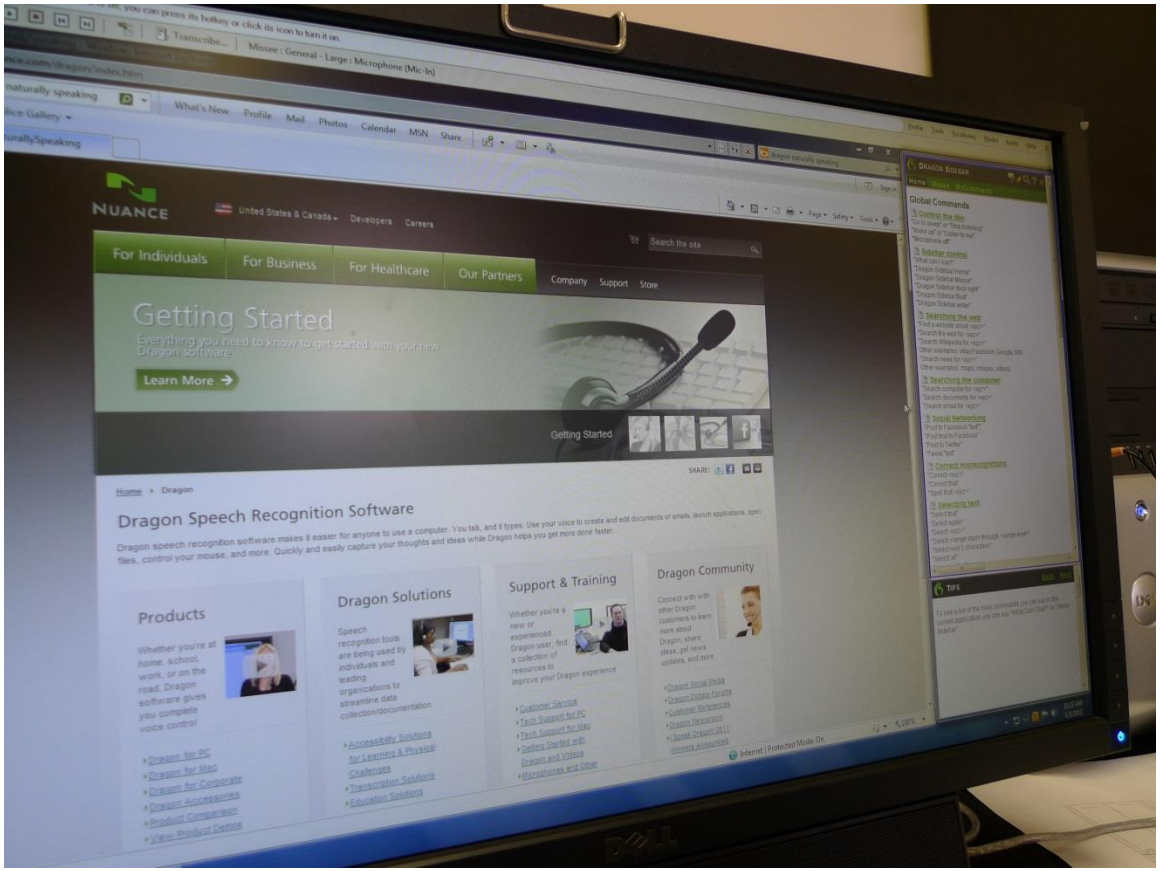
AT CONT'D



Dragon Naturally Speaking

Using voice to create email, documents and spreadsheets. Helps control PC/MAC by talking to it, starting programs, using menus and surfing the Internet.

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AT VIDEO

- Head Tracker

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ENGAGEMENT

- Provide multiple and flexible means of engagement to tap into diverse learners' interests, challenge them appropriately, and motivate them to learn.

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STRATEGIES FOR ENGAGEMENT

- Provide options for recruiting interest
  - Design activities so that outcomes are authentic, communicate to real audiences, and are purposeful.
  - Invite students to provide personal responses, evaluation, and self-reflection to content and activities.
  - Give students as much discretion and autonomy as possible by providing choices

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STRATEGIES CONT'D

- Provide options for sustaining effort and persistence.
  - Ensure the division of long-term goals into short-term objectives.
  - Offer prompts that guide students in when and how to ask peers and/or teachers for help.
  - Provide feedback that encourages perseverance, focuses on development of efficacy and self-awareness, and encourages the use of specific supports and strategies in the face of challenges.

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STRATEGIES CONT'D

- Provide options for self-regulation
  - Differentiate models, scaffolds, and feedback such that students can manage frustration.
  - Arrange for coaches, mentors, or agents that model the process of setting personally appropriate goals.
  - Increase the length of on-task task orientation in the face of distractions
  - Elevate the frequency of self-reflection and self-reinforcement

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ACCESS TO TECHNOLOGY

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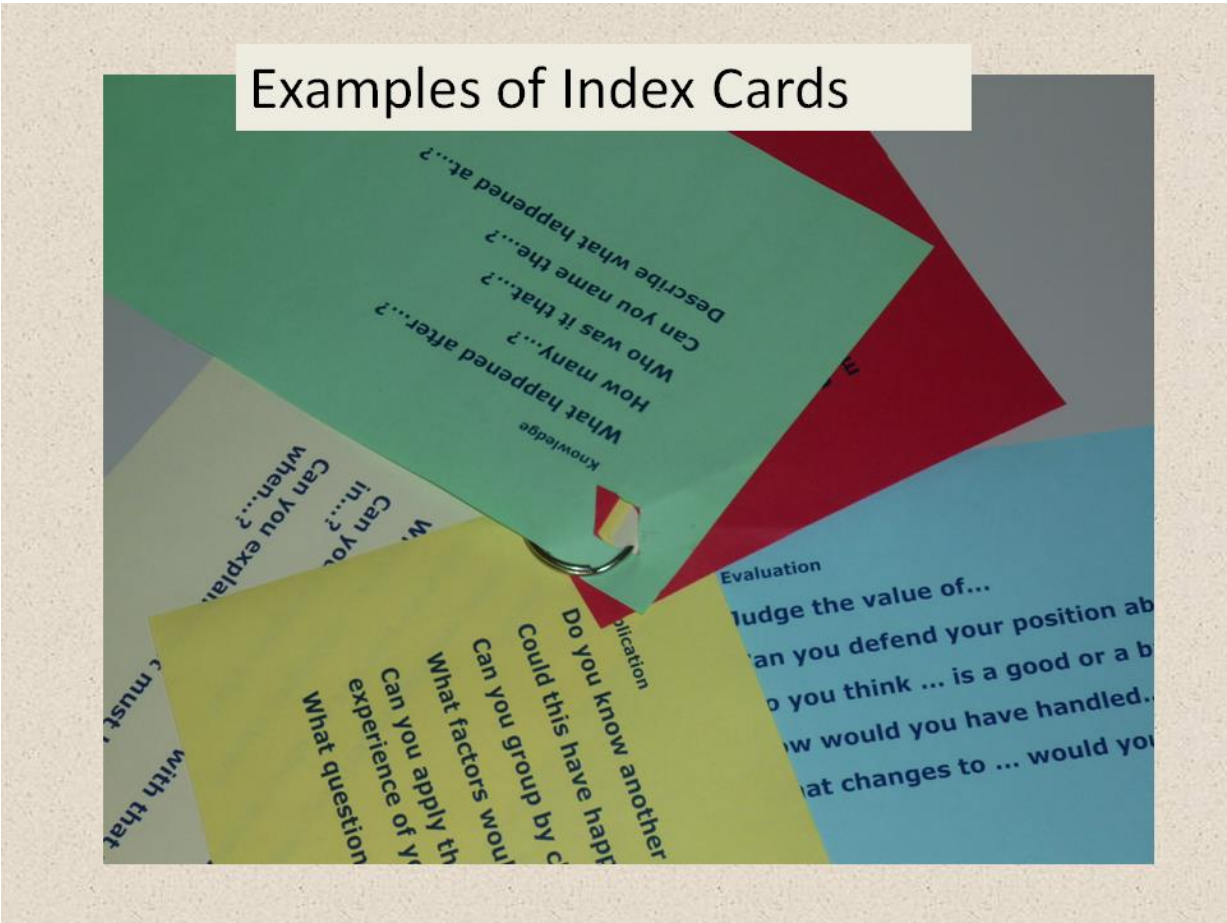
LEVELED QUESTIONS



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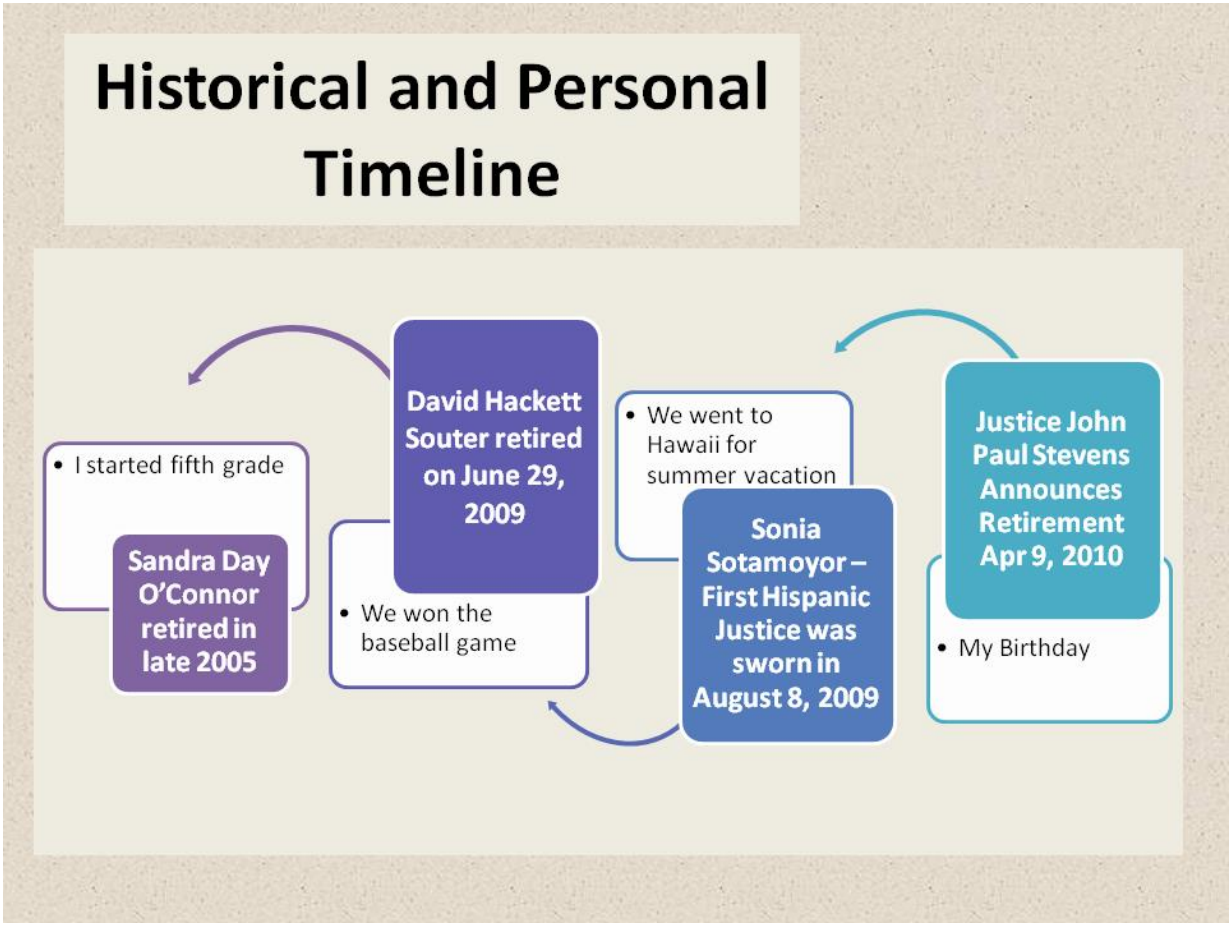
RELATE PERSONALLY TO MATERIAL



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VIDEO EXAMPLES

- Engagement in general
- Use humor
- Partnering
- Provide rationale
- State objectives
- Close class

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BENEFITS OF UDL

- Building accessibility into design helps to ensure that features meeting the needs of the widest range of students are incorporated integrally into the curricula. Such designs can prevent the need for adaptations or retrofitting.
- Providing adaptable materials and media allows students to choose and customize formats suited to their learning needs.

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BENEFITS CONT'D

- Using multiple media, such as video and audio formats, provides a variety of ways to represent a concept and allows students to access the materials through different senses.
- Presenting information in multiple, parallel forms help to accommodate diverse learning styles.
- Providing challenging, salient, and age-appropriate materials to all students motivates students who may not otherwise be able to access curricular content they need given their age and developmental level.

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Questions ?

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