

## Using Low-Tech to Support Literacy Learning



Presenter: Mary Sagstetter

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## Goals of Session

- Increase knowledge of assistive technology tools and strategies with a focus on literacy
- Take away multiple ideas to integrate technology the into your student's day
- Share teacher resources and literacy materials

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- All students are ready to experience literacy-based interactions.



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## Literacy is the Goal for All!

*The notion that children are  
too physically,  
too cognitively, or  
too communicatively disabled  
to benefit from experiences with written language,  
is not supported by current emergent literacy research.*



Mirenda, 1988



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## Importance of Literacy

*for students with moderate to severe disabilities*

- Academic instruction for students who are nondisabled does not change at signs of no progress
- Reading is a “pivotal skill” that enhances adult outcomes & *is functional*
- Literacy skills can open opportunities for learning, enjoyment & work

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## Students learn because someone . . .

- Believes in their capabilities
- Has high expectations
- Understands that it's the process & the product
- Provides systematic strategies, instruction, & tools



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## Assistive Technology for the Classroom



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- Until recently, typical literacy materials have not been thought of as accessible to students with significant disabilities.

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# Reading Experiences

Ask for Help!

## 6 Literacy Area - bottom shelf

Ask for help! Record the **Little Step-by-Step** and mount it on the bookshelf to build independence and increase student's literacy opportunities.



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# Accessible Classrooms



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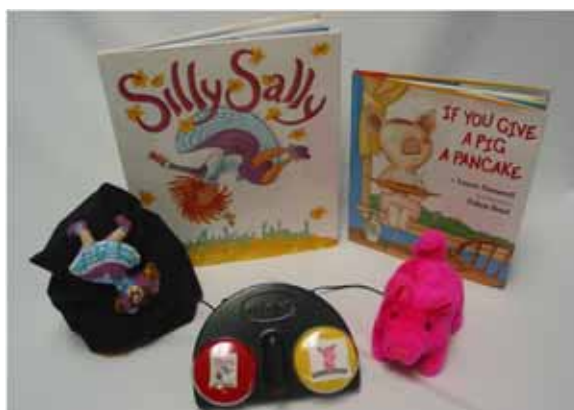
# Interaction with Toys



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# Reading Experiences

Selecting Literature



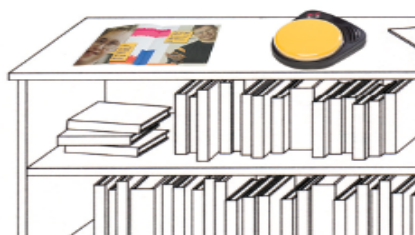
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# Reading Experiences

Read the Story

## 5 Literacy Area - top shelf

Read a story! Regularly record the **Big Step-by-Step** with each page of a story and place on the bookshelf for staff and students to use at a moments notice.



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## Background Knowledge

- Before you read a book it is important to have background knowledge for that text
- Extensive experiences not the same
- Connect to today's purpose for reading



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## Build Background Knowledge

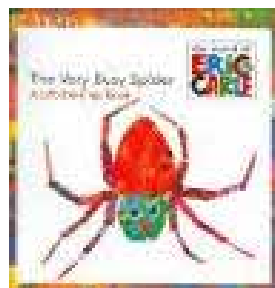


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## Look for action words / verbs

- Eat
- Run
- Jump
- Roll
- Chase
- Nap
- Swim
- Catch



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## QuickTalker 1 / S

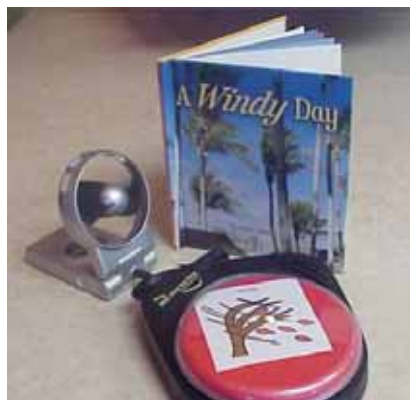


- Turn the page
- Repeated line
- Repeated character name or identifier
- Say a specific sound connected to the reading

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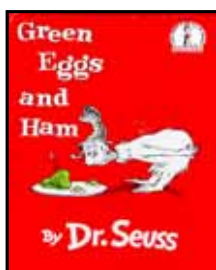
## Reading Experiences – Adding a Sensory Component



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## Literacy



Build fluency!  
Read every other page.

Responding to the story.



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## Repetition with Variety

- Read a simple text multiple times for different purposes
- Listen so that you can
  - identify characters
  - tell me all the places
  - all the feelings in the story
- Reading a story
  - increase comprehension
  - and fluency

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## Making Comments....



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## Dr. Caroline Musselwhite

- 11 video clips
- Enhance and support teacher practice in the area of literacy for students with significant disabilities.
- [http://inclusiveeducationpdresources.com/literacy/conversation\\_with\\_caroline\\_musselwhite.php#](http://inclusiveeducationpdresources.com/literacy/conversation_with_caroline_musselwhite.php#)



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## Build Vocabulary Knowledge



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**answer** is required to a question

Consider the wide range of questions and situations where answers fully empower students to share information, state a preference, say "No," etc. (Other actions included)

**Response 1**  
 The student activates a single or double message communicator to answer a question.

**Indicators:** The instructor recalls or presents information on Talking Mats™ or Talki™ communicative and follows working pre-symbols to represent the answer or information.

**Student:** The student activates the Talking Mats™ or Talki™ communicative to answer a question (unless having other access or double message communicative is correct).

**Response 2**  
 The student activates a multiple message communicator to answer questions.

**Indicators:** The instructor recalls answers or information on a SuperTalker™ or SpinTalker™ and follows working pre-symbols for each choice.

**Student:** The student activates the SuperTalker™ or SpinTalker™ to answer questions.

**Response 3**  
 The student makes a selection from a set of answer choices on a display to answer a question.

**Indicators:** The instructor places pre-symbols or pictures representing answer choices (one correct, one held). The instructor displays the pre-symbols or pictures on a choice board, point chart, or response communication board. (Includes learning, include only correct answers).


**Student:** The student points to, grasps, eye gaze to, or verbally selects pre-specified representation of answer. (Includes learning, any choice is correct).

**Response 4**  
 The student makes a selection from a set of objects on display to answer a question.




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## Vocabulary



The National Reading Panel (NRP, 2000) emphasizes that students benefit when they are taught the meanings of words before encountering them in the text and when they are provided consistent, ongoing opportunities to learn new words through reading.



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## Vocabulary

- Record the vocabulary word, then the definition
- Students are able to self-study or quiz others
- Example: States of Matter  
**Solid** -- Firm or compact  
**Liquid** -- Flowing readily; fluid  
**Gas** -- A fluid that has no fixed shape



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## States of Matter



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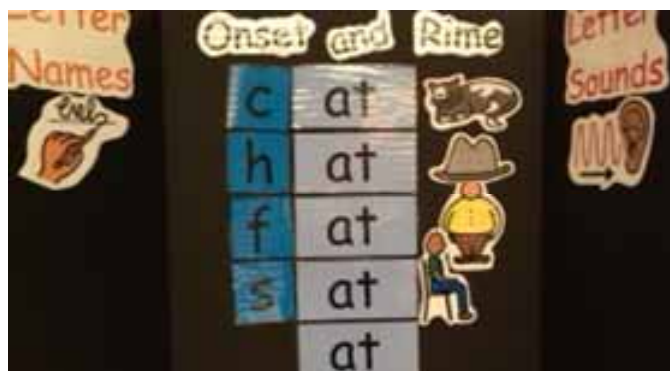
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# Person or Plant



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# ELA - Letter Families



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# ELA - Letter Families



Pick me 	I want a turn 	not that one 
<b>b</b> at	bat	The bat flew away. 
<b>c</b> at	cat	The cat meowed. 
<b>h</b> at	hat	Put on your hat. 
<b>m</b> at	mat	Take a nap on the mat. 



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# ELA - Letter Families

Talking Snowmen



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## Assessment Ideas



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## Clap the Syllables!



## All About ME!



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## Matrix Maker



- Software for making communication overlays and educational resources.
- Easy to use intuitive interface
- Create and print right away with no need for training

\*\*Matrix Maker is compatible with Windows XP/Vista/7/8.

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## Phonics

### Missing Sound

\_\_\_\_\_ og



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## Fluency



Use a **Little Step-by-Step levels** to:

Record a repeated word

**or**

Record a repeated line

**or**

Record an appropriate sound effect

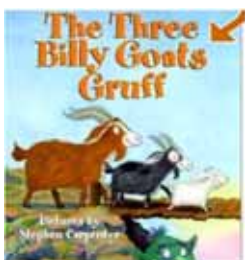


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## Literacy

Retelling the story  
Sensory experience



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## Switch-Adapted Toys

Develop motivation to read by  
creating an enjoyable, interactive  
reading experience!

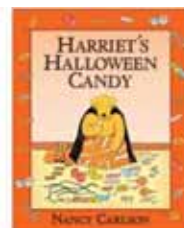


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## Predict the Story

- Look at the cover & a few pages
- Have students predict what the story is about – show pic-symbol choices
- Write predictions on board
- Record predictions on Step-by-Step prior to reading the story
- Check as you read the story



The bear gets a tummy ache.

Going trick or treating.

Eating candy!



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## Access to Print Materials

- The first step in engaging and participating in reading is to provide students with access to print.
- Create images for characters, actions or concepts in a book print them out as paper symbols or mount them to popsicle sticks.

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## Popsicle Characters



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## Literacy Supports

- As students read the book together, students will listen to the story and hold up their picture(s) whenever the character or concept appears in the book.
- Attention to story
- Sense of anticipation or responsibility

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## Benefits

- **Non verbal students:** alternative way to demonstrate comprehension and attention to the book.
- **Verbal students:** Opportunity for them to describe what is happening in the story.

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## Access to Literacy



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## Any Age!



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## Any Ability!



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Add bookworm video here



**Focus on STEM**

**Math & Science Classroom Library**



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**Focus on Science**  
**Teacher's Guide**  
with Lesson Plans and Differentiated Instruction

**Habitats**  
Mountains  
Desert  
Forest

**LEVEL 2 READER** Things with Wings  
**Dragonflies**

**LEVEL 2 READER** States of Matter  
**Liquids**  
by Jim Maczanovic

**LEVEL 2 READER** Simple Machines  
**Wheels and Axles**  
by Jim Maczanovic

CD-ROM: **Animals and Their Homes**

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## Members Only Website

### student worksheets

### Levels 1, 2, 3

comprehension and vocabulary worksheets

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## Incorporating technology into the lesson



Vocabulary Game

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The Complete Collection Includes:



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## Sample Objectives

- Josh will ask and answer curriculum based questions in 4<sup>th</sup> grade Language Arts by using a speech generating device 3 times during each class period 4 out of 5 days.



## Sample Objectives

- Josh will activate a dual message device to tell a joke to peers and adults 4 out of 5 opportunities.



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## Computer Access



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## Sample Objectives- Written Language

Sam will write 2 or 3 sentences on the topic of his choice provided teacher prompts and computer technology.



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## Student Objectives



Using an adapted computer keyboard, Grant will type 10 words per minute with no errors over 10 or more consecutive trials.



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## Switch Accessible Software

- Laureate Learning Systems
  - <http://www.laureatelearning.com>
- MarbleSoft
  - <http://www.marblesoft.com>
- Inclusive Technology
  - <http://www.inclusive.co.uk/>
- Priory Woods – FREE
  - <http://www.priorywoods.middlesbrough.sch.uk/>
- Tumble Books - Subscription
  - [www.tumblebooks.com](http://www.tumblebooks.com)
- TarHeel Reader – FREE
  - <http://tarheelreader.org/>

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## Tar Heel Reader

<http://tarheelreader.org/>

- Free collection of user-created, accessible books
- Multitude of topics
- Read and create books
- Books can be speech enabled
- Access thru Hitch Switch Interface and switch or keyboard
- Reviewed for quality and language.
- Great resource for free, short and easily adapted



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## Writing Activities

Let's write the alphabet.  
I will say the letter & you can write it.  
A – B – C – D . . .

Name

"Will you write my name for me?  
I will spell it for you."

P, A, Y, T, O, N



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## Consider Mounting

- Wheel Chair
- Table
- AbleNet Mounting Base
  - Mounting at floor level
  - No surface



## Goals of Session

- Increase knowledge of assistive technology tools and strategies with a focus on literacy
- Take away multiple ideas to integrate technology the into your student's day
- Share teacher resources and literacy materials



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