

## Assistive Technology Evaluation Report

<b>NAME</b>	JC	<b>DATE(S) OF ASSESSMENT</b>	2/16/2017
<b>AGE/GRADE</b>	12/7 <sup>th</sup>	<b>SCHOOL/ORGANIZATION</b>	XX Middle School
<b>PRIMARY DIAGNOSIS</b>	Learning Disability	<b>ADDRESS</b>	113 XXX
		<b>PHONE</b>	XXX

<b>REFERRAL INFORMATION</b>
<p>JC was referred to Westminster Technologies by SW, in order to determine if he would benefit from assistive technology to improve his reading, writing, math, and have better access to the school curriculum. The IEP team determined that based on JC’s current skills and deficits, further investigation was needed.</p> <p>Westminster Technologies’ Director of Assistive Technology Applications and Evaluations visited the school on the assessment date to conduct the assistive technology assessment. Observations and conversations with several of JC’s teachers were completed along with review of his IEP and the completed student information guides provided to teachers before the assessment date. These guides were completed by the teachers for the following areas: motor aspects of writing, composition of written material, reading, organization, and mathematics.</p>
<b>STUDENT PROFILE</b>
<p>JC is a very bright, 12 year old, middle school student at XXX Middle School who is polite and friendly. JC has not been formerly diagnosed with a specific learning disability but based on school work and teacher observations, he presents with learning disabilities in the areas of reading, writing, and possibly math. By report, JC is at a beginning reading level which is well below his current grade level. Scores place him in the third grade level. JC is able to learn and retain material that is presented orally. His writing consists of the ability to copy text but unable to initiate independent writing tasks without the use of a scribe. He has a good vocabulary but needs assistance transferring thoughts to written form with verbalizing to a scribe the most effective method. JC is motivated to learn and participate in his classes. He completes all homework assignments and has access to a computer both at school and at home (reported that currently home computer is not functioning).</p>
<b>DAILY TASKS/ACTIVITIES AND ENVIRONMENT</b>
<p>As reported, JC has reading goals to identify features of a sentence, distinguish long and short vowel sounds, applying phonic skills and word analysis skills to correctly decode words, and compare, contrast, and integrate information from different media and formats. In the area of writing, he is working on capitalizing the first word in a sentence, holidays and proper names, and supporting opinions with linking words and including a closing statement. In the area of math, JC is working on</p>

<p>the operations of division, drawing, identifying and classifying shapes by properties of their lines and angles, and recognizing numbers in written format. The classrooms observed consist of SMART Boards, whiteboards, desktop computers, laptops, and Chromebooks.</p>
<p><b>RESULTS OF ASSESSMENT/EDUCATIONAL IMPLICATIONS (COMPLETE AREAS AS NEEDED)</b></p>
<p><b>COMMUNICATION (ORAL/WRITTEN)</b></p> <p>JC is a very articulate young man who is able to successfully relay information verbally. By report and the evaluator's observation, he is able to copy text but not able to spontaneously write. When asked to write or type an answer, for example, he exhibits inventive spelling and non-recognizable words. JC uses a scribe in order to successfully communicate in written form.</p>
<p><b>COMPUTER ACCESS/COMPUTER BASED INSTRUCTION</b></p> <p>JC's teachers report that he is able to use a computer to complete work (with needed assistance when completing written work) as well as to play games. He has access to SMART Boards, computers, laptops, and Chromebooks in the classrooms. The school currently uses a reading program called READ 180, which includes supports for text-to-speech, highlighting, digital dictionary, and zoom options.</p>
<p><b>HEARING/VISION</b></p> <p>Not applicable for assessment needs at this time but appear to be within normal limits and no deficits reported.</p>
<p><b>READING</b></p> <p>JC's teacher handed out an article and read it to the class asking them to underline cause and effect statements throughout the reading. These were then transferred to a Do Now graphical organizer worksheet. Modelling was completed with a few of the cause/effect boxes and students were then given time to complete the rest of the worksheet before they reviewed their answers as a class. There was a lot of auditory/lecture which is beneficial to how JC is currently learning best. The classroom environment consists of a SMART Board that was only used to display the objectives for the day's class and then turned off. A whiteboard that was used to highlight important information/definitions from the article. Two computers in the back of the room and several laptops for using the READ 180 program. JC did not participate a lot in this class but was able to answer questions about the reading when prompted. He is able to track words in the reading when it is read to him. He is able to copy text to answer questions/write notes from the whiteboard or the article/reading. JC's writing, when not copying is not legible and consists of inventive spelling or non-recognizable words. Workbook exercises that he has completed were presented.</p>

**MATH**

JC's math teacher was on a field trip but he had a worksheet to work on during his two math periods. During the second math period, the co-teacher assisted the student's that were having issues with a word problem. She wrote the problem on the board and they circled the pertinent information needed to complete the work. JC was struggling to follow along until the actual math problem was being presented on the board. He then became more engaged and was able to participate by suggesting the next step and answers.

JC's math teacher reports a lot of modelling occurs in class, graphic organizers, charts, and SMART Board activities are used. He has good auditory skills and is able to comprehend and retain information presented orally. JC showed interest and motivation at the beginning of the school year but has since been showing less motivation in class. It is observed that his reading comprehension skills are affecting his math.

**LEARNING/STUDYING**

It is reported that JC does well with auditory and visual prompts and is able to learn best through oral instruction.

Observation of JC in his social studies class demonstrated his excitement for the subject. The teacher was actively involved with the students and presented a Power Point on the SMART Board with limited text and pictures to engage the students. JC was able to actively remember and share information learned from previous lessons and was showing a true passion for learning during this class.

It is reported that JC completes all homework assignments and is motivated to learn. His organizational skills are lacking due to his issues with reading and writing. He has been using folders, highlighters, and graphic organizers, and all information management is completed verbally.

**OTHER OBSERVATIONS**

Each of the classrooms that I observed contain a SMART Board for instruction. The board was used most effectively during JC's social studies class to present written and graphical information through a PowerPoint presentation. During math, an example problem was completed on the board using the different colored pens to designate the different components of the problem. The SMART Notebook software is very robust and has built-in tools to engage students in the learning process through interactive lessons that incorporate visual, auditory, and tactile modes of learning. Technology is already available in each classroom observed. Only use of technology by students observed was during his reading class when two of the students used the READ 180 program on a laptop with headphones.

Implementation of a variety of hands-on activities and a multi-sensory approach should be increased to assist JC in having full access to all learning experiences.

**RECOMMENDATIONS FOR CONSIDERATION**

The following items should be considered for JC. Whenever possible information on pricing and free demos have been included for each piece of technology. It is highly recommended that you take advantage of any free demos and loan equipment options to trial the technology before purchasing to determine if it is something that JC not only benefits from but also enjoys using. It is recommended that the IEP team meet to discuss the options below and determine which should be trialed. If desired, a Skype meeting can be conducted with Westminster Technologies to assist in this decision making process. After trialing, with JC's input, make a decision keeping in mind the ability to use the assistive technology in the classroom, at home, and in other environments (as needed).

**Diagnosis:**

It is highly recommended that JC be formally assessed to determine the exact type and severity of his learning disabilities. A list of NY resources was provided to Ms. XXX of professionals in the area; local children's hospitals typically have a psychology department for diagnosing learning disabilities as well.

**Reading:**

JC does well with auditory information but is also able to follow along in the text. The following recommendations range from low tech to high tech options. It is recommended that he continue to use his current no tech supports and the use of READ 180 to continue working on basic reading skills:

1. **Highlighting:** Teach JC to highlight text in readings with different colors to represent main ideas, key vocabulary, etc. This can be demonstrated on the SMART Board for use by all students. Allow JC and the other students to complete this exercise for each reading on the SMART board to provide a multi-sensory approach to learning through the use of both tactile and visual means.
2. **Reading Pen:** Use of a scanning reading pen with headphones/earpiece to scan text and have it read aloud.
  - a. *C-Pen Reader:* Scan any text and through text-to-speech, the text is read to the user. The text is scanned and displayed in the small display window with words being highlighted as it is read. Has the ability to record voice notes such as a reminder, homework assignments, etc. Save audio recordings and text that was scanned and transfer it to the computer. Includes a dictionary to look up words that were scanned. Compact, easy to carry and use but limited functionality and can only be used with print text. Costs around \$250 and can be purchased through Amazon or Scanning Pens. A free thirty day trial is available before purchase at <http://www.readerpen.com/#request-trial-section>.
  - b. *Reading Pen 2:* Similar functionality of the C-Pen with the scanning of text with text-to-speech and dictionary. No audio recording capabilities. Costs around \$229 and can be purchased through <http://www.wizcomtech.com>.
3. **Portable Readers:** Portable reading devices allow the user to read digital books, quickly scan or take a picture of text and have text to speech on the go.

- a. *Amazon Kindle*: eBooks and other online material just as magazines, blogs, and newspapers can be read aloud. Good for personal reading at home or reading books for school. The text to speech is not available on all models and all eBooks. Prices vary from \$80 and up.
- b. *Intel Reader*: Small, portable reader allows the user to take a picture of any printed text, anywhere and have it read aloud (headphones can be used to listen to text). Each word in the text is highlighted while being read. Reading can be paused to have individual words highlighted and spelled. Digital text files transferred from a computer can also be accessed on the Intel Reader. If using to capture textbooks, for example, an Intel Portable Capture Station can also be purchased. The Intel Reader costs \$1499 and the portable capture station is an additional \$399. Additional information can be found at: <https://www.gh-accessibility.com/products/intel/reader>.

**4. Text to Speech Software:** Software that reads the text to the user, allows students with a reading disability to follow along with the text as it is being read aloud.

- a. *Built-in Accessibility Features (WIN)*: The Windows systems located in the school have free built-in accessibility text to speech which can be found in: Control Panel\Ease of Access\Speech Recognition\Text to Speech. Several voices are available depending on the Windows platform and speed adjustments are also available.
- b. *NaturalReader*: Text to speech program that allows text to be pasted into the reader or typed to have it read back to the user. A free version is available that highlights by sentence, has one voice, and several speed adjustments. Ability to upgrade to additional features: 2-6 voices, OCR (optical character recognition) to convert printed text to digital text, turn text into audio files, pronunciation editor, word prediction, and spell checker. The upgraded versions range from \$69.50 to \$199.50. Additional information and the free version can be found at: <https://www.naturalreaders.com/index.html>.
- c. *WordTalk*: A free text-to-speech plugin for Microsoft Word that highlights each word as the text in the document is being read aloud. The toolbar allows the user to read a word, sentence, paragraph, or selected text. It also includes a talking dictionary and the ability to save audio files. The plug-in can be found at: <http://www.wordtalk.org.uk/home/>.

**Writing:**

JC does well when verbally expressing what he needs to write when using a scribe but as the demands of middle school and high school continue to increase he needs an independent means of writing independently:

1. **Writing Prompts, Word Banks, Graphic Organizers:** Use of writing prompts and word banks, if not already being provided to encourage assistance in writing.
2. **Alternate Project:** Allowing JC to present an oral report or visual project instead of a written report will demonstrate his knowledge of the topic. Provide rubric to make sure the alternate project meets same expectations of a written report.
3. **Handheld Voice Recorder:** Voice recorders can be used in class to record lessons/lectures and to dictate homework, writing assignments, etc. The Olympus VN-541PC digital recorder

allows user to quickly and easily record lessons or dictate with one-touch recording and transfer recordings to a computer. Holds about 2080 hours of audio recordings and costs about \$40. Information can be found at: <http://www.getolympus.com/us/en/audio/vn-541pc.html>.

4. **Windows Accessibility Speech Recognition:** Free built-in speech recognition software can be used to quickly and easily create written text by speaking into the computer. A good microphone and quiet location is needed for best results. Training the computer should be done to allow for better understanding but simple sentences need to be read to complete this portion (sentence can be whispered to user if needed). Completion of the training tutorial is needed to understand necessary commands. This is a free option to trial speech recognition which can lead to using more advanced programs if desired. Can be found in: Control Panel\Ease of Access\Speech Recognition.
5. **Inspiration Graphic Organizer:** Inspiration software is a visual graphic organizer program that allows users to use graphics/pictures with words to organize thoughts for writing. Includes a graphic organizer, concept mapping, mind mapping, webbing, outlining, and plots and graphs including Venn diagrams, bar graphs, etc. Videos, examples, and a free 30-day download can be obtained at: <http://www.inspiration.com/inspiration>. Pricing ranges from \$40 and up depending on version and licensing options selected.

### **Reading/Writing:**

JC has difficulties with both reading and writing so having a software program that allows him to complete all school work independently will be of great use for him as he progresses through school. All of the programs below are similar in features such as text-to-speech, word highlighting, word prediction, etc. All of these programs are very good options but should be trialed to determine the best fit. All of these programs allow universal access and can be used with all students:

1. **Premier Literacy:** The Premier Literacy applications can be purchased separately or as a Literacy Productivity Pack. The tools consist of a Worksheet Wizard (convert hardcopy to digital), Write Now (works with cloud applications and word processors), Scan and Read Pro (scan books or other hardcopy text to digital and have read aloud), Talking Word Processor (type and have text read aloud with spelling and grammar checkers), PDF Equalizer (access, read, and work with PDF files including multi-lingual support), Text-To-Audio (convert documents to audio files), E-Text Reader (study tool to highlight, bookmark, search, and extract text), Universal Reader Plus (read emails and web pages), Talking Dictionary, and a Talking Calculator. Individual products range from \$20 - \$100 for single licenses. The Literacy Productivity Pack ranges from \$200 - \$1000 for 1 to 10 licenses. Additional information including videos and a free trial can be found at: <http://www.premierliteracy.net/schools>.
2. **Kurzweil 3000:** The Kurzweil 3000 program includes three main components. The first is Read, the text-to-speech portion, which includes 31 text-to-speech voices, 18 languages and dialects, speed and presentation rate options, OCR features to scan hardcopy text and have it read aloud, creation of audio files, and a talking calculator. The second component is Comprehend, for writing support. It includes a picture and talking dictionary, vocabulary



study guides, note tools including sticky and voice notes, bookmarking, highlighting, and other study tools. The third portion is Demonstrate which includes additional supports for writing and for test taking. It has a graphic organizer, outline templates, word lists, and more. Tests can be created or scanned into the program and the student can use the test-taking tool bar to either type the answers or record their answers. Pricing starts at \$1395. Videos and a free demo can be found at: <https://www.kurzweiledu.com/experience-kurzweil/experience-kurzweil.html>.

3. **TextHelp Read&Write:** TextHelp's product has text to speech, editing tools, study tools, graphic organizers, dictionary, picture/symbol support, type and speak for writing, voice recognition software, and many other features. Read&Write can be purchased as an annual subscription and starts at \$145. A free trial and more information can be found at: <https://www.texthelp.com/en-us/>.
4. **WYNN:** WYNN has two product levels, both of which contain the following reading and writing features: text-to-speech with text highlighting, talking dictionary and thesaurus, study tools (highlighting, bookmarking, text and voice notes), teacher lockout (temporary locking of spell-checker, dictionary, thesaurus for test taking), read the Internet, word prediction, outlines, as well as, easy to use toolbars, and ability to customize for individual student's strengths and grade-level curriculum. The WYNN Reader is priced at \$99 per license with no OCR/scanning capabilities. WYNN Wizard includes all of the same features as Reader but also includes the OCR capability with scanning at \$595 per license. Videos and a free demo version can be found at: <http://lsg.freedomscientific.com/products/index.asp>.

### **Organization/Planning:**

JC's deficits in reading and writing make organizing his work difficult. The following can be considered to increase his independence in organizing his homework, etc.:

1. **Handheld Voice Recorder:** As noted above for recording lectures and creating dictation files for completion of homework, a handheld recorder can be used to record homework assignments so a written planner does not need to be used.
2. **Graphic Organizers:** For organizing writing projects, graphic organizers can be used. They can be hardcopies with and without supports provided (partially completed) or a program such as the Inspiration program mentioned above.
3. **Study Tool Software:** Using any of the read/write programs above, such as Kurzweil 3000 and TextHelp Read&Write incorporate digital tools such as highlighting, sticky notes, graphic organizers, and more to assist with organization and planning.

### **Math:**

Based on feedback from JC's math teacher from the student information guide that was completed, he is being provided with a lot of supports. Recommendation is to provide accommodations for reading and writing and continue current math supports. When trialing one of the reading and

writing programs (e.g. Premier Literacy, Kurzweil 3000), the built-in talking calculator can also be trialed. Math worksheets can also be used with a text to speech program.

**SMART Board:**

Provide professional development for teachers in order to create interactive learning environments for all of the students. Go to <https://training.smarttech.com/en/training-centers> to find a local training center or certified trainer.



Recoverable Signature

X *Heather R Koren*

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