

The Effective Use of 21st-Century Learning iPad Applications in the Primary/Junior  
Literacy Classroom Handbook

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Submitted in partial fulfillment  
of the requirements for the degree of  
Master of Education

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## **Abstract**

The purpose of this major research project was to develop a practical tool in the form of a handbook that could facilitate educators' effective use of technology in primary and junior classrooms. The main goal was to explore the use of iPad devices and applications in the literacy classroom. The study audited available free applications against set criteria and selected only those that promoted 21st-century learning. The researcher used such applications to develop literacy lessons that aligned with curriculum expectations and promoted 21st-century skills and traditional skills alike. The study also created assessment models to evaluate the use of iPads in student work and explored the benefits and limitations of technology usage in student learning.

## **Acknowledgments**

The completion of my Major Research Project would not have been possible without the help of many key people. I would like to take this opportunity to thank my family and friends for their support and encouragement in my personal and educational goals not only during the past year in my MEd studies, but through my undergraduate work as well. I would also like to acknowledge Dr. Jennifer Rowsell for her kind advice, patience, knowledge, and guidance. This MRP also would not have been possible without the hard work of my second reader, Dr. Diane Collier. I would like to thank them both for dedicating their time in assisting me with this project. Finally, thank you to Dr. Camille Rutherford for exposing me to the educational technology world. They all my MEd experience enjoyable and I truly learned a great deal from their involvement and interest in my work.

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## **Prologue: Letter of Invitation to Educators**

The handbook incorporated into this Major Research Project was designed to focus on an important change that the classrooms of today are undergoing as a result of the technological developments of the 21st century. These developments have created a different kind of learner and a new way of thinking that the students of the 21st century have developed as a result of the implementation of technology in society in general. In order to help address this fundamental change in learning and thinking, I have designed this handbook to assist educators in effectively using the popular iPad and associated iPad technologies in the classroom. The iPad has immense possibilities for use in all classroom subjects because of the features and range of applications that are available for download and use on the iPad. Technology integration is crucial in the education of literacy learners, especially in the younger age groups, and this handbook has been specifically designed to explore iPad and iPad applications in relation to literacy instruction for Grades 1 through 4.

The applications included in this handbook were audited based on criteria that promoted the idea of 21st century learning within the applications. All of the applications allow for experimentation, have high visual appeal, and encourage the development of students' metacognition, or thinking about their own personal thinking. The applications directly align with traditional literacy skills while also addressing the new skills that are required by the 21st-century learner. During the application audit process, I considered it important to select applications that educators would be able to use effectively and independently with their students. All of the applications can be obtained at no cost and can be downloaded from the Apple App Store. I have created basic lessons with each

application for use in Grade 1 to Grade 4 classrooms which can be easily tailored to a specific classroom or student. The lessons describe in detail how to use the applications and explain the unique features of each. This allows the teacher to gain a full understanding of the technology and the workings of the application before beginning the lesson, which is a key factor in ensuring effective use. It is important to remember that a single application may not address all parts of a lesson and there may be a need to compile a few applications to achieve your desired results and learning goals.

I hope that you find this handbook beneficial in your teaching practice. It was my objective to develop an easy-to-use document for educators to reference in order to enhance the use of technology in their classrooms with the creative and effective use of the iPad. Whether the classroom has one iPad or the students are working at a 1:1 ratio with the device, the impressive capabilities of the iPad and iPad applications can ignite today's learners to think, read, and write differently through a critical lens and collaboratively with their peers in the classroom. This handbook can help educators in their goal of successful technology implementation while allowing for easy access in exploring literacy across multiple media and modes.

## CHAPTER ONE: INTRODUCTION

Education today has undergone a shift towards tailoring learning to meet the needs of students of the 21st century. The 21st century has brought skills not previously considered important, and some that did not even exist 10 years ago. These 21st-century skills are enhanced in the literacy classroom. In current studies, literacy has been redefined to encompass more than traditional views of reading, listening, and writing with the assistance of technology (Pacino & Nofle, 2011). Twenty-first century learners are interpreting texts in different ways because of their exposure to both print and non-print texts (Pacino & Nofle, 2011). Thus, students now engage with multiliteracies which can be defined as literacies that extend beyond basic print texts and also include images, animation, music, and other aspects of technology (Walsh, 2010). The classroom has been transformed into a multimodal, multiliterate place, and technology can be the mechanism that powers this transformation (Hutchison & Reinking, 2011).

However, there are difficulties in bridging the gap between effective traditional literacy instruction and the new technological based literacy skills (Hutchison & Reinking, 2011). iPads are mobile learning devices which offer applications that can target specific literacy skill sets in engaging, virtual ways to students. Today, teachers must act as facilitators of technology in the literacy classroom and scaffold their students in the use of these technologies (Coiro, 2003; Sandvik, Smordal, & Osterud, 2012). Previous research has examined technology use in the classroom but has not focused solely on the use of the iPad and iPad applications that target specific literacy skills. How comfortable are elementary school teachers in using iPad technologies in the literacy classroom? What 21st-century thinking applications are available for



teachers to use and how can they use them effectively? This study will explore the quality of the use of iPad technologies in the literacy classroom and identify applications that teachers prefer to use.

## CHAPTER TWO: LITERATURE REVIEW

A few common themes arose from the exploration of the literature. In order to fully understand the definitions of the terms explored, the literature explored helped create operational definitions of them.

### **Multiliteracies**

In the 21st century, the incorporation of literacy with different modes of communication has occurred as the result of society's advancement of technology (Sandvik et al., 2012). Literacy has been redefined to encompass more than simply traditional views of reading and writing, and has expanded to include the skills that are needed in the digital age (Pacino & Nofle, 2011). Literacy can now be regarded as multimodal and an important relationship has been noted in the literature to have developed between technology and literacy (Sandvik et al., 2012; Walsh, 2010). In a notable societal shift, students are viewing literacy practices through different modes other than print, such as viewing texts through screens (Sandvik et al., 2012; Walsh, 2010). Accordingly, texts are becoming more unstable when compared to traditional monomodal views of literacy as a consequence of the variety of ways that literacy is presented to students (Kress, 2005) both inside and outside of the classroom. This transformation has changed the way that students are learning about literacy, which now includes many different multiliteracies such as images, music, sounds, and graphics (Walsh, 2010). These multiliteracies are regarded as basic forms of communication and are being implemented into the classroom to create a balance along with traditional literacy views (O'Mara & Laidlaw, 2011; Walsh, 2010). Technology has influenced how society understands literature and how print and non-print formats of literature are

interpreted (Pacino & Nofle, 2011). At present there is a greater need for critical thinking and a faster set of skills in order to understand the sources that are presented on a computer screen, as technology becomes more and more a part of literacy in society (Pacino & Nofle, 2011).

### **iPads in the Literacy Classroom**

The use of iPads in the classroom is in the beginning stages of exploration by researchers in the field of education. The iPad has revolutionized the capabilities of a laptop computer and has promoted the idea of mobile learning (Hutchison, Beschorner, & Schmidt-Crawford, 2012). Since the creation of the iPad in 2010 by Apple, there have been many system updates and new models available for users, including a smaller-sized miniature version. The original devices are lightweight, portable, and easily customized, which creates numerous benefits and allows for easy accessibility for the users (Borgia & Anderson, 2012; Hutchinson et al., 2012). The iPad is also equipped with a touch screen and a built-in camera. Lynch and Redpath (2012) studied iPad use in the early years of school. They discovered that the iPad's simple navigation system, portability, and touch interface, which are features that are hardwired into the tablet, have great appeal to learners in the early years. For the same reasons, Borgia and Anderson (2012) embrace the idea of the characteristics of the iPad as a benefit to students with special needs. Across all grade and ability levels, iPads have the capacity to engage students and enhance their learning. The iPad is a true mobile-learning device (Miller, 2012) that offers ample opportunities to be used by a wide range of students.

The iPad can help bridge the gap between traditional literacy goals and the new multiliteracies as presented by the modern technologies of this century (Hutchison et al.,

2012). The use of iPads, like many other tablet devices, also allows students to engage with print text in a virtual way. O'Mara and Laidlaw (2011) studied the use of technology in the literacy classroom and discovered that students will initially use these devices for "skills and drills," an exercise which quickly loses their engagement. However, students have the opportunity to progress from using "skill and drill" activities with technology, such as the iPad, eventually to higher-level thinking by using their ability to apply concepts creatively through these technologies. Miller (2012) believes that the iPad's most beneficial use in the literacy classroom is the iPad's ability to act as an e-reader. Publishers are creating multimedia elements to their e-books which allow students to physically manipulate the text on their touch screens and interact with the reading experience (Eagleton & Dobler, 2007; Larson, 2010). Still, there are many applications available that support the idea of print-text in an engaging way that can foster reading practices without using the technology as merely an e-reader.

### **Applications**

As well as using iPads in the classroom for e-reader purposes, text can be explored through the use of applications easily downloaded on the iPad. A multitude of applications have been created for specific functions on digital devices and most are free or available at affordable prices (Hutchinson et al., 2012). The successful use of appropriate applications can transport students from being passive recipients of the technology (Lynch & Redpath, 2012) to becoming active and engaged in their own learning. Specific applications target literacy skills such as sight word recognition, comprehension, meaning, and vocabulary (Getting & Swainey, 2012). These applications, presented in an activity or game form, allow students to write text, insert

images, highlight, organize, respond, and use audio in many different ways (Hutchinson et al., 2012). The touch-screen feature allows for open-ended applications to encourage the promotion of students to become innovative creators in the learning process (Lynch & Redpath, 2012).

Getting and Swainey (2012) state that in their exploration of iPad use in the classroom, students would assist each other with application use and discovery, which created a collaborative environment. The use of iPad applications is not always solely an individual experience. With some applications explored in this handbook, there are options to discover the concept of author and audience in cooperative activities that share the iPad screens of different students (Hutchison et al., 2012; Sandvik et al., 2012). Students can also manipulate and respond to other students' work through this sharing of screens, a process that facilitates group work and collaboration (Hutchison et al., 2012). As well, students can share with their teachers the material that they create. The iPad can be connected to a projector and applications can be shown on larger screens. This creates a shared display where students can interact with the application as a whole group (Sandvik et al., 2012). The use of the appropriate applications produces opportunities for students to create their own digital texts and engage with literacy in new ways on screened devices (O'Mara & Laidlaw, 2011) with the flexibility for both collaboration and individual work.

### **Technology and Student Learning**

O'Mara and Laidlaw (2011) suggest that students today view technology not as a tool, but as something that is a part of their everyday encounters. Technology is an ever-present and inclusive element of a child's life and many students have a pre-existing

knowledge of some form of technology and may already know how to use Apple products (Harmon, 2012). Technology products like the iPad give students the ability to discover literacy through a trial and error approach in their learning (O'Mara & Laidlaw, 2011) because they are able to engage with applications and explore them in different ways, as many times as they want. Miller (2012) studied the experiences that students had with iPads in the classroom and reported that overall, students supported the idea that the iPad had contributed to their learning and level of engagement. Children have become producers of material in their learning, and have been able to recognize that they are doing so (O'Mara & Laidlaw, 2011).

Harmon (2012) states that applications have the ability to engage students in different ways than the traditional classroom could. This statement validates the idea of the use of iPads by students who do not necessarily fit into the traditional school setting, and who would benefit from text to speech software and customized learning games in instruction (McClanahan, Williams, Kennedy, & Tate, 2012). It is important to recognize that there are some negative aspects that accompany iPad and technology use in the classroom, such as attention issues, technological problems, and staying on task (Getting & Swainey, 2012; Miller, 2012). Any technology in the classroom should be treated as a learning tool (Getting & Swainey, 2012). Teachers should ensure that student engagement, participation, and feedback are part of the successful classroom establishment of the use of technology for learning (Sandvik et al., 2012). The exploration of the use of iPads in the elementary school classroom has been limited as it pertains to research. The literature stresses the concept of the quantity of technology that

is available in the classroom, rather than the quality of technology use (Warschauer & Matuchniak, 2010).

### **21st Century Skills**

The recent emergence of new technologies has led to a necessary shift in the classroom of today from teaching 20th century skills to teaching the skills of the 21st century. Today's educators have the tools to engage students in productive inquiry and learning in ways that did not previously exist (Brown, 2006). Schools must be accommodating to this new type of learner by incorporating more critical thinking, collaboration and problem solving analysis into lessons (Rotherham & Willingham, 2010). The 21st century has produced students who have distinctive ways of seeing, knowing, and responding to literacy, behaviours that are demanded of today's workforce (Brown, 2006). A significant shift is required to add on from the 20th century and embrace the 21st century literacy skills by using interactive elements, multimedia, and games in order to engage today's digital natives that can be found in every classroom (Brown, 2006). Twenty-first century skills are not necessarily new sets of skills; they are now newly important in the classroom (Rotherham & Willingham, 2010; Silva, 2009). These newly important skills are already present in the curriculum but need to be balanced and enhanced to meet the needs of today's technologically enhanced society (Silva, 2009).

The aim for this study's guidebook is providing an opportunity for teachers to successfully engage with the use of technology and incorporate mobile learning into their classrooms through the use of iPads. The exploration of iPads in the elementary school classroom has been limited in regards to research. The literature stresses the idea of

quality of technology use in the classroom, over the quantity of technology available (Warschauer & Matuchniak, 2010). Teachers must now act as facilitators of technology in the literacy classroom and scaffold students in the use of these technologies (Coiro, 2003; Sandvik et al., 2012). The aim is to provide alternative ways to use the iPad technology with elementary-aged students with applications, rather than using the iPad just as a screen to read a digital book. The problem now is bridging the gap between effective traditional literacy instruction and new technological-based literacy skills (Hutchison & Reinking, 2011). The end goal is to promote the idea of curricular integration and not technology integration (Hutchison & Reinking, 2011) with engaging, literacy skill-based applications to teachers wanting to embrace technology and mobile learning into their classroom.

### **Accommodations**

The lessons provided in this study's handbook can be differentiated to address the many different types of learners in the classroom. Countless possibilities for learning can be constructed when mobile learning and 21st century learning are combined through the use of an iPad device, easily customizable to all learning styles and abilities. There are numerous features on the iPad device to assist students with special needs in order to encourage and support their successful and effective engagement with technology in the classroom.

The Universal Design for Learning (UDL), as described by CAST (2014), is a framework for inclusive learning that derives elements from neuroscience. UDL's goal is to not limit any individual from their opportunities to learn and that all learners should have not only have access to the general curriculum but be provided with custom



solutions to their instruction, goals, materials, and assessments that are flexible to their needs (CAST, 2014). Taking this framework into consideration, the iPad offers ample opportunities for customizable learning and can target distinct networks that can be unique to each individual learner. The focus of UDL is not only to use technology to facilitate learning, but to embrace pedagogies that facilitate accessibility for diverse learners (Burgstahler, 2008; Katz, 2013). King-Sears (2008) states that UDL recognizes that learners need different means in which to represent and express themselves and they require different modes of engagement. The iPad device provides students with the opportunity to engage using that approach through the use of accessible technology.

It is a simple task to provide opportunities for students with special needs by applying the foundations of the Universal Design for Learning to the applications that have been selected for this study's handbook. Literacy instruction, through the framework of UDL, can be enhanced through mobile learning devices, the use of which offers students new and exciting visual and tactile experiences. The ability for the device itself to be customized outside of the use of applications, in the iPad features, can make the learning process unique for each individual student.

The goal in the creation of the lessons that accompany the selected applications was to have the lessons accessible for a wide range of students while requiring limited modifications. Therefore, it was decided that the lessons themselves would not include specific accommodations or modifications because of the scope of the different needs of learners, on both ends of the spectrum. Many of the lessons target a variety of grade levels and can be adjusted to the individual learning goals of the student. In the application selection process for this study's handbook, the ability of the application to be

easily accessible to all was noted and consideration was given to how the application could be tailored and adapted for the UDL classroom.

## **CHAPTER THREE: PRACTICAL MATTERS AND LESSONS**

Before one's journey with technology in the classroom begins, it is important to address the "technology" aspect of iPads. The following information will explain the practical features of using an iPad in the classroom with one's students and the main aspects to consider when operating an iPad.

### **iPad Set-Up**

After the initial set-up of your iPad (following the instructions from Apple, the manufacturer), it is important to decide upon an email address with which to set up your Apple account. This email will be used to ask you for permission to add new features on to your iPad. If you are giving consent to your students to use your personal iPad, you might want to create a class email account. This email becomes your "Apple ID" and if you have the use of a class set of iPads, all of the iPads should be set up under the same email or Apple ID.

### **Permissions**

When using iPad applications, the application might prompt you with on-screen requests to send you push notifications or for access to various items on your device. Push notifications are sent to you when the application needs updating or you may receive notifications about scores or new application features, but for the most part these notifications are not a necessity. You can decide to turn this feature off if desired. If an application prompts you for access to your camera roll or microphone, it is a good idea to allow this permission so the application can then be used across different modes. In most apps, giving access permission in this instance allows students to record their voices, upload their pictures, and document their work.

## **Updates**

Apple will frequently update the iOS operating system and your device will receive a notification when an update is available. This will occur through the settings feature that is already loaded on your iPad. It is important to frequently update the operating system in order to ensure that the device is running properly and applications will continue to work on your device. System updates optimize the operation of the iPad with enhanced versions and general improved iPad esthetics. The applications themselves will also provide updates to keep the content new and to ensure that all of the features are running smoothly (getting rid of “bugs” in the system). When opening an application, you might be prompted to load an update and you should always do so. You will also find updates within the Apple Applications Center under the tab “updates.” If an application seems to be running slowly, you may find a no-cost update available here of the latest version of the application, which should improve the app’s performance.

## **Upkeep and Charging**

The general upkeep requirements of an iPad are relatively low. A screen protector should be purchased for the iPad to avoid scratches and a device case should be used to prevent dents. Proactively implementing these two steps to avoid physical damage is a key success factor in allowing students to use the iPads independently. The iPad screen should be wiped off frequently to remove the inevitable marks of many finger prints. The iPad device needs to be charged frequently if used every day, and simply requires to be plugged in to a power source with the provided charger. There is a battery symbol and a number that displays the percentage level of battery power left on the iPad. The device

will also prompt you when there is 20% and 10% of battery power remaining. When the battery falls under 10% it will turn red and soon needs to be charged.

### **App Store**

Download all of your applications for your iPad from the Apple App Store. The App Store has many categories to look at when searching for applications to download to your device. For example, there is an education section where you can explore the different applications that Apple has selected for educators. Here, you can also search by grade level (elementary, middle, and high school) and by specific subject. Completing a general search in the search bar will provide you with application suggestions that are centered on your particular requirements. There is a nifty app called “Apps Gone Free” which you can download, and each day this app releases an application, usually available for a fee, at no cost to the user for a limited amount of time.

### **Applications**

Applications can be downloaded from the App Store to your iPad. Some are available for a fee and others are free to download. You can purchase iTunes gift cards to load on to your Apple account to purchase from the App Store, or you can purchase directly from the site.

### **Settings**

There are many ways to customize the settings of your iPad device. By clicking on “settings,” you are taken to a page that provides the user with many options. For example, here you can connect your device to WIFI, change the wallpaper and explore the privacy options (microphone, pictures, calendar, etc.). Under the “general” tab, some

of the options include changing the text size to appear smaller or larger or editing the gestures that are used to navigate the device with your fingers.

### **Accessibility**

Accessibility features are found under “settings” in the “general” tab. Here there are various selections that allow for accommodations for your specific learner, including visual, hearing, learning, and physical and motor control options. These features can be easily turned on or off depending on the needs of the student. The Guided Access feature allows the educator to lock the iPad device to one designated application in a given time which can keep the student on task to a specific application and prevent the student from exploring the iPad in a non-productive way. This also reduces the possibility of the student changing the iPad settings, which could be useful for your specific lesson and student.

### **Lessons**

The 20 applications selected in the application audit process have been made into lesson plans for their implementation in the literacy classroom. The lessons highlight the traditional literacy skills and 21st-century thinking skills the applications promote. The lessons have a suggested grade level, yet they can easily be altered and modifications have been provided for different grade levels. Easy to use steps are provided to use the application and to demonstrate it to the students. The lessons have been classified by literacy skill development—awareness of print, spelling, oral language and listening, reading and decoding, visual cues, and writing. Many applications cross over into different areas of literacy development. In the assessment section of the handbook, a chart is provided which outlines specifically which lesson aligns with which skills.

# JUMBLLED SENTENCES

*Create sentences from jumbled words in outer space*

---

**Literacy Skills:** Writing, sentence structure, vocabulary and punctuation

**21<sup>st</sup> Century Skills:** Interactive, tactile elements presented in a game format.

**Objective:** To practice sentence formation, structure and appropriate punctuation.

**Grade Level:** Ranges – Example: Grade 3

**Time:** 30 minutes

---

## Suggested Activity

Have the students work with the application individually or in pairs. This application can be used as a competition between small groups because there is a timer aspect. The application focuses on sentence structure and students can move different words into the appropriate box to explain the picture being shown to them in one sentence. Have the students record the sentences they create in their language notebooks to future use and assessment. The students can work through the levels as they progress with sentence building.

## Across Divisions

- **Primary (1/2):** Level one of the application features words that make simple sentences. Students can use this application to practice their grammar and recognize different types of punctuation.
- **Junior (3/4):** Level three of the application is challenging enough for juniors to engage and have fun with this interactive game. They can work on their sentence structure and appropriate vocabulary (Ex: the difference between singular and plural) while beating the clock timer in the game. Level three also does not have a picture of the sentence to assist the students, so they have to determine what the jumbled sentence is on their own.

## How to Use the Application

1. Choosing the “Jumbled Sentences” icon directs the user to the homepage of the application where a selection can be made from three different levels which range in difficulty.
2. In all levels, there is a timer that counts down from three minutes and users can build their score as they increase the amount of correct sentences unjumbled.
3. The picture in the middle of the word wheel in levels one and two indicates what the jumbled sentence describes.

4. Students can drag the word from the spinning wheel into the spots in the blank sentence.
5. If students can't determine where a word should be placed, there is a "hint" feature.
6. When the words are properly placed in the sentence boxes, click "ok" to advance to the next jumbled sentence. Eventually, a level can be completed once all sentences are unjumbled.

#### Other Applications & Links

Review for Jumbled Sentences (4.5 out of 5 stars):

<http://bestappsforkids.com/2013/07/jumbled-sentences-3/>



# WHIRLY WORD

*Race against the clock to create your own words!*

---

**Literacy Skills:** Phonics, Word Formation, Spelling

**21<sup>st</sup> Century Skills:** Involves interactive, tactile elements to word creation.

**Objective:** To practice phonics, spelling and word formation.

**Grade Level:** Grade 3

**Time:** 30 minutes

---

## Suggested Activity

Have the students work in individually or in pairs to complete different levels of “Whirly Word”. Have them write a list of their found words on a separate piece of paper and organize them into categories based on number of letters, syllables, or phonics sounds. Have the students complete a t-chart on a piece of chart paper that they can share with the class. This application is also good for simple practice of word formation.

## Across Divisions

- Primary (Grades 1 and 2): Have students find only the three and four letter words and create a t-chart based on syllables or have them arrange the words in alphabetical order.
- Junior (Grade 4): Some of the larger words in this application are difficult to find and define. Have older students challenge themselves by looking in a dictionary to define words they might come across that they do not know the definition and have them present the words to the class.

## How to Use the Application

1. Open up the application from the home screen by clicking on it. Once the app is loaded, click on “new game”.
2. A series of letters will appear in a wheel. Use those letters to create different words by clicking on the letter individually in order. The letters will appear in the boxes above.
3. When a word has been created, click “enter” at the center of the wheel and it will be added to the top of the page. The empty spaces represent the number of words the certain letter set can make and the goal of the game is to find them all. (Notice: the number of spaces corresponds with the number of letters in the specific words).
4. There is no time limit in “Whirly Word”. By pressing the button called “Whirl” located to the right of the wheel, the letters will spin and are displayed in a different way. This is a feature that makes it easier to create new words from the letters. The

level can be exited out of at any time by clicking “End” or by completing the level. All of the letters given are random.

#### Other Applications & Links

Word Buster

Word Ball

Chicktionary

# STORY BUDDY 2 LITE

*Create your own digital story book*

---

**Instructional Literacy Focus:** Writing, Language

**21<sup>st</sup> Century Literacy Skills:** Allows students to create their own storybook through the use of tactile objects and variety of different texts.

**Objective:** To create a personal story book while practicing proper use of language and writing.

**Grade Level:** Grade 2/3/4

**Time:** 60 to 100 minutes

---

## Activity

The possibilities in using this application for language purposes are endless. Have your students create their own story book on the iPad with minimal instruction. Once finalized, the storybooks become “published” as a PDF file which can be accessed on different devices or printed. The books can be centered on a specific language skill which the class is focusing on (Ex: use of commas, letter writing, etc.) or a general theme.

## Across Divisions

Primary (Grade 1): With prompting, students can create their own storybook once they have an understanding of how the application works. Story Buddy 2 Lite can be used to produce a class storybook by allowing each student in the class the chance to create one page each to make a complete e-book which can be connected to a projector.

Examples:

- Have students create their own page about themselves for an “about me” class book.
- Have students create their own page about what they learned in a specific unit or subject.
- Create a class storybook about goals for the year or centered around a holiday.

## How to Use the Application

1. After opening the application from the home screen, the story buddy bookshelf becomes available. Press “new” in the top left hand corner to create a new storybook.
2. The creation of the story is set up similarly to the software *PowerPoint*. To add a new page to the book, select the plus sign at the bottom left corner of the screen.

Features:

- Add written text with the “T” icon and type in the text.

- The camera icon imports pictures from a camera roll onto your storybook page.
  - Tapping on the picture enlarges it, or move and rotate the picture with a two finger swipe.
  - The paint brush icon gives the ability to draw on the storybook pages.
3. When the storybook is completed, press done. This will publish the story book and put a copy of it on the homepage bookshelf. A title for book and the author's name can be written on the book when it is placed on the shelf. Click the book on the home page to review and read it. Pages are flipped just like a real book by swiping from the bottom corner.
  4. To edit the book at another time, click the "pencil on the piece of paper" icon below the specific book.
  5. To share the storybook, it can be saved as a PDF file and sent to different applications (*Evernote, eduClipper, Lino*, etc.), emailed or printed.

#### Other Applications & Links

StoryBuddy 2 – paid application with more features.

# WORD TREE 3D

*A spelling game that's all about speed*

---

**Instructional Literacy Focus:** Spelling

**21<sup>st</sup> Century Literacy Skills:** Tactile manipulation of letters to visualize word development.

**Objective:** To practice spelling three, four, and five letter words.

**Grade Level:** Grade 3

**Time:** 30 minutes

---

## Suggested Activity

This application is great for students to practice word formation with different letters. The game is fast paced and involves some level of competition, and is best played on an individual level. The application would be beneficial for use after discussion and/or brainstorming of different three, four and five letter words on the classroom word wall. The game is designed as a way for students to apply their knowledge in a fun and engaging way. Students can move up levels based on a certain amount of points they earn depending on the words they created. Have the students make a screen shot of their points as each level is completed to record the number of words that they produce.

## Across Divisions

Primary (Grades 1 and 2): The application is fast moving and has a timer option, therefore it is not user friendly for most primary users.

## How to Use the Application

1. After opening the application, a prompt appears to choose whether the game has sound or not. Select the preferred option.
2. Select play to begin the game. The game allows 1 minute and 30 seconds to find five, four and three letter words using the letters within the apples on the trees before the apples fall to the ground. Select the apples in the order of how to spell the word. An "S" symbol will show up in the barn in the right hand corner, click it to submit the word. The timer is found on the bottom right hand corner.
3. Gain points (which are shown in the right hand corner) based on the tally of the number of words and the quantity of letters.
4. As the user progresses through the levels, the apples fall from the tree faster and the word formation must happen quicker.

### Other Applications & Links

To screen shot – press the “home” button and the “lock” button on the iPad at the same time.

WordSpot

Word Ball

# BLUSTER

*Vocabulary building based on specific grade level*

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**Instructional Literacy Focus:** Vocabulary

**21<sup>st</sup> Century Literacy Skills:** Problem solving with visuals and words to increase vocabulary. Tactile manipulation of different words surrounding word matching.

**Objective:** To practice creating words and spelling known words.

**Grade Level:** The application gives the option to set the focus on vocabulary for *grades 2, 3 and 4*.

**Time:** 60 minutes (or one language period).

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## Suggested Activity

This application can be used in a lesson that focuses on a range of vocabulary skills. The interactive and engaging game gives the ability to support lessons surrounding homophones, synonyms, base words, prefixes suffixes and word roots. Students can work individually to practice these skills, or in groups to encourage interaction. There is also a “versus” option that allows students to work in pairs and compete with each other in the game (using the same iPad from different sides). The application can easily be used at a literacy center and the type of vocabulary match can be interchanged each day.

## How to Use the Application

1. When opening the application, a prompt appears for the home page. Here, click “play” to discover the options. Change the number of players, level (grade level) and match type (rhyming words, homophones, synonyms, etc.) by scrolling through the options. When the desired options, have been selected, click “go”.
2. The game consists of three boxes and a list of words the user must scroll through. The type of match that is selected (Ex: “match 3 words that rhyme”) will be prompted at the bottom of the screen). Scroll through the words and drag them into the box to select them.
3. If the words are correctly placed in the boxes, the words will be accepted and the list will grow shorter. Once all the words have been used, the user will move on to the next level.

Note: In the team selection, there are options to slow the opponent down when a “disruptor” icon shows up. Here, the user has to quickly make word selections to activate the icon, which appears as a tornado symbol.

Other Applications & Links

Bluster in the iTunes store -

<https://itunes.apple.com/us/app/bluster!/id416160693?mt=8>

There are packs with extra match types available for purchase for \$0.99.



# RAZ-KIDS

*Immerse yourself in different lands of books*

---

**Literacy Skills:** Reading & Listening

**21<sup>st</sup> Century Skills:** Students will engage in text-to-speech and voice recording/playback options when reading leveled books.

**Objective:** To interact with e-books for leveled reading. To listen to and record the reading of e-books.

**Grade Level:** Primary

**Time:** Varies

---

## Suggested Activity

This application has many possibilities! The free trial without a membership to the website contains numerous free leveled e-books ranging from level AA to level Z. These books can be used in reading groups, for individual assessment or at reading centers. Have the students read the book by themselves or in pairs, allowing the application to use the text-to-speech technology and read the book to the students. The application highlights the words as they are read. Another option is to have students record their voice as they read the book and listen back to it after they are finished. The teacher can also listen back to the recording to check the fluency and word pronunciation. To take this activity one step further, complete the quiz associated with each book. The student is given immediate feedback on their score, and have the opportunity to take the quiz again, at the same time as reading the book to correct their answers. Teachers can also view these scores.

## Across Divisions

Junior: The leveled books range from AA to Z. The e-books are a fun way to engage struggling readers without openly identifying them in the class as reading at a lower level. There are e-books available for kindergarten through grade 5.

## How to Use the Application

1. After selecting the Raz-Kids application from the home page of the iPad screen, select "No username? Start Here!" to access the free material without creating an account. This gives the user access to a few book selections to try out in the classroom. If a full free trial is required, or to create a membership, go to the Raz-Kids website listed below.
2. The books are shown with a preview of their front cover and the level is also listed.

3. Click on the “ear” symbol below the desired book to have the book read aloud as the words are highlighted.
4. To record the reader’s voice as the book is read aloud, click on the symbol underneath the book that shows an “eye”.
5. The question mark symbol is the link for the quiz associated with the book.

#### Other Applications & Links

Raz-Kids Website: <http://www.raz-kids.com>

- Teachers can gain access through a free trial or purchase a membership for full access to the website and applications features.
- Full membership features: more e-books, assessment options (running records, progress, tracking), online student incentive and awards and assignment creation.

# SOCK PUPPETS

*Create your own sock puppet show presentation*

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**Literacy Skills:** Oral Communication, Writing, Media Literacy

**21<sup>st</sup> Century Skills:** Interactive elements used to create personal virtual sock puppet presentation with voice recording and animation.

**Objective:** To practice sentence formation, structure, appropriate punctuation and presentation skills.

**Grade Level:** Ranges – Example: Grade 4

**Time:** 45 to 60 minutes

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## Suggested Activity

After teaching students the elements of writing a script, use this application to bring the scripts to life on the iPads with simple animation! Have the students create, individually or in pairs, a simple script with a maximum of four characters. The students can create scripts based on the characters in the application or from the scenery or props that are available. Have the students, as a class, view the available features in the application. The students can then develop their own setting or scene with props and sock puppet characters. Instruct the students to record their voices reading their own script that they have reviewed and made into a final copy. The students can then create their interactive media presentation and save it to their iPad to present to the class, share in a small group or hand in to the teacher.

## Across Divisions

- **Primary (1/2):** Have the students work on the idea of clarity, coherence and appropriate language and voice in their presentation. Have the students create a simple script and allow them additional time to practice recording their voices and moving the interactive elements of the application.
- **Junior (3/4):** Have the students concentrate on the development of their draft and final copy of their script, focusing on developing the scene, characters, time period and purpose of the discussion. To make this lesson cross-curricular, provide a related theme for their script that aligns with another unit, such as social studies.

## How to Use the Application

1. After selecting the Sock Puppet application icon from the home screen of the iPad, click on “new” to create a new presentation. To open an existing presentation, click open to view the saved presentations.

2. A prompt will appear to select the up to four characters for use in the presentation. A pair of eyes will show over the character's picture once it has been successfully selected.
3. Press the arrow in the bottom left corner to move on to select a background for the presentation. After the background has been chosen, click the next button to select the props and scenery that are desired.
4. Up to two props can be selected and when this step is finished, click "next" and the application will set up the stage.
5. Once the stage is set, the characters can be moved right and left and voices can be recorded.
6. Click the red circle to start recording, and speak as the character is moved. When finished, click the red square to stop the recording and the disk to save the work. Play back the recording with the play button.
7. A good feature of this application is that if the icon with the face and beams is chosen, the saved presentation can be "shared" with Facebook, YouTube or in the photo stream on the iPad.
8. The "home" icon returns to the home screen to start a new presentation or to open a saved one.

#### Other Applications & Links

Puppet Pals

# SPARKLE FISH

*Practice parts of speech in a fun way*

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**Literacy Skills:** Parts of Speech

**21<sup>st</sup> Century Skills:**

**Objective:** To demonstrate the knowledge of parts of speech.

**Grade Level:** Grade 3

**Time:** 30 minutes

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## Suggested Activity

This application works like MadLibs, but on an iPad. This application can be used in a classroom to demonstrate the students' knowledge of parts of speech such as a noun, verb, adverb and more. Use this application as part of your literacy centers for students to demonstrate their understanding of parts of speech. This application can be used in small groups, or individually. Before using the program, have students brainstorm as a class on chart paper different examples of different parts of speech and post it at this literacy center. Create an anchor chart for each part of speech that students can refer back to while they are imputing and recording their voice into different stories. The teacher can also review these recordings and evaluate if they used the parts of speech properly in their work.

## Across Divisions

Primary (1/2): The program gives examples of each part of speech, which will be beneficial while primary students are using the application. The activity can be modified by using it as a whole class, a literacy center, or as a hook for an introductory lesson for parts of speech.

## How to Use the Application

1. When you open the Sparklefish application on your iPad, it will take you to the home page and give you a view options to choose from. If you select "record story" you can record your voice and create a new story.
2. If you choose "listen" you can listen back on previous recorded stories that you saved.
3. If you are recording a new story, click that icon and it will take you to a page where you can choose five options of types of stories (Example: A fairy tale, The cold remedy, The greeting card). Select the one you wish to record and the program will prompt you with parts of speech to record.

4. Hold the microphone sign down as you record your part of speech (Ex: an adjective).
5. When all parts of speech for the story are complete, click “sparkle fish” and it will input your voice recordings in a story and read it back to you! These automatically save on to your program to listen back to at any time.

Other Applications & Links

SparkleFish Online: <http://www.sparklefishapp.com>

# TOONTASTIC

*Create your own mixed media cartoon*

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**Instructional Literacy Focus:** Oral language, Foundational Reading Skills

**21<sup>st</sup> Century Literacy Skills:** Allowing students to be tactile and explore different texts through recording their own voice and creating animation.

**Objective:** To explore the parts of a story and to develop their own cartoon through the use of mixed media.

**Grade Level:** Grade 3/4

**Time:** 60 to 100 minutes

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## Suggested Activity

Have the students create their own cartoon on the application. The interactive cartoon can concentrate around a given theme (i.e. the novel currently being read in class, a social studies unit theme or a holiday) or let the students develop their own idea. Ensure that the students understand that the goal of the lesson is to clearly identify the parts of a story (beginning, middle and end), characters and setting. Have them pre-plan their ideas for their cartoon on the application *iBrainstorm* (an interactive brainstorm application for the iPad) or on a piece of paper to organize their thoughts.

## Across Divisions

Primary (Grades 1 and 2): This application also comes in a “junior version” for younger students. Toontastic Jr. provides easy instructions for primary students to follow along with or without teacher prompts. The application highlights parts of the story and allows students to create their own cartoon and record their voice along with the action.

## How to Use the Application

1. Opening Toontastic from the home page, it presents you with the home screen. Click “create cartoon” and then “new cartoon” to begin.
2. In this screen, it shows the five parts of the cartoon – the setup, the conflict, the challenge, the climax and the resolution. Each section can be edited by clicking on the paint brush on the top of the individual sections.
3. The set-up section allows you to choose from created settings or you can draw your own background. Once this is selected, it will prompt you to choose your “toys” or characters from the applications selection, or students can draw their own characters. Record your voice and select background music for your chosen characters and their scene.

4. Each section follows the same order – character selection, voice record and animation by moving your character with your finger on the screen, and background music selection.
5. Once all parts of the story are completed, click done in the right hand corner. This will take you to a screen where you can input your movie title, and write who it was created by. It gives you an option to save the cartoon to the camera roll as well.
6. Click the green check mark to play your cartoon movie.
7. You can access saved cartoons from the home screen.

#### Other Applications & Links

Toontastic Jr.

Sock Puppets

iBrainstorm



# ACTION MOVIE FX

*Create a short video clip and make it into an instant action movie*

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**Instructional Literacy Focus:** Writing and Oral Language

**21<sup>st</sup> Century Literacy Skills:** Exposure to sounds and special effects during oral communication.

**Objective:** To narrate a created movie or video.

**Grade Level:** Grade 3/4 (Junior application).

**Time:** 60 minutes (depending on how much time is focused on the movie creation and brainstorming process).

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## Suggested Activity

Students can create their own action movie in this application. Have students pre-plan their movie plot and script on *iBrainstorm*, an application for brainstorming. Allow the students to film a short clip (can either be themselves acting or narrating a scene from behind the iPad camera) and add special effects into the clip. Once completed, the clip can be used solely by itself for presentation purposes or be included in a larger video students can create on their iPad (with *iMovie*, etc.) by importing it into the camera roll. The effects are frequently updated based on effects used in action movies that are currently in or recently out of theatres.

## How to Use the Application

1. In the home screen of *Action Movie FX*, select the special effect desired. Effects range from “car smash” to “avalanche” and can involve animals and alien invasions.
2. Press the record button to record the clip. When the clip is done recording, click on the red light again to stop it. The screen will turn green when the clip is done recording (there is a limit to the amount of time for recording).
3. In the next window, edit where the effect occurs in the video clip by touching and dragging the effect on the screen. The time line at the bottom of the screen tells when the effect will happen in the clip. The time line can be adjusted by dragging the red circle that says “FX” to a different time of the clip.
4. Select “Swap FX” in this edit window to change the effect.
5. When all edits are completed, select ok to “make your movie”. In this new window there is the ability to play the movie, delete the movie or click “share” to email it or save the clip to the camera roll.

## Other Applications & Links

Action Movie FX - <https://itunes.apple.com/ca/app/action-movie-fx/id489321253?mt=8>

# AUTO RAP

*Make any voice recording into an automatic rap*

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**Instructional Literacy Focus:** Writing, Listening Skills and Oral Language

**21<sup>st</sup> Century Literacy Skills:** Engaging with texts in different forms.

**Objective:** To narrate a created movie or video.

**Grade Level:** Grade 3/4 (Junior application).

**Time:** 30 minutes

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## Suggested Activity

There are many uses for this entertaining and engaging application. It would be interesting to see students use this “translator” to make any of their written pieces instantly into a fun rap. This requires students to write, record with their voices, and play back and listen to the rap recording. Have students write a poem about a given topic and use the application to translate the poem into a rap song. Have the class demonstrate their raps in a “rap battle smack down” as a fun way to present their poems!

## Across Divisions

Primary (Grades 1 and 2): This application is easy for use in the primary grades. Have the students record their own short poems or have pre-printed poems ready for students to read out loud and record with the *Auto Rap* application.

## How to Use the Application

1. Create a username for the application for the specific iPad using it.
2. The application gives you one free “beat”. The beat is the music that plays behind your voice recording. The other beats require points attained from the application game or by purchasing them.
3. Select the free beat called “Turkey Burger”.
4. The screen will prompt you with a red record button. Press the button and record your voice. When you are finished click the stop button.
5. This will take you to a page where it will play your rap track. Save the rap as “solo”.
6. When you save the track, click done. This will take you to the page with all your saved raps to be played back for presentations at any time.
7. By clicking the recording to hear it being played back, you can send the recording via email or leave it saved in the application.

8. The button in the top right corner of the screen will take you to the “beats” you can record over. The button on the top left directs you to your profile and will show your recorded raps.  
Option – click on the customize button on the page where it plays your rap back to you to create album cover art or to make the recording “private”. In order for the rap to not be posted on the applications “newsfeed” click private to not share it.

#### Other Applications & Links

Youtube.com – This is a suggested link because there are many YouTube videos that have raps about curriculum units and themes. For example:

Rapping video about rhyming words: <http://www.youtube.com/watch?v=ggcr7hMInVE>

# GARAGE BAND

*Create your own podcast*

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**Instructional Literacy Focus:** Oral language

**21<sup>st</sup> Century Literacy Skills:** Allowing students to record their voices and engage in a new form of text with the playback features.

**Objective:** To record an oral presentation in the form of a podcast.

**Grade Level:** Grade 3/4

**Time:** 60 to 90 minutes.

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## Suggested Activity

Have the students create their own radio show with the use of the *Garage Band* audio recorder. They can brainstorm, write, edit and finalize their script on the application called *Lino* or *iBrainstorm*. The radio show can be in the form of a news report or an interview surrounding a certain theme or unit. This radio broadcast can be created by an individual but would be more beneficial if done in pairs or in small groups. The show can be played back for the class like a real radio broadcast. This activity can also be set up in a format whereby groups of students are responsible for reporting daily news to the class using the application in given weeks or days.

Another use of the application would be to have students record discussions in a true podcast form in literature circles, group meetings or in group work. This can be played back for students to engage with at a later date, or be submitted to the teacher for participation marks.

## Across Divisions

Primary (Grades 1 and 2): The application can be used to have students record their reading and listen back to the recording to learn more about their fluency, and pronunciation. It can also be a tool for tracking student progress.

## How to Use the Application

1. Open the *Garage Band* application, and different instruments will be available to choose from to begin the recording. Scroll to the right to find the audio recorder and select it.
2. This will open to the audio recorder. Point the iPad toward the sound intended to record and tap the “record” button to begin the recording.
3. The audio recorder will track how loud the recording is (which is a useful prompt to speak louder if necessary). The recording will last for 8 counts, and can be restarted to record more.

4. There are different effects to use while the recording is happening (Ex: make the recording sound like talking on a telephone, or like a robot, or speaking in a large room or talking through a bullhorn). Select one of these to use before the recording begins.
5. The recording will save and can be accessed by selecting “my songs”.

#### Other Applications and Links

Audioboo: Search and listen to podcasts in the classroom.

Reading Rockets: Creating Podcasts with your Students -  
<http://www.readingrockets.org/article/25032>

# TELLAGAMI

*Create your own animated message*

**Instructional Literacy Focus:** Oral language, Writing

**21<sup>st</sup> Century Literacy Skills:** Voice recording and writing dialogue for animation.

**Objective:** To create a personal avatar to deliver a presentation or speech from voice recording.

**Grade Level:** Grade 3/4

**Time:** 60 to 90 minutes.

## Suggested Activity

Have the students create their own avatar, called a “*gami*”. The *gami* can be customized to look like the student or a particular character (Ex: a person from a book being read or a historical figure, etc.). The student can select the background from the applications options or upload their own background and either record their voice, or type in what they would like the *gami* to say. If they choose the *gami* voice option, they can select what voice they would like to use. A suggested activity would be for the student to upload a picture of a particular place (Ex: a famous place or time period being studied) and have the *gami* discuss the background as themselves or as a famous character. These can be saved and shared so the entire class can experience these animations.

Another activity that could be used for this application is to record a book report, “about me” activity, speech or story and use the animation for presentation purposes.

## How to Use the Application

1. Upon opening the application, students can customize their *gami* character by selecting “character”. Here there are options located at the side to adjust the *gami*’s body (gender, skin tone, eyes and head) and their wardrobe (hair, top, bottom and shoes).
2. After the *gami* has been created and the colours have been selected for their clothing, select “emotion” on the left hand side to choose the emotion that the *gami* will portray (neutral, happy, sad, surprised, angry, scared, or silly).
3. Under “emotion”, find the background options. Scroll through the different backgrounds that the application has loaded, or chose a picture from the iPad’s camera roll (library), draw one with the doodle button, or take a photo within the application with the iPad for the background.
4. Clicking “back” will save these features, and the ability to record/type what the *gami* will say is then available. Press the record button to record a voice to have the *gami* speak with the user’s voice in the animation. The clock will record the length of the

recording and the application allows for 30 seconds of speech. To input text, click “text” and type in what the *gami* will say. At this point, select what the voice will sound like (eight options).

5. During the recording, adjust and rotate the character. By clicking “preview”, watch the *gami* in action.
6. To share and save, select the share button on the bottom left hand corner. There are options to save the *gami* to the application and camera roll or share it via email, twitter, text or on Facebook.

# GRAMMAROPOLIS

*Explore the city to earn super seals for parts of speech*

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**Literacy Skills:** Parts of Speech, Text Features and Forms

**21<sup>st</sup> Century Skills:** The program involves interactive elements, such as videos, songs, and interactive e-books and games.

**Objective:** To practice parts of speech, such as understanding and demonstrating what a noun is.

**Grade Level:** Grade 2/3

**Time:** Varies

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## Suggested Activity

This application can be used to reinforce the parts of speech in an interactive and engaging way. The free version of this application gives full access to the noun game board. The students can work through the “noun map” to receive their “seal of noun”, which is a medal for completing the games noun level. There are different places to travel on the map which lead the student to interactive videos, quizzes and songs about nouns. They will be prompted to watch a fun video about nouns inspired by “School House Rock” and answer the quiz about the video immediately afterward. The game keeps track of the scores and displays them on the home page so they can be easily viewed. Each video highlights a different aspect of a noun, whether it be a common, proper, concrete, abstract or collective noun. In the noun level there are four videos, an interactive e-book, a song and two quizzes to be completed. Students can work on these individually or in small groups.

## Across Divisions

Primary (1/2): Select the appropriate aspects of the noun to be reviewed and go through the levels together as a class on the projector. Some words might be difficult to read in the primary division, so reading them out loud and having students select them as a group would be beneficial. A variety of levels, songs, e-books or videos to watch can be selected.

## How to Use the Application

1. Choose the Grammaropolis icon to lead to the home page of the program. Here, select different maps to visit which have different parts of speech (noun, verb, adjective, pronouns, conjunctions etc.). The free version of this application gives access to the noun map. Access to all of the maps, or to one specific map (example:



buy just the verb section without having to buy all of the maps) can also be purchased.

2. Clicking on the map goes to the screen with all of the elements of this interactive program about nouns.
3. Click start to begin and work through all of the elements to receive the medal at the end.
4. Use the index to view videos, e-books and quizzes separately without working through the level. These features would be beneficial for quick, whole group, interaction.
5. Clicking “more fun” gives links to another Grammaropolis activity called “word sort” and the ability to listen to the Grammaropolis CD.

#### Other Applications & Links

School House Rock: <http://www.youtube.com/watch?v=kfnXUWJzOsE>

# ROVER PRO

## *Student Browser Program for Education*

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**Instructional Literacy Focus:** Reading

**21<sup>st</sup> Century Literacy Skills:** Allowing students to engage in multi-media and text prints through the use of one application.

**Objective:** To conduct research on a given topic.

**Grade Level:** Grade 2, 3, 4 +

**Time:** Varies

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### Suggested Activity

Use *Rover Pro* to give students the ability to conduct research on a given topic. *Rover* is specifically designed for educational use by students and educators and operates like a search on a web browser would. The *Rover Pro* bookshelf has different cross-curricular activities and websites for students to use. The *Rover Pro* application can stream educational flash to the iPad (and iPad internet browsers do not support flash).

### Across Divisions

Primary (Grades 1 and 2): This application can be used in the primary grades because the *Rover Pro* application selects appropriate websites for students to engage in, eliminating teacher concern over the content the students are viewing.

### How to Use the Application

1. *Rover Pro* will open to the browser. Here, use *Rover Pro* in the same way as any other internet browser by typing in the web address or performing a general search. Bookmark pages by using the bookmark page, like a Safari browser search.
2. The homepage of *Rover Pro* recommends different age appropriate websites for students to engage in on the right side of the page. Click on these featured pages to open in the application.
3. The “more content” button in the bottom left hand corner directs to different web-pages based on school level (Ex: Elementary, middle and high-school). These will also open up in the application if selected.
4. All webpages are contained within the application for better safety and web-page blocking security.

### Other Applications and Links

Rover on the iTunes Store: <https://itunes.apple.com/ca/app/rover-browser-for-education/id483262612?mt=8>

# CoLAR MIX

*Watch your 1D drawings become 3D*

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**Literacy Skills:** Writing, Oral Communication and Media Texts

**21<sup>st</sup> Century Skills:** Moving from 1D to 3D in visualizing stories and parts of a story. The student is incorporating visual and linguistic skills in a new 3D immersive world. The student is experiencing augmented reality.

**Objective:** To engage in the world of 3D story telling

**Grade Level:** Grades 1-4.

**Time:** 30-60 minutes

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## Suggested Activity

Have the students choose from a selection of CoLAR colouring pages found on the application website, print the page and colour it. Specific art styles/colours can be used for this step if desired. The students will develop their stories based on whatever picture they choose to colour. Once the picture is coloured, the students will use the application to see their picture in 3D as the application takes the colouring page and the student's colours and makes the picture come to life. Have the students experiment with the application before writing their story. Then, ask the students to write a story based on their colouring page. For example, if the colouring page is of a bird, the student would write a story based on that specific bird. The student will have to demonstrate that they understand the idea of the story having a beginning, middle and an end and perform a review process before completing the final copy of their story. Have the students present their story and the associated 3D image to the entire class, or to a small group. If there is access to a projector, connect the iPad to the projector to be able to view the 3D image as a class during story presentations.

## Across Divisions

- Primary: Have students write a shorter story about their 3D colouring page image.
- Junior: Have the students write a story, which includes all parts of a story, and have them outline the characters, setting, place and time. The students will formulate their story based from their 3D image and practice the review and edit process with a peer. Students can also create an extended story about their image, for example, what they would want the image to do if they had control over the CoLAR Mix application program.

### How to Use the Application

1. After selecting the CoLAR Mix application from the home screen of the iPad, select the pages option to view the colouring pages that are available to print. This will allow the viewing of the colouring pages from the iPad and provide instructions to visit the CoLAR App website to print the pages directly from a computer. There are many free colouring pages, and others are available for a fee. **The application will only work with the specific colouring pages printed from this website.**
2. Then visit the website, *www.colarapp.com*, and print off the students' desired colouring pages.
3. After the student has coloured their colouring page, return to the home screen of the application and click "play". Focus the colouring page in the middle of the iPad's screen and watch the box turn blue to verify that the camera can see the whole page. The screen will then turn the colouring page into a 3D image that has designated animations.
4. There are buttons at the top of this page which allow for further features. The camera allows for screen shots of the image and has the ability to save to the image gallery on the iPad, which can be used to document the students' work.
5. The magnifying glass can make the 3D animation bigger or smaller and the pause button can pause the animation. There is also music that accompanies the animation, which can be turned on or off with the music note button.

### Other Applications & Links

CoLAR App Website for free printables: [www.colourapp.com](http://www.colourapp.com)

# SPHERE 360

*Get a 360° degree view of different places in the world*

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**Instructional Literacy Focus:** Writing and Descriptive Language

**21<sup>st</sup> Century Literacy Skills:** Exposure to 3D visuals in a 360° fashion which promotes acceptance of different perspectives.

**Objective:** To practice descriptive words.

**Grade Level:** Grade 3/4

**Time:** 60 minutes (or one language period).

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## Suggested Activity

After selecting a landmark to view on the application, have students explore the 360° image in front of them. Have them practice writing descriptive paragraphs or sentences (based on grade level) that explain the experience they are having. Students can also use descriptive writing to explain the details of the image (Ex: St. Peterburg's architecture) and have a goal to explain the image to someone who has not seen it.

## Across Divisions

Primary (Grades 1 and 2): This application is effective for promoting exploration in the primary grades. Students can write a story based on what they would do if they were in the particular location they are viewing on their iPad. There are many options for modifications to this lesson for younger grades as viewing new world images encourages thinking outside of the box and supports the engagement of different types of texts.

## How to Use the Application

1. Use the search button to search different landmarks, specific spots or countries. The button takes the user to a map with red dots. These dots signify where a *Sphere 360* image has been taken. *An interesting addition to this lesson would be to have students chose different image uploads of the same landmark and compare perspectives of the uploads.*
2. There are staff picks, people and categories that can be used to limit the search or to explore other possibilities. *A good idea would be to let students explore all of the different 360° images loaded into the application.*
3. Holding the iPad with both hands, a 360° image will appear of the selected destination. Hold the iPad high or low and walk in a circle to see the different parts of the image.
4. To choose another image, select "back" in the top left hand corner.

### Other Applications & Links

Google Maps – an application that allows a satellite street view of different places in the world.

# BRAIN POP JR.

*Watch interactive movies on a learning platform*

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**Literacy Skills:** Media Literacy

**21<sup>st</sup> Century Skills:** Video and interactive elements that engage learners in new content

**Objective:** Engage in different topics surrounding reading and writing and demonstrating

**Grade Level:** Grades 1-4

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## Expectation

Brain Pop Jr. is a learning platform that has many cross-curricular videos, comics and information to engage learners in new content surrounding the subjects of science, health, reading and writing, social studies, math, arts and technology. Each video is designed to target the junior audience with its graphics and interactive elements. As well, each video comes with associated quizzes which come in easy and difficult modes.

## Activity

Use this program to display videos to the whole class or on an individual basis. Have the students complete the quizzes about the new information that they have learned and they can enter their name to keep track of their progress. An interesting feature of this program is that it allows for additional areas of self-discovery. It suggests related videos in the same subject area which students can explore and learn from. All videos are presented in animation and the program has a “jokes” section and cartoon area that relate to the curriculum and units of subjects. The videos illustrate the text of the video for students to follow along.

## How to Use the Application

The free version of the program allows access to six videos from different areas of the curriculum and their associated features such as quizzes, jokes and comics. Select Brain Pop Jr., to go to the home page of the program. The program is very easy to navigate because it is targeted to a junior audience. The home page will display the free movie of the week and the cross curricular activities that accompany it (Example: the weekly movie is about Martin Luther King, Jr., but it also has information about biographies and links to other famous people). Select the movie of the week if that is the area of interest. By clicking “all movies” in the bottom left corner, a search by subject for the specific area of the curriculum and theme can be made. Without a subscription, click “more” and that page will provide information on the features of the Brain Pop Jr. program and show the section of the program where the free movies and quizzes are

located. After a video is watched, students will be prompted with the associated quiz and other related activities to the video's content.

#### Other Applications & Links

Brain Pop



# LINO

*The ultimate group work application*

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**Instructional Literacy Focus:** Writing

**21<sup>st</sup> Century Literacy Skills:** Problem solving and collaboration with different texts and visuals.

**Objective:** To complete all stages of a group project and presentation using the iPad.

**Grade Level:** Grade 3/4

**Time:** Varies

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## Suggested Activity

Divide the students into small groups to complete a project. This project can be in any subject, and is not limited to language arts. Students can use the application to brainstorm, give feedback, and attach pictures, videos and text to a communal canvas (much like a corkboard). The communal canvas can be used while students are having planning meetings, either in person or wirelessly. The theory behind this process is that students are thinking in different ways and are exposed to various forms of texts while in the group work. The group option is a great feature, however this is also a useful application for brainstorming for individual projects.

The corkboard can also be used as the visual mode for presentations. The canvas can act as a way to present information to the class, much like a poster board, but on the iPad.

## Across Divisions

Primary (Grades 1 and 2): There is a task option that can be added to the *Lino* corkboard. This can be used for classroom management. Students can check their own personal corkboards (when put in a “group”) to see messages posted by their teacher and/or peers.

## How to Use the Application

1. Opening up the *Lino* application takes the user to a screen called “My Canvases” after the log in. This is the location of the personal canvases that are owned by the specific user that is logged in. To create a new canvas, click the button in the top right hand corner. At this point a title can be added, and a background can be chosen. As well, the user can determine who will be able to see the canvas.
2. Select the canvas to be edited. Text can be added to the document by selecting the button on the top right hand corner. Click text and type in the “sticky note”. Here, emoticons can be chosen by using the smiley face button, or set a due date with the calendar icon or select a colour for the sticky note.

3. By using the same button on the top right hand corner, video and pictures can be taken from the application with the iPad and added. Access the camera roll to upload previously taken pictures or videos. When a picture is selected to use on the canvas, the size and border styles of the picture can be edited. Click save to upload the picture or video.
4. To go back to the homepage to see the canvas, click back. On this homepage there is an option in the bottom left hand corner to view the groups that the user belongs to and who can access the canvas. This can be created online at the *Lino* website.

#### Other Applications & Links

##### Corkulous

[www.lino.com](http://www.lino.com) - On this website make groups by using different user names for access to the same corkboards/canvas.

# WORD MOVER

*Create new found poetry*

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**Literacy Skills:** Poetry, the Writing Process

**21<sup>st</sup> Century Skills:** Be able to engage with words in a tactile, interactive interface.

**Objective:** To create a personal poem on a topic of the student's choice.

**Grade Level:** Junior – Example: Grade 4

**Time:** Varies

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## Activity

1. This program can be used for creating poems in the classroom. The easy and interactive approach to moving words around in the home screen is a good way to have students work hands-on with their word selection and develop the ability to see their poem unfold in front of them. Have the students generate their ideas on the word mover program and go through the draft and revision process on their screens. It is easy to add, change or delete words from their poem as they are developing it. A good follow up step to this activity would be to have the students reflect on their writing process and the strategy of using their iPads as compared to a piece of paper in completing their work. What did they like about word mover? What did they not like? Have the students work in small groups to present their poems and ask them to reflect on the meaning and word selection of their poem. Assign a certain type of poem for the students to complete (Example: a haiku) or have them generate their poems around a certain theme (Example: seasons).
2. The program can be used as a brainstorming platform for any literacy project.
3. Word Mover also gives access to famous speeches and poems that can be viewed, allowing students to descramble or deconstruct them. An interesting activity would be to take the individual words (word mover shows the poems in individual words which can be moved around) and create their own poem from the famous words of a poem on the program.

## Across Divisions

- Primary (1/2): Students in the primary grades can use word mover to create their own poems. Some words might need to be pre-loaded first. Primary grades would engage well in simple descrambling of short poems.
- Junior (3): The activity can be simply modified to the Grade three level by allowing the students to create their own poems and using the revise and draft process to double check their spelling on an online dictionary (several apps are available for this as well).

### How to Use the Application

1. The Word Mover home page will prompt a “sign in” as a user. Here, create a new user by entering in the user’s name. This gives the ability for many different users to access the same program but have their own username to hold their work. If more than one student is using the same iPad throughout the day, this makes organization easy and efficient. If this is the case, and more than one student has access to the iPad, make sure the first user entered is the teacher for they become the “user manager” and can manage all the users.
2. Select the desired user and the program will point to that specific user’s homepage. Here, select “create new found poetry”. Once poetry pages are created, they will appear on this homepage.
3. The user is then prompted to a page that says “word bank” and “my own words” where a new poetry page can be created.
4. The “word bank” gives access to a word bank of more complex words that can be used in the poem. Here, an option is available to also use “add a word” to input the user’s own words. If the “my own words” is chosen, all of the words inputted into the program and the poem must be typed by the user.
5. Choose the “backgrounds” button to select a fun background screen for the poem!
6. When the poem is complete, select the “share button” to save it to camera roll, send it to a wireless printer or forward it as an email. The poem will automatically be saved to the user’s homepage. At anytime, clicking the small garbage can on the top right hand corner of the poem on the home page can delete the poem.

To access the famous poems and speeches already preloaded, click “create new found poetry” and select a piece of work under the section “famous works”. Here, the work will be uploaded in order. Click the “shuffle button” to scramble the words. By clicking “new word bank” beside the work, the program will provide another piece of work by that famous poet or speaker. For example, there are two Shakespearean poems within the program, and by clicking shuffle access to both is available!

### Other Applications & Links

Word Mover Program on the Computer:

[http://www.readwritethink.org/files/resources/interactives/Word\\_Mover/](http://www.readwritethink.org/files/resources/interactives/Word_Mover/)

## CHAPTER FOUR: ASSESSMENT AND EVALUATION

The new form of literacies that are presented with the use of technology do not readily lend themselves to traditional paper and pen assessment (Burke & Hammett, 2009), encouraging teachers to embrace a new form of creative assessment. Current advances in educational technology offer many opportunities to design assessments that measure these complex skills and student knowledge (Clarke-Midura & Dede, 2010). When using technology to support learning, different higher-order thinking skills are evident and these skills are difficult to measure with traditional paper and pen assessments (Clarke- Midura & Dede, 2010). As a result, assessments which capture traditional literacy evaluation aspects but also incorporate the evaluation of technology competencies and digital literacy (Lei, Shen, & Johnson, 2014) must be utilized.

Traditionally, assessment for literacy has been monomodal and primarily print based, and education is familiar with valuing systems that strongly regard texts that are presented in semiotic modes (Vincent, 2006). There is an epistemological change that occurs when assessing with technology and embracing the change from the current form of representation to the new form of representation (Bearne, 2009). Technology can improve the quantity and quality of a student's writing and their higher order thinking (Peck & Dorricott, 1994). In order to properly assess by means of technology, multimodal texts should be accepted as equal with traditional texts and be considered a normal form of text production (Vincent, 2006). It is important for educators to value the texts created with the use of technology, and deem them as valuable as traditional text production. To overcome this potential barrier, teachers

must embrace the new ideas of literacy production available when using technologies such as iPad devices when they are creating assessments for the use of technology in the classroom. These assessments must take into consideration that being capable of using technology does not necessarily mean that the student is using it critically or meaningfully in their learning (Lei et al., 2014). Assessment of technology use can encompass the evaluation of the technological tool itself, such as determining if the student can successfully use the application to create something, which is referred to as the “product” (Peck & Dorricott, 1994). The “process,” or information base, can also be evaluated, which would be the experience in which the students engaged (Peck & Dorricott, 1994) through observation or anecdotal records of the creation process.

### **Views on Assessment of Student Use of Technology**

The International Society for Technology in Education (ISTE, 2007) states in its publication titled “National Educational Technology Standards for Students” that there are six skills and abilities that students can be evaluated on in their use of technology (see Table 1).

These technology standards can be applied to the use of iPad applications which promote students to create products and engage in a process of collaboration. They can also be used to effectively evaluate students on their knowledge of technology concepts, problem solving, and their responsibility in being honourable digital citizens. The use of applications and technology in general can also be measured through self-report questionnaires, online skill assessments and portfolio based assessments (Zhao, 2009), which is similar to familiar print-based assessment.

Table 1

*National Educational Technology Standards for Students, ISTE, 2007*

Technology standard	Description
Creativity and innovation	Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.
Communication and collaboration	Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.
Research and information fluency	Students apply digital tools to gather, evaluate, and use information.
Critical thinking, problem solving, and decision making	Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.
Digital citizenship	Students understand human, cultural, and societal issues related to technology and practice legal and ethical behaviour.
Technology operations and concepts	Students demonstrate a sound understanding of technological concepts, systems, and behaviour.

Zhao (2009) developed a framework for assessing student digital competencies through a framework called Knowing, Participating, Creating and Leading (KPCL). “Knowing” entails exhibiting an understanding of the nature of digital technologies. “Participating” means students are able to use digital technologies to partake in different communities (Zhao, 2009). The other aspects of digital technology literacy include “creating,” which is the ability to use digital technologies to create digital products and “leading,” which can be assessed when students take on leadership roles in the use and creation of digital technologies (Zhao, 2009).

The United Kingdom Literacy Association (UKLA) and Qualifications and Curriculum Authority (QCA, 2005) note that progress in creating multimodal texts in literacy can be assessed through four descriptors which encompass paper based and screen based productions. Progress is made by an increase in the ability to decide on the mode and content for a specific purpose and audience, in structuring texts, using technical features for effect and reflecting on the process (UKLA, QCA, 2005). Through the employment of these descriptors, it is a simple task to evaluate a student from the early stages of multimodal text creation on to an experienced text maker (Bearne, 2009). These can be also be adapted to the use of an iPad device in the classroom, across the different modes that a student might encounter while handling different applications.

### **Assessment of iPad Application Lessons**

When developing plans on how technology will be used in lessons and how its use will be assessed, it is important to set educational goals on such use and assessments based on the specific goals of the desired technology (Lei, 2010). This ensures technology is being used to its greatest potential. Teachers should develop technological



pedagogical content knowledge to teach material with the appropriate technology, not only to incorporate student needs but also to assess its use (Harris & Hofer, 2011). In literacy learning development, setting goals for writing development, using applications that target writing development, and creating rubrics to assess the work will help to guide the assessment of students. Table 2 lists areas of literacy development and associated iPad applications, the basis for the constructed literacy lessons. The medium being used, for example, the specific application, has unique features and there are various possibilities for assessment.

Incorporating aspects into assessments that allow for flexibility depending on the application, and their multimodal elements is an essential way to embrace the responsibilities of the 21st-century teacher. It is crucial to have the ability to define the characteristics of the new texts that are being produced and to understand the creation process that is being taught to students (Burke & Hammett, 2009). Discovering how different aspects of this new literacy are used by the students and how they are conceived is a key step that educators must take in assessing literacy instruction through the use of technology (Burke & Hammett, 2009). The iPad allows for authentic assessment that can be related to curriculum standards for literacy while providing students with 21st-century learning opportunities for acquiring the critical skills that are needed for literacy.

Such learning opportunities can measure the knowledge gained through the use of iPad and iPad applications and can allow for teacher observation of student learning (Clarke-Midura & Dede, 2010). Many applications have options for following a student's progression through in-application assessments or scores.

Table 2

*Overview of Literacy Development Application Assessment*

Literacy development	Associated application lesson	Key indicators
Awareness of print	<ul style="list-style-type: none"> <li>- Whirly Word</li> <li>- Jumbled Sentences</li> </ul>	Students can identify how individual letters make up a whole word and how words are different from each other with the use of the application.
Spelling	<ul style="list-style-type: none"> <li>- Whirly Word</li> <li>- Story Buddy 2 Lite</li> <li>- Word Tree 3D</li> <li>- Bluster</li> </ul>	Students can successfully practice, create and confidently spell words with the use of the application. The application helps to guide trial and error in word construction.
Oral language/ listening	<ul style="list-style-type: none"> <li>- Raz-Kids</li> <li>- Sock Puppets</li> <li>- Sparkle Fish</li> <li>- Toontastic</li> <li>- Action Movie FX</li> <li>- Auto Rap</li> <li>- Garage Band</li> <li>- Tellagami</li> </ul>	Students can read fluently and present with clarity at an appropriate pace. Students can responsively engage in listening and responding to their peers.
Reading / decoding	<ul style="list-style-type: none"> <li>- Raz-Kids</li> <li>- Grammaropolis</li> <li>- Toontastic</li> <li>- Bluster</li> <li>- Rover Pro</li> </ul>	Students can isolate, blend and segment sounds. The applications can be used in reading centers, guided reading, and in individual practice.
Visual cues	<ul style="list-style-type: none"> <li>- CoLAR Mix</li> <li>- Jumbled Sentences</li> <li>- Sock Puppets</li> <li>- Brain Pop Jr.</li> <li>- Sphere 360</li> <li>- Bluster</li> </ul>	Cues are given to the student within the applications to assist in visualization of word formation, presentation, and writing prompts.

Table 2 (cont'd)

*Overview of Literacy Development Application Assessment*

Literacy development	Associated application lesson	Key indicators
Writing	<ul style="list-style-type: none"> <li>- CoLAR Mix</li> <li>- Jumbled Sentences</li> <li>- Sock Puppets</li> <li>- Grammaropolis</li> <li>- Word Mover</li> <li>- Sparkle Fish</li> <li>- Story Buddy 2 Lite</li> <li>- Sphere 360</li> <li>- Action Movie FX</li> <li>- Auto Rap</li> <li>- Lino</li> <li>- Bluster</li> <li>- Tellagami</li> </ul>	<p>Students can successfully complete the writing process including brainstorming, drafting, editing, and creating a final product. There is clear ideas, theme, organization, and voice to their writing.</p> <p>Writing can be assessed indirectly or directly through the use of the applications</p>

Some applications offer features that track the progression of specific students' development as they work through different aspects of the application. It is a simple task to save, work on, and share assignments with the teacher through email and projector presentations or by saving them directly to the device itself such as through the camera roll. The screen shot function permits students to document their work in picture form, allowing for anecdotal records and submission for evaluation, all managed on the iPad device. A variety of applications and programs provide ample opportunities for assessment for learning, assessment as learning and assessment of learning, as well as appraising group work and collaboration when the devices need to be shared. The use of an iPad in the literacy classroom allows for personalized and individualized instruction and assessment and reflects the immense possibilities for production of texts across different modes and spaces.

The goal is to create opportunities for students to be assessed on the use of applications and their constructions with multiliteracies and multimodal texts through the iPad device, encourage the students' processes of understanding, and foster the new skills that are required of the 21st century (Burke & Hammett, 2009). The iPad and related applications offer engaging options to reach this goal through the creation of assessments that support these new texts as literacy.

## CHAPTER FIVE: CONCLUSION

The goal of this study's handbook was to create a resource for the effective use of the iPad in elementary education, specifically in literacy instruction. The technology of the 21st century has created new types of learners who engage with these rapidly developing texts in their daily lives. It is important as educators to recognize and address this shift towards multimodal texts in literacy instruction. The use of technology can support literacy instruction and provide students opportunities to engage with multiliteracies. In particular, the iPad can give students unique and individualized learning opportunities to participate in tactile, visual, and multimodal experiences with text. As a mobile device, the iPad and its applications allow students to explore a new world of literacy instruction and be engaged with their learning collaboratively.

Applications offer students a variety of different formats in which to engage with traditional literacy skills, while developing the new skills that are required of the 21st century. The handbook discussed in this study outlines the many benefits of engaging with this type of technology, along with accommodation aspects and the importance and ease of assessment. It was a goal of the handbook to select applications for the iPad that went past the basic "skill and drill" activities that would be possible without the iPad, on paper. The 20 applications selected represent true 21st-century literacy skills and were included based on criteria that valued students' engagement levels, learning goals, and higher-order thinking.

The lessons have been constructed to represent the students' development in relation to literacy learning, beginning at awareness of print and building into higher literacy skills such as independent writing and spelling. The applications demonstrate a

variety of forms in which students can engage with different aspects of literacy, and the lessons easily give educators the ability to adapt to specific grades and to the unique needs of individual students. The experiences that children receive in using the lessons created from applications such as CoLAR Mix and Sphere 360 provide them with opportunities to view texts in a way that was not possible before the development of technology. Puppet Pals, Tellagami, and Toon Tastic allow students to represent themselves in new and creative ways, allowing for reading, writing, and presentations to take on a whole new meaning through these unique experiences. As well, students can practice their core literacy skills in unique and exciting ways through the use of Whirly Word, Bluster, Brain Pop Jr., or Word Tree 3D. These applications illustrate a small sample of those available in the handbook. All of the applications challenge students on how they construct their knowledge and provide the ability to represent themselves as 21st-century learners. The lessons facilitate individual and collaborative work, and expand the possibilities for inventive classroom activities, literacy centers, and guided reading.

There are some drawbacks in using technology in the classroom. Media and literature tend to romanticize the idea of new emerging technologies like iPads addressing all of the issues surrounding learners presented by the 21st century (Rowse, Saudelli, Scott, & Bishop, 2013). The presence of iPad technologies in the classroom does not ensure that deeper learning will occur with students. The iPad can be used to present and frame literacy materials (Rowse et al., 2013) and create 21st-century learning opportunities that the teacher must create. These tablets have altered how we teach and teachers must still take a hands-on approach to planning with iPads (Rowse et al.,

2013). The iPad device should not be used in place of the teacher. The limitations that exist for iPad use in the classroom are important to identify in order to create solutions for an individual practice. It is essential to recognize that there will not be one application that will address all learning goals and fit with every stream of literacy. Depending on the lesson, it may require a combination of several different applications to provide students with a beneficial experience in the technological world. However, the importance of this experience as guided by their teachers cannot be understated, as the goal is for students to become 21st-century learners. There are also limitations that govern access and equity as it pertains to the availability of technology in schools. Although most of the applications do not require Internet access, the applications that do require Internet might impose limitations on the full integration of iPads into the classroom depending on the school's Internet accessibility. To mitigate this consequence, many of the applications included in the handbook do not require an Internet access. It is important to remember that whether working on a one-to-one iPad model or if the school has the use of only a few iPads, that the iPad can be used both individually and collaboratively amongst pairs or small groups.

iPad applications are continuously updated and new applications are always being developed. The application selection in this study's handbook was deemed current and popular through an audit at the time of the handbook creation. Educators should be exploring new applications in the Apple Store and through online searches in order to remain current in their iPad use. It has been recognized that one of the limitations on implementing technology in the classroom is teacher training. The goal of this study's handbook was to provide a teacher-friendly source to effectively incorporate iPads into the literacy classroom, even without specific training on the device itself. The lessons

include easy instructions on how to access the applications as well as a section in the introduction describing tips and tricks about the iPad to ensure effective instruction.

In order to support the 21st-century learners who are emerging in the classroom of today, it is essential to examine the science behind why the elements that are presented in this study's handbook are crucial for educators to know. Although it took a human journey of almost 2,000 years to develop language, today's children are learning about 2,000 words in only one year (Wolf, 2007). These learners, the new digital citizens, have accelerated this rapid change in the practice of literacy. Learning to read and write changes the visual cortex of the brain and as the decoding process becomes more automatic, a learner progresses from a novice reader to an expert one (Wolf, 2007). Even though the process of reading and writing is different in the present age, it is imperative that the critical skills of reading development be supported, practiced, and guided through the use of technology (Wolf, 2007). Readers need to be prompted to search for deeper levels of meaning and to go beyond the text that is presented to them with the touch of a button on a screen (Wolf, 2007). Therefore, it is important for technology to be used effectively and to sharpen these crucial skills by employing technology in transformative ways. This theory is reinforced through the SAMR Model, and supports the concept that technology should be used in a significant redesign to modify or redefine the lesson, and in such an original way that the new changes would have been impossible without the technology (Puentedura, 2010). Educators must strive to move past using iPads for enhancement in their lessons towards using them to transform their literacy practices (Puentedura, 2010).



As an educator, it is important to stress the quality of the instruction over the quantity to ensure that the successful implementation of iPads and related technology is effective and meaningful. The applications and lessons provided in this study's handbook will guide your practice and inform you on how to make this transition successfully. I hope that the handbook allows users to smoothly transform their practice and helps to facilitate the journey in continuing to become innovative literacy teachers.

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