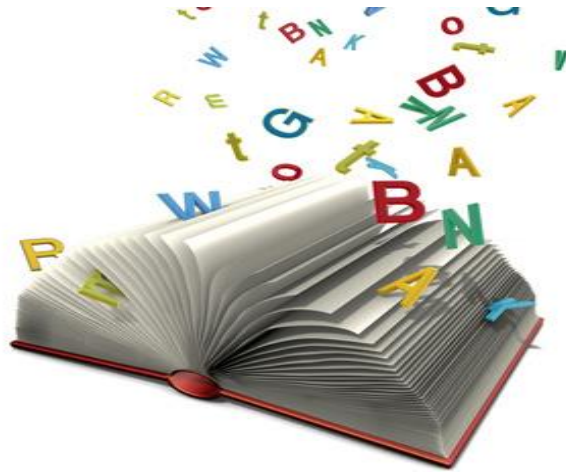


# Building and “I Can” Attitude: Technology Tools to Support Reading and Writing for Support Students Who Struggle



July 21, 2015

Nevada Disabilities Conference

# Contact Information

## Nevada Special Education Technology Assistance Project

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## Carson City School District

Kristina Britt, Speech-Language Pathologist

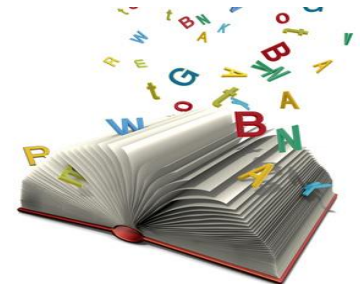
Kathi O'Meara, Teacher of the Visually Impaired

Shawn Schneider, Resource Specialist

[www.nvdc.wikispaces.com](http://www.nvdc.wikispaces.com)

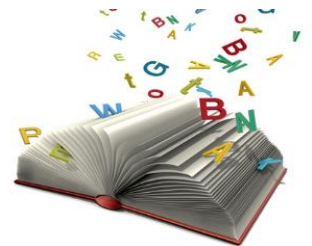
# Learning Objectives

- Identify technology tools and resources to remove obstacles and promote reading and writing success for diverse learners.
- Provide information on how to choose from available options and what features make text based material accessible to students with learning disabilities.
- Understanding of the Accessible Educational Materials Initiative (AEM) and Universal Design for Learning (UDL) principles.



# The Focus

- Best practices
- Students with learning disabilities who comprise 96% of the special education population (U.S. Department of Education).
- The majority of students with learning disabilities have reading disabilities and there is evidence that students do not outgrow such disabilities (Shaywitz, 2003).
- Research based practices and research data support the use of various technologies to improve comprehension of content, test taking scores, and time engaged with text (Conference Presentation - DeCoste, 2012).



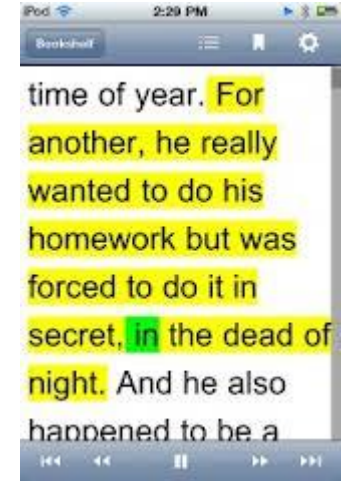
# Continuum of Options

Consider a Range of Options  
Low to High Tech

Educational Needs



# Universal Design for Learning



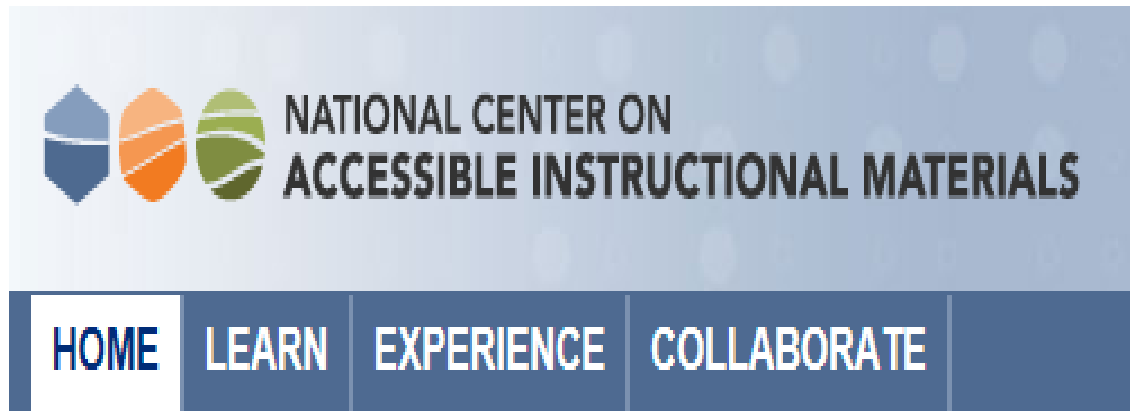
<http://www.udlcenter.org>

- Flexible approaches that can be customized and adjusted for individual needs.
- Multiple means of representation, engagement and assessment.



# Accessible Educational Materials

Support of the AIM initiative



<http://aim.cast.org>

Joy Zabala

# Accessible Educational Materials

Print based instructional materials may not be accessible for learners who struggle to read because of differences.

- Physical
- Sensory
- Cognitive
- Learning



video



# Accessible Educational Materials



Nevada Special Education  
*Technology Assistance Project*



- ◆ About Us
- ◆ Consortium
- ◆ Resources
- ◆ AIM
- ◆ Contact Us

**Welcome to our site!**

Enhancing the capacity of school districts to provide assistive technology devices and services.

[www.nsetap.com](http://www.nsetap.com)

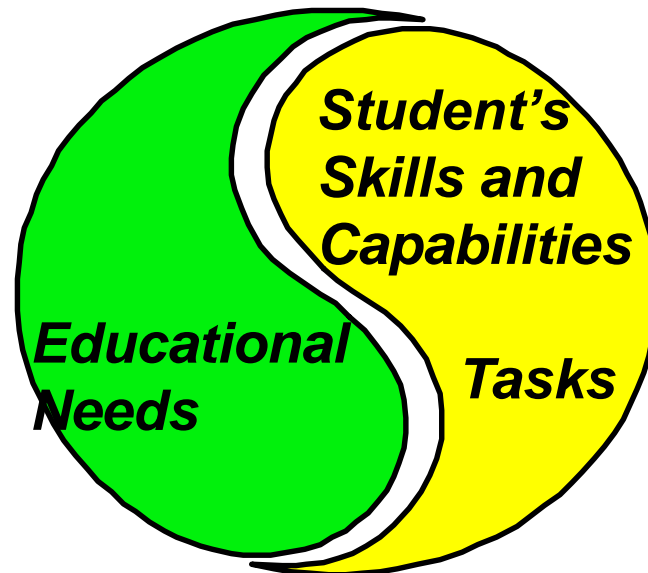
# Team based decision-making

Data driven



# Making the Match

What features support access to text?



Consider low to high tech options

# ***The SETT Framework***

***A Collaborative Planning and  
Decision-Making Tool***

- ***Student***
- ***Environments***
- ***Tasks***
- ***Tools***

# The SETT Framework

## *A Collaborative Planning and Decision-Making Tool*

### Accessible Technology Assessment: Student, Environment, Tasks and Tools (SETT)

**Student:**

**School:**

**Grade:**

**Team participants:** names and titles

**Phone Number:**

**Case Manager:**

**Date:**

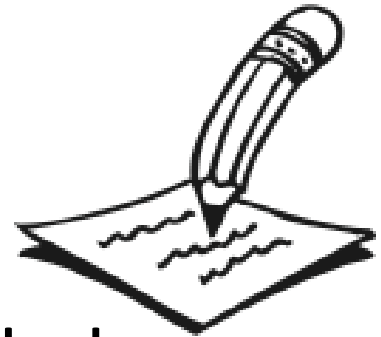
**School Administrator:**

**Special Ed Cluster Supervisor:**

**IEP Goal area being addressed:**

<b>STUDENT:</b> What are the student's strengths and needs?	<b>ENVIRONMENT:</b> Classes and situations where help is needed?	<b>TASKS:</b> What are the tasks that the student needs to be able to accomplish to meet IEP goals?	<b>TOOLS:</b> What AT or services will address these tasks?

# Writing Protocol



- A formative assessment tool that helps educators identify factors affecting an individual student's ability to produce writing
- Documents student's handwriting and keyboarding across a variety of tasks
- Helps guide decisions for what will best help the student based on their individual needs

[www.donjohnston.com/decoste-writing-protocol](http://www.donjohnston.com/decoste-writing-protocol)

# Handwriting & Keyboarding Assessments

- **Background information:** services and interventions already used to address handwriting; experience with keyboarding; fine motor skills (consult with O.T.)
- **Handwriting samples:** class work, student notebook. Check legibility.
- **Keyboarding styles:** 10 fingers, 2 fingers, thumbs for space bar, 1 finger hunt & peck.
- **Timed writing samples**
  - Full alphabet
  - Sentence from dictation
  - Sentence copying
  - Independently composed sentence

## What do you get??

1. Letters & words per minute for both handwriting and keyboarding
2. Developmental spelling level
3. Writing traits

# Data Collection Worksheet

**Written Productivity Profile**  
Worksheet 4

Student: [REDACTED] Date of Report: Feb, 15, 2014  
Date of Birth: 7-5-03 Chronological Age: 9.7 Student ID # \_\_\_\_\_  
School: Boskewick Bray County/State: \_\_\_\_\_  
Student's Native Language: English Grade: 4 Program: \_\_\_\_\_  
Examiner: Kristin Britt, SLP Date(s) of Assessment: 12-5-13

**Purpose:** To assess need for alternative writing accommodation, such as keyboarding.

**Background Information:** Student has autism. Handwriting is neat & legible but takes an extremely long time. Has some OCD behaviors that impact written skills.

**General Observations:**

**Written Productivity Profile**

- 1. Handwriting Profile:** Not on the line, no spacing between words. Gets upset if letters don't "look right".
- 2. Keyboarding Profile:** Keyboarding takes 1/2 as much time than handwriting. She includes spacing between words.
- 3. Spelling Profile:** uses mostly transitional & conventional spelling patterns.
- 4. Writing Traits:** n/a.

**Summary and Recommendations:**  
It is suggested that some type of keyboarding device be available for Katelyn to use when required to write in class or for homework.

**Assistive Technology Considerations:**  
Alpha Smart

Assistive Technology Assessment: Developing a Written Productivity Profile by Denise DeCoste  
© 2006 Don Johnston and NATE

**DON JOHNSTON**  
The Leader in Learning Intervention Resources  
www.donjohnston.com



# Word Prediction

- Helps spelling, grammar and keyboarding skills.
- Predictions based upon sentence content and spelling, as well as the number of times a word is used.
- Can be limiting if student has weak sound-symbol skills.
- Can be paired with text to speech to help word recognition.
- Helps students become more independent and confident in their writing abilities.
- Carson City S.D. uses Co-Writer. Other examples are.....

# Protocol for Accommodations in Reading



- An evidence-based screening tool that guides educators to determine the need for read aloud accommodations and supports needed throughout the school year and on state-wide assessments.
- The cost of this screening tool is: \$25.00
- It can be downloaded from:  
<http://donjohnston.com/par>

# Protocol for Accommodations in Reading

Question	Incorrect	Correct	Type
1. What is this passage about? <i>(surfing) surfers</i>		✓	Main Idea
2. What did the European explorers and traders strip from the Hawaiian practice of "wave-sliding"? <i>(the spiritual elements) religious parts/ aspects/chart</i>		✓	Fact
3. What did the Hawaiians believe about the sea? <i>(that it possessed human emotions) Charmed produced better surfing</i>	✓		Fact
4. By the 19 <sup>th</sup> century, what happened to surfing? <i>(it was nearly extinct in Hawaiian culture) disappeared/ wasn't pop</i>		✓	Fact
5. Who did most 19 <sup>th</sup> -century people outside of Hawaii believe were the only people who had the ability to surf? <i>(Native Hawaiians)</i>		✓	Fact
6. What is the name of the world's first recreational surfer; the man who played a key role in surfing's growing popularity in California? <i>(George Freeth) terrible w/ names Hawaiian/ Irish</i>	✓		Fact
7. What specialized gear allowed surfers to practice surfing year around to improve their skills? <i>(wetsuits) fiberglass/ fin</i>	✓		Fact
8. In the 1950s and 1960s, what spread surfing culture across the country? <i>(movies, music and magazines) promotional surfers</i>	✓		Fact
9. Why do you think that surfing became more popular after World War II? <i>better materials to improve surfing</i> <i>(any logical response: new technology produced more lightweight and maneuverable surfboards, surfboards were shorter and lighter - easier for women/girls to carry and ride the waves on)</i>		✓	Inference
10. Why do you think that surfer words such as "graily", "bogus", and "wipe-out" became part of the popular vocabulary of young people in America? <i>stoners/ fit in</i> <i>(any logical response: because the media - movies, music and magazines - made young people want to act, look and speak like those cool surfers)</i>		✓	Inference
11. What is one example of how surfing culture has developed into an established part of America's popular culture? <i>(any logical response: there are clothing brands and stores that sell "surfer wear," surfing music like the Beach Boys is still played and known to many young people)</i> <i>surfing lingo</i>		✓	Inference
12. In this passage, what does the word "lucrative" mean? <i>(profitable, money-making) read sentence w/ word</i> <i>in d. 'uncommon'</i>	✓		Vocabulary
Total (circle the outcome) Green 10-12 Correct Yellow 4-9 Correct Red 1-3 Correct			

Question Type	Correct	Incorrect
Main Idea	1	0
Fact	3	4
Inference	3	0
Vocabulary	0	1

Likert Scale Rating:			
1 ☹️ Very Dissatisfied	2 😞 Dissatisfied	3 😐 Neutral	4 😊 Very Satisfied



## What is Bookshare?

- An online library of accessible ebooks and education materials
- For people with print disabilities.
- Access more than 300, 000 textbooks, bestsellers, children's books, newspapers, and magazines, and much more!

[www.bookshare.org](http://www.bookshare.org)



## Who can join?

- Anyone with a print disability, including blindness or low vision, a physical disability, or a specific learning disability
- Membership types: Individual, organizational, or both
- Cost: FREE to qualified U.S. students and schools



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## An Accessible Online Library for people with print disabilities

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### More Accessible Titles, More Ways to Read

Open up the world of reading with  
Bookshare®



#### Announcements

##### **More Search Categories**

Find the books you want  
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categories!

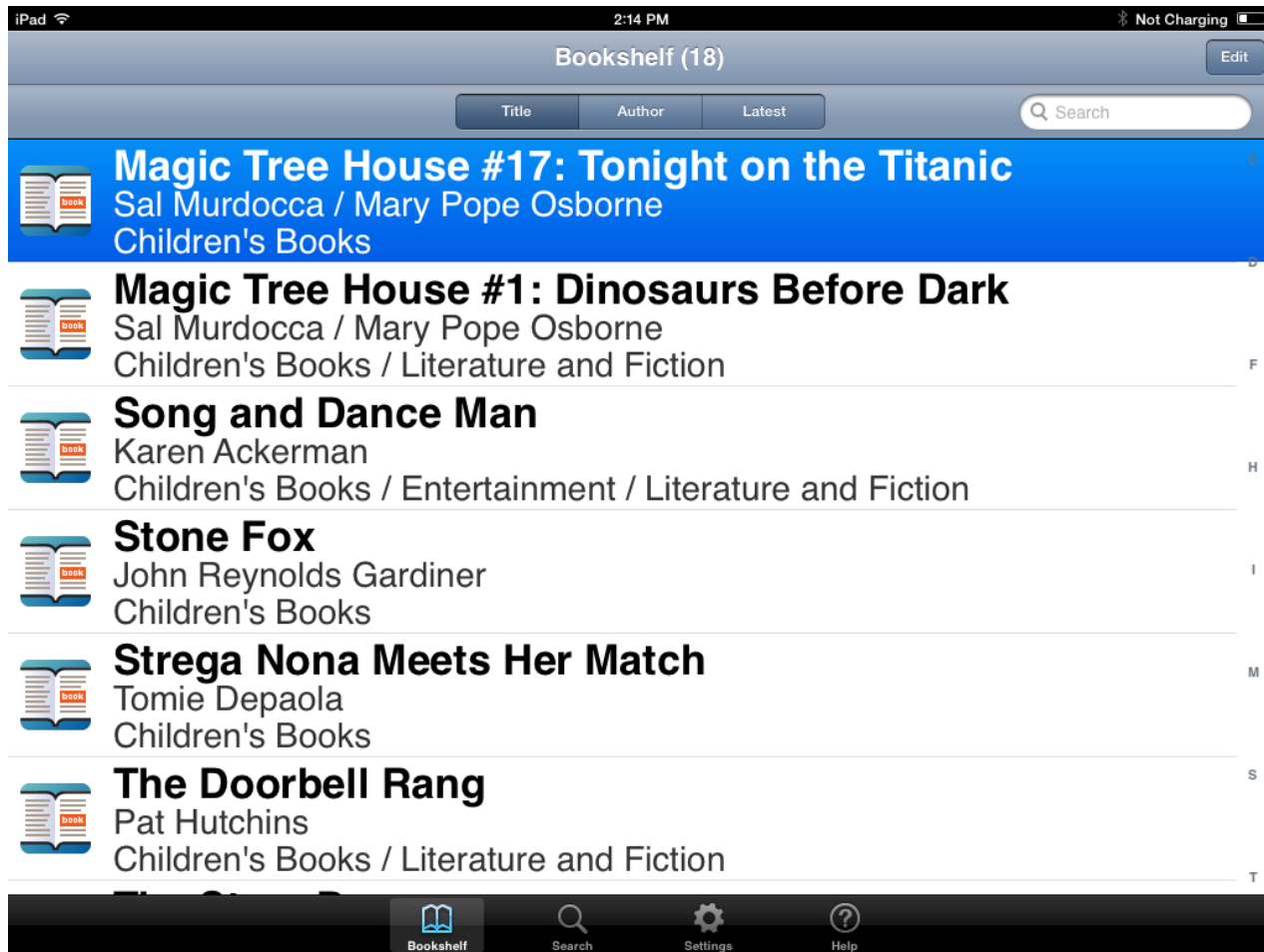
##### **Bookshare in Canada**

Learn why Bookshare is an  
eye-opener for Canadian  
members.

347,569  
Titles  
and

# Read2Go

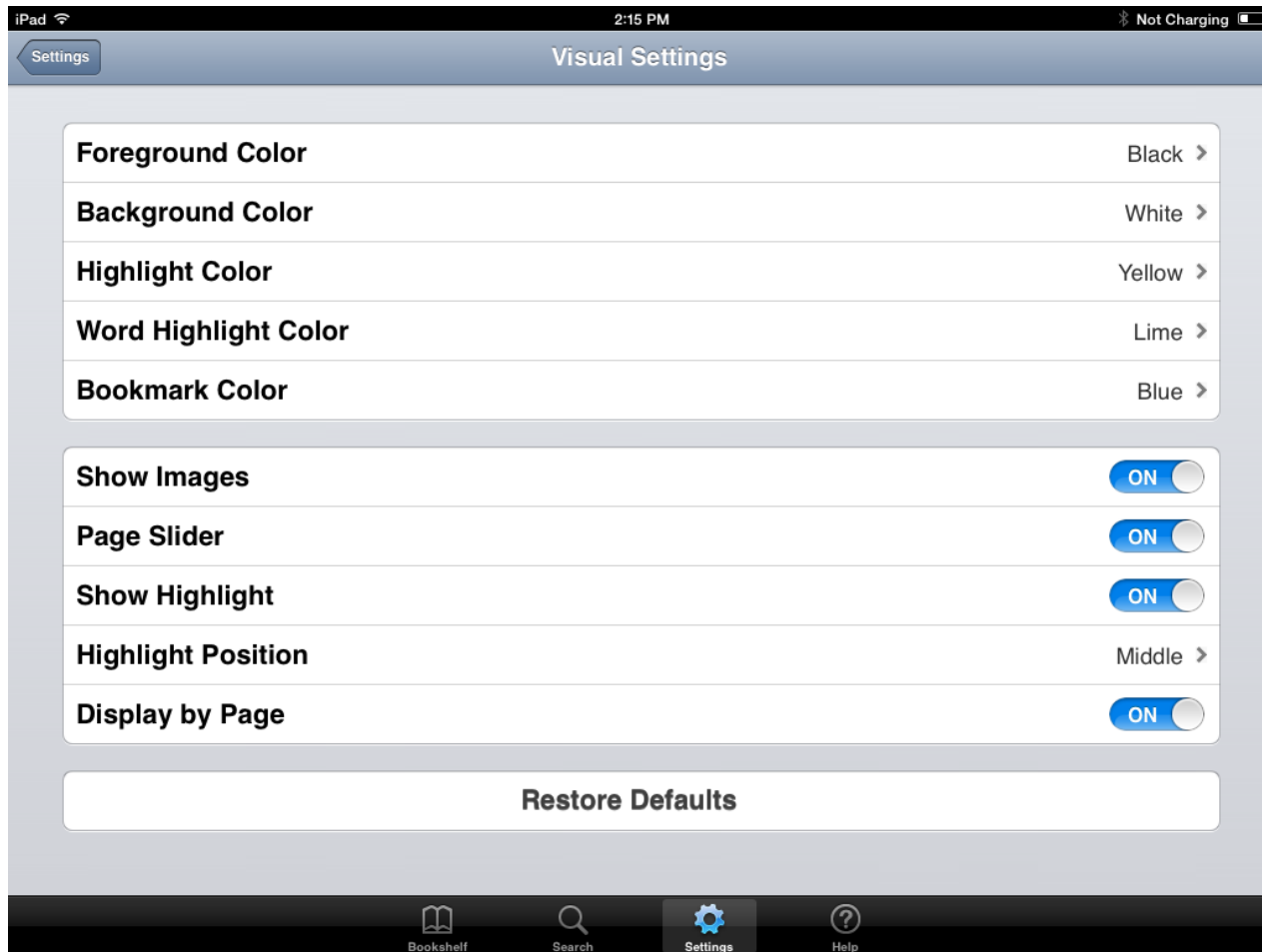
## Apple App for Bookshare



Read2Go Bookshelf as it appears on a student dedicated iPad.

# Read2Go

## Apple App for Bookshare

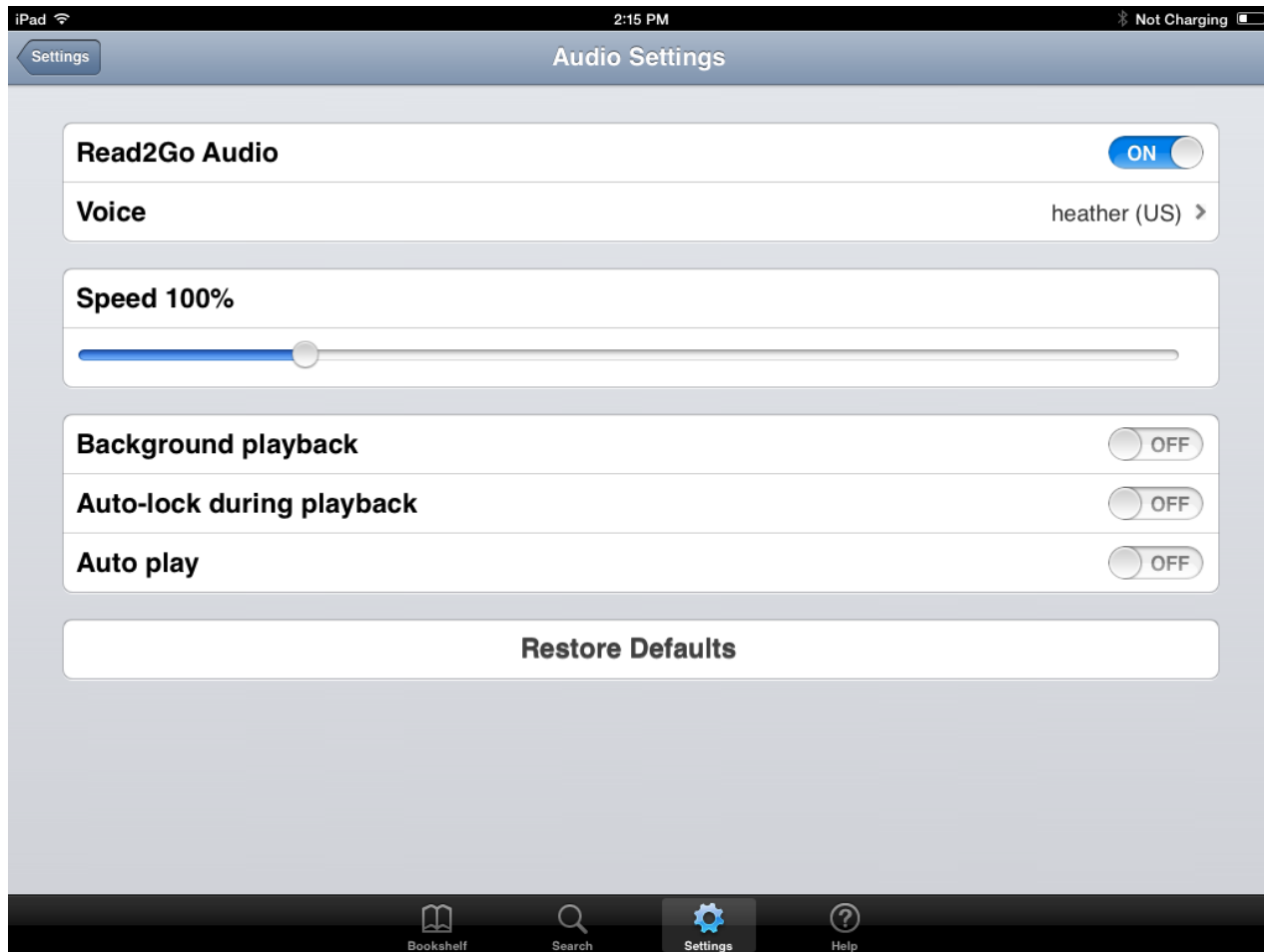


Visual Settings on an iPad



# Read2Go

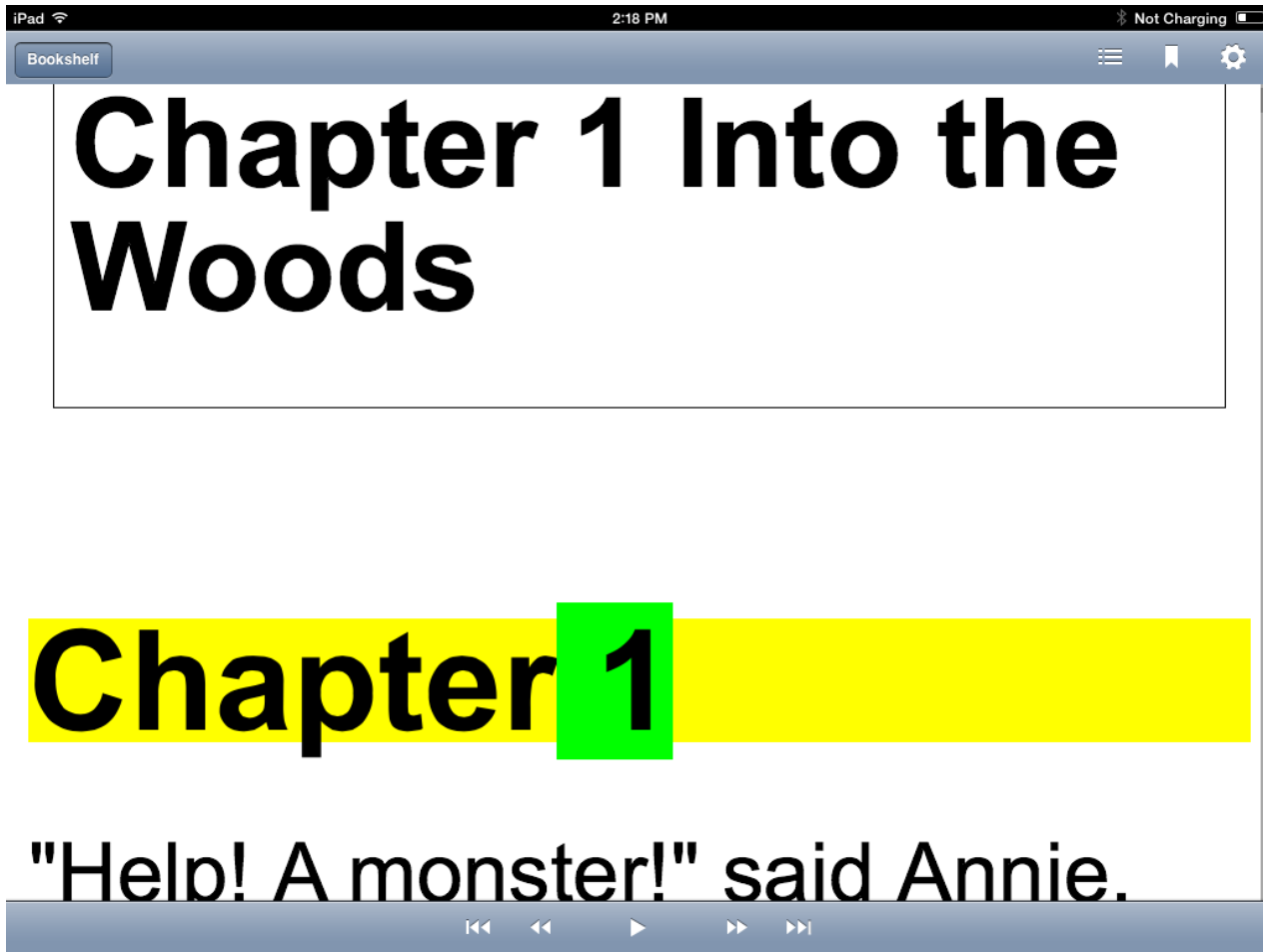
## Apple App for Bookshare



Audio Settings on an iPad

# Read2Go

## Apple App for Bookshare



2 levels of highlighting on an iPad

# Prizmo (iOs app)

- What is Prizmo?
- A \$10 app that combines OCR (Optical Character Recognition), text to speech, PDF file conversion and language translation. Image and text processing options (rotate, crop and lighting adjustments are also available).
- Can scan all sizes/types (books, whiteboards)

# Prizmo

- Outputs text to the clipboard or email, as a text document or PDF or for use in Dropbox or CloudApp. Can read PDF in iBooks.
- OCR accuracy is fairly high. Increased lighting improves accuracy.
- Ability to manually fix errors while proofing scan.
- Voiceover option works well. More than 65 male or female voices available for \$3 each.
- Does not require internet connection for image processing and OCR. Newer versions do not require internet connection for language translation.

# Prizmo

## Applications:

- Students who have low vision or a print disability can scan and paste text into the Prizmo Voice Reader so that text can be read aloud.
- Can quickly scan and prepare text for materials that are not readily available in a digitized format.
- Foreign languages can be scanned and converted to the reader's native language.
- Replaces scanners.

# Prizmo

iPad 10:48 PM 45%

Documents Undo Text 3 Prepare

1 What do you see?  
What do you see when you look up

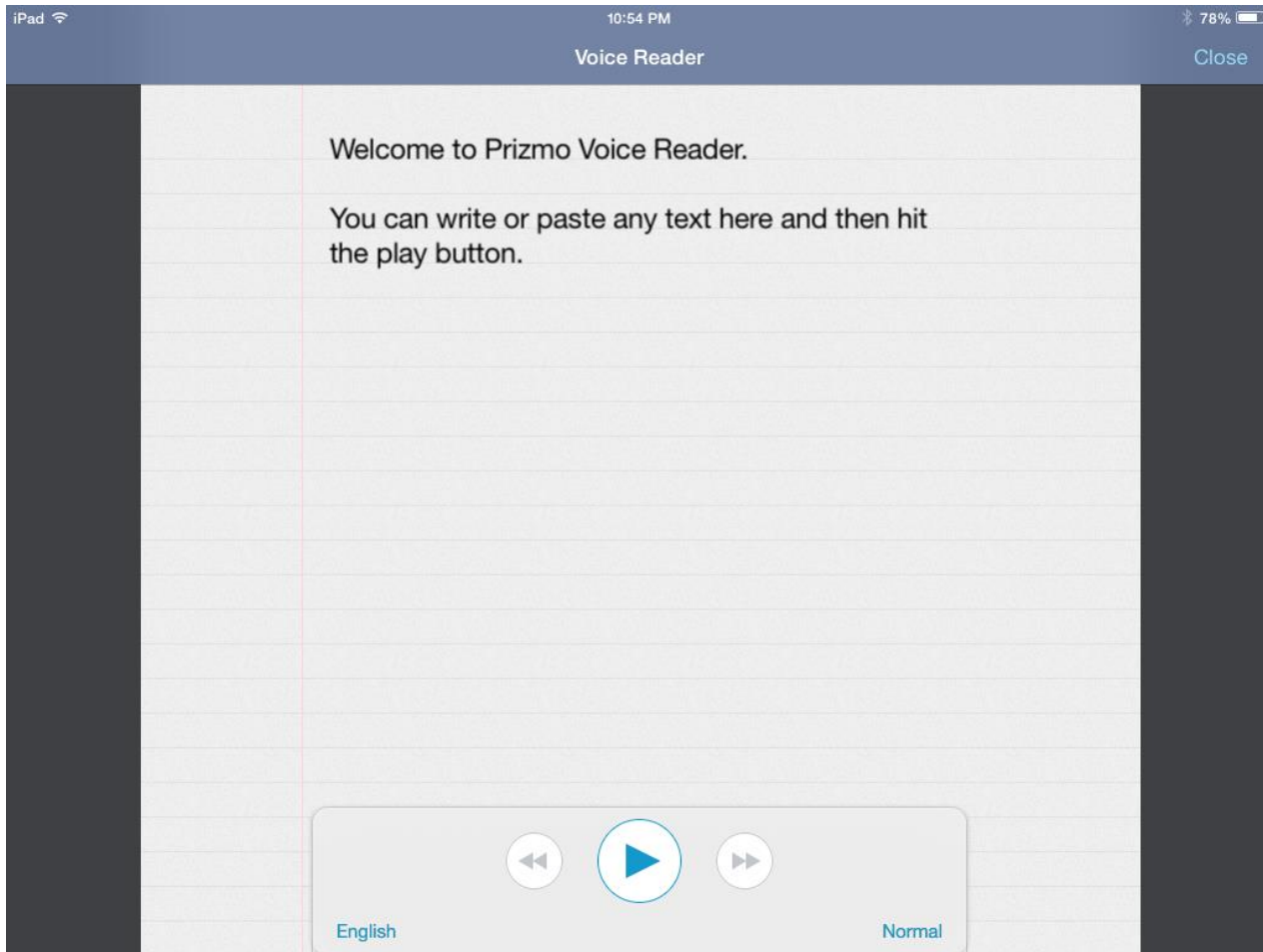
2 at the night sky? If the sky is clear enough, you can see the moon and stars. You might also be able to see

3 certain planets during certain times of the

4 year. Sometimes you can even see satellites. Those are man-made spacecraft that circle Earth. They take pictures from high above. It's the planets and stars, though, that have fascinated stargazers for centuries. For as long as people have been on Earth, they have looked up and wondered just what is there. We may never know about everything there, but we do know about some of it. Let's take a trip through our solar system. We'll learn about the planets there. Then we'll learn about some of the things that are even farther away from our solar system. Finally we'll learn a little about the history of stargazing, and the future of space travel. Let's go, 3...2...1...blast off to the stars...and beyond!

Type Language Add Remove Merge Reorder Translate

# Prizmo



# Free Chrome extensions and apps

Voice Search



Google Dictionary



Speak it!



Dictatnote





# Chrome app for purchase



- Hear text read aloud with dual highlighting
- Picture dictionary
- Word prediction
- Google dictation
- Summarize text



Free 30 day trial

Teachers-full version for one year free

# Video Resources

## Universal Design for Learning at a Glance

[http://www.udlcenter.org/resource\\_library/videos/udlcenter/udl](http://www.udlcenter.org/resource_library/videos/udlcenter/udl)

## Accessible Instructional Materials: Simply Said

<https://www.youtube.com/watch?v=JcPIMIOJJkc>

## What is Bookshare?

<https://www.youtube.com/watch?v=ExqTYgbwS7E>