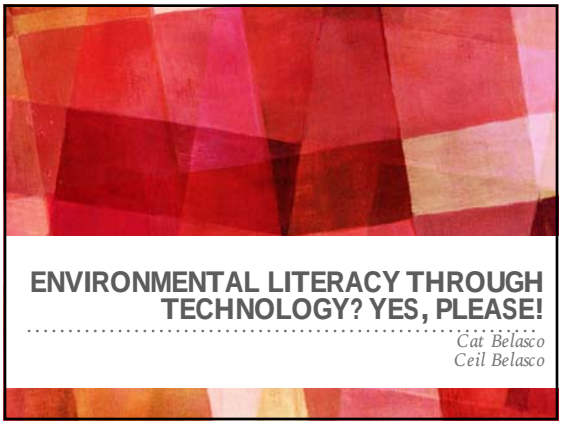


ENVIRONMENTAL LITERACY THROUGH TECHNOLOGY? YES, PLEASE!

Cat Belasco
Ceil Belasco

ENVIRONMENTAL LITERACY

- Being able to use the signs, symbols, and cues around you to navigate your environment
  - Cues - can be verbal, nonverbal, given by people or by objects in the environment.
- Literacy that is functional, purposeful, and goal-directed
- The ultimate goal of environmental literacy is not phonemic awareness or reading written books - it is to immerse the individual in their world with a sense of confidence that they can access their environment
- The development of literacy involves reading, writing, listening, and speaking - adapted to the individual needs of the user

WHO CAN USE TECHNOLOGY (LO-TECH AND HIGH-TECH)?

ANYONE WITH A NEED OR AN INTEREST
CAN USE AND BENEFIT FROM TECHNOLOGY

BENEFITS OF USING TECH TO MAXIMIZE PARTICIPATION

- Use of audio and visual prompts decreases reliance on reading written words
- Use of technology should allow the person to make choices and pursue the lifestyle they want (i.e. maximize independence)
- Decreases reliance on prompts from others which increases time for social interaction
- Offers the user predictability in their day, which for many users can increase their participation and lessen their anxiety
- Through repeated practice and real-world use, the user can increase their environmental literacy skills

HOW DO WE START? – ANALYZE THE NEED

- What task or skill are we looking to develop?
- Are there written words in the environment that the user needs to learn? Are these words frequently paired with a symbol?
- How frequently is there a need to use this skill?
- How urgent is the need? Is it time sensitive? Is it causing frustration?
- Has the user expressed an interest in technology or developing a skill?
- Will it help the person access their environment or increase their independence?
- Analysis could be done formally or informally. There are assessments available but you could also use your own skills as a caregiver to analyze the need.

THINK ABOUT THE USER

- What is the person's communication levels/means of communication?
- Think about motor skills…are additional supports needed?
- What are the vocabulary already exists in their repertoire? Think about, both receptive and expressive, as well as oral language, written language, symbols
- If they are using words, how intelligible is their speech?
- Can they recognize objects, pictures, logos, visual representations of actions, etc.?
- What words do they recognize or write?
- What is their learning style? How will you introduce, teach and maintain skill levels? What is their motivation level?

PRIORITIZE

- What causes the most frustration? How could it be addressed?
- What could maximize independence in completing a task?
- What could maximize access to an environment?
- What would maximize a feeling of control? How could this move the adults to the background?
- What would maximize access to actions, events, tasks, etc. that same age peers are accessing, using, doing?
- What is the user motivated to learn?
- How can progress be evaluated and changes made to the tools?

MATCH THE NEED AND THE SKILLS

- Match the "needs" with the "skills" of the particular user.
- Use existing skills to your advantage
- Is there a way to "work around" the need if there is not a direct match? What is the function of the need?
- What technology is in place or available for use?
- Don't be afraid to try the obvious! The answer may be easier than you think.

LOW TECH IS READILY AVAILABLE

- Low tech is affordable and available.
- May be helpful to provide a trial period of technology use before investing in something more expensive.
- It includes quick, on-the-spot methods:
  - whiteboards, paper and pen
  - words/drawing
  - an object for transition
- Also includes methods that require more preparation:
  - digital photos
  - symbols

LOW TECH AND ENVIRONMENTAL LITERACY

- Low tech solutions can be used in a variety of different ways:
  - Schedules
  - Calendars
  - Task completion
  - Story creation
  - Reference to "translate" words
  - Communication
  - Money management

TIPS FOR USING LOW-TECH

- Pair pictures with written words
- Google images, digital photos, or symbol programs can be great sources of images
- Small laminators are available for purchase online or office supply stores - they range in price from $20-$30
- To adhere pictures to surfaces or other schedules, Velcro, magnetic tape, or command strips can be used
- Be creative! Think about the user and what will make it portable and helpful.

LOW-TECH EXAMPLES

- Helps the user to know what snacks are available
- Created using Google images, laminated, and stuck on refrigerator with magnetic tape

LOW-TECH EXAMPLES

- Allows the user to know where to put items when cleaning up.
- Created using Google images and adhered with clear tape.

LOW-TECH EXAMPLES

- Allows the user to wash laundry independently
- Created with post-it notes, clear tape, and permanent markers

HIGH-TECH

- The use of electronic devices such as smartphones, tablets, computers, and more expensive communication devices.
- They are likely more costly than low-tech solutions.
- However, they can create a broader range of access.
- Also, it is common in today's world.
- Have a need? There's an app for that!

HIGH TECH AND ENVIRONMENTAL LITERACY

- High-tech solutions can be used for the same purposes as low-tech solutions:
  - Schedules
  - Calendars
  - Task completion
  - Story creation
  - Reference to "translate" words
  - Communication
  - Money management

START BY EXPLORING BUILT IN ACCESSIBILITY FEATURES

Settings > General > Accessibility

Here you can set:

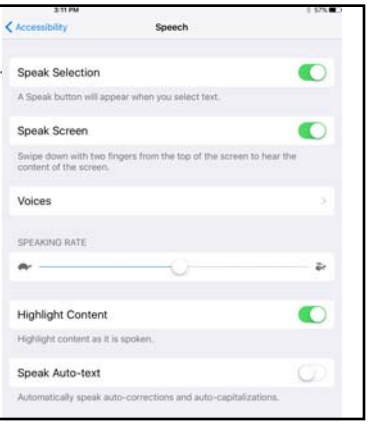
- size of type
- voice over
- screen contrast
- switch controls
- change how the screen will respond to touch
- connect to Bluetooth enabled hearing aids
- braille input and output with compatible equipment

HIGHLIGHTED FEATURES

- Speech (read aloud emails, texts, webpages, PDFs)
- Guided Access (keeps iPhone, iPad in a single app, and allows you to control which features are available)

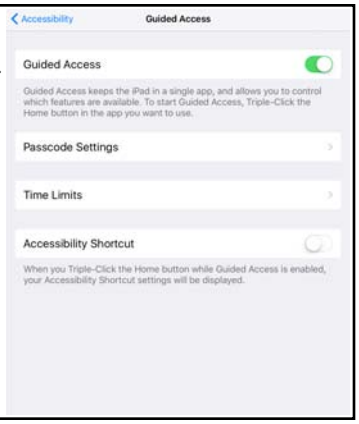
SPEECH

Settings ⇨
General ⇨
Accessibility ⇨
Speech



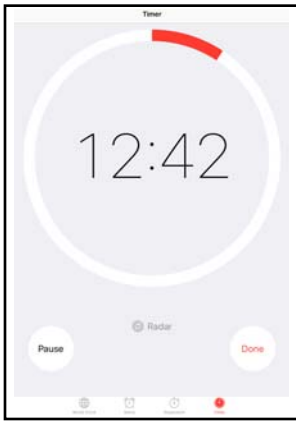
GUIDED ACCESS

Settings ⇨
General ⇨
Accessibility ⇨
Guided Access



OTHER OPTIONS IN CONTROLS

- General> Keyboard >**Text Replacement** (set up shortcuts to eliminate the need to type/spell frequently used phrases)
- General> Keyboard > **Predictive** (allows user to see probable word or spelling)
- General> Keyboard > **Enable Dictation** (allows user to dictate messages, emails)
- Settings> Restrictions > **Enable Restrictions** >Set Passcode (allow or disallow access to features, define allowable content, access to content)



TIMER ON IPAD

- Provides visual for how much time has passed
- Found within "dock" app

TIPS FOR USING HIGH-TECH

- Put most used apps on front screen
- Create folders to organize apps used together
- Try the "lite" version before purchasing an app
- Practice use of app/tool/frequently to insure it is usable and applicable for daily life

EXAMPLES OF APPS

- **Name:** Tip Calculator
- **Use:** Helps the user with money management
- **Price:** FREE!
- Automatically calculates amount of tip for one or more person.
- Great for use of a credit/debit card to "work around" the need to count cash

EXAMPLES OF APPS

- **Name:** CanPlan
- **Use:** Create daily schedule or task steps using pictures and audio or video.
- **Price:** First 3 creations are free, $6.99 to store more than three
- Customized to the individual
- Easy to use

EXAMPLES OF APPS

- **Name:** iDress
- **Use:** Helps the user know how to dress based on current weather
- **Price:** FREE!
- Shows current temperature based on your location and provides visual suggestions of wardrobe

LIVING IN THE REAL WORLD

- Many demands within the real world
- Technology can insure maximum access and participation in daily environments
- Use low-tech, high-tech, or a combination of both
- The use of technology can minimize reliance on reading printed word