

Bluetooth Keyboard Commands with VoiceOver on the iPad

Chapter 2: Review Educational Apps with VoiceOver Gestures

iOS 9.2

Module Objectives

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- 2.2 Review: App Layout
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The *Bluetooth Keyboard Commands with VoiceOver on the iPad* manual is being shared on the *Paths to Technology* website with permission from SAS Institute Inc.

Overview

This review section is designed to refresh participants' iPad skills; participants should already be familiar with Pages, Dropbox, iBooks, Mail, and Safari. Participants should also be familiar with how to edit, copy, paste and highlight, as well as how to create notes and study cards in iBooks when VoiceOver is off. Participants should be familiar with VoiceOver gestures.

Since many schools are using Google Docs and Google Drive, this manual includes a quick review of these Google apps as well.

TEACHER HINT: WHEN INITIALLY TEACHING STUDENTS TO USE VOICEOVER GESTURES, PLACE THE IPAD FLAT ON THE TABLE. WHEN THE IPAD IS UPRIGHT, SUCH AS IN A BLUETOOTH KEYBOARD CASE THE IPAD IS NOT AS STABLE WHICH MAY BE CHALLENGING FOR BEGINNER VOICEOVER USERS.

This review will be done with VoiceOver on. The Bluetooth keyboard is turned off.

2.1 Review: VoiceOver Gestures

Participants in this training should be comfortable with VoiceOver gestures. As a group, we will review basic VoiceOver gestures.

Activity 2.1 VoiceOver “Synchronized Swimming”

Using Triple-Click Home, turn VoiceOver on; for this portion of the training, make sure that Zoom is turned Off. With VoiceOver on, the training instructor will lead the group to VoiceOver Practice screen. (Settings > General > Accessibility > VoiceOver – on). Once on this screen, touch – but do not select – the VoiceOver Practice button. Turn the Screen Curtain on (3 fingers, triple tap). The Screen Curtain makes the iPad screen go blank but allows the iPad to continue working with VoiceOver.

TEACHER HINT: IF YOU ACCIDENTLY TURN SPEECH OFF; 3 FINGERS, DOUBLE TAP WILL TOGGLE BETWEEN SPEECH ON/OFF. FOR THIS ACTIVITY, YOU WANT THE SCREEN CURTAIN ON (SCREEN IS BLANK) AND SPEECH ON.

As a group with the screen curtain On, open VoiceOver Practice. (You should have selected VoiceOver practice before turning the screen curtain On; now double tap any where on the screen to activate the VoiceOver practice screen. If the VoiceOver focus is not on the VoiceOver practice screen, drag your finger down the right two-thirds of the screen, stopping on VoiceOver practice screen; split tap to activate.) Once in VoiceOver Practice, tap the screen one time to listen to VoiceOver Practice directions. Now you are ready for “VoiceOver Synchronized Swimming”. On the count of three, the training instructor will call out various 1, 2, 3 and 4 finger gestures and as a group, participants will try to perform these gestures in sync. The training instructor will drill these gestures to help develop muscle memory and to review what each gesture does.

When finished with this activity, the instructor will guide you to the Done button in the top right corner of the screen. After you hear VoiceOver say, “Done button” then double tap to exit VoiceOver Practice.

With the screen curtain still on, the instructor will guide you through returning to the Home screen, opening and closing several apps. Use the shortcut gestures to locate the Calendar button in the top left corner of the screen (4 fingers, single tap at the top portion of the page) and to find Safari at the bottom right corner of the page (4 fingers, single tap at the bottom portion of the page). Find Calendar again. Find Pages in the bottom left corner of the page (drag finger to the bottom left). As a group, open Pages (split tap), activate the Add Document button (split tap or double tap), activate the Create Document button, flick

right or drag finger down to Blank Document and activate (double tap or split tap) to open. Type your own name on the Blank document using the on-screen keyboard. We recommend selecting Touch Typing in the rotor; this enables you to drag your finger around the on-screen keyboard. The letter is selected when you lift your finger. Standard Typing is the other typing mode option; drag your finger to the desired letter then split tap. Turn Screen Curtain Off (three finger, triple tap) to visually see the items on the iPad's screen.

TEACHER HINT: USE THE SAME ACTIVITIES LISTED ABOVE TO REVIEW VOICEOVER GESTURES WITH YOUR STUDENT.

TROUBLE SHOOTING: CHANGING COMMANDS FOR SPEECH ON/OFF AND SCREEN CURTAIN ON/OFF

There are only two commands that change: Speech on/off and Screen Curtain on/off. In early iOS versions, Zoom and VoiceOver could not be used simultaneously. Now that Zoom and VoiceOver can be used separately or together, the commands to toggle speech on/off and screen curtain on/off are impacted. These two commands depend on whether VoiceOver and Zoom are turned on – not just available - in Triple Click Home.

When using only VoiceOver or only Zoom:

- Toggle between Speech on/off; 3 fingers, double tap
- Toggle between Screen Curtain on/off; 3 fingers, triple tap

When using VoiceOver and Zoom together:

- Toggle between Speech on/off; 3 fingers, triple tap
- Toggle between Screen Curtain on/off; 3 fingers, quadruple tap

2.2 Review: App Layout

It is important for students to be made aware of the physical layout of each app and to specifically teach students with visual impairments to consciously learn the layout of each app. Most apps have the Tool bar at the top of the page (under the Status bar). The Tool bar enables you to navigate around the app and to interact with the app. Typically, the button in the top left corner will take you “back” to the previous screen. The middle of the Tool Bar will often name the screen you are currently on within the app. If a named document is open within the app (such as a Pages document or an email document), the title of that document will appear in the middle of the Tool bar. Often, the Add button and the Action/Share/Send button will be in the Tool Bar at the top right corner. Different screens within the app will display different Tool Bar options. Some apps will have additional options found in a Tool Bar along the bottom of the screen. Knowing the spatial layout within each app enables a student with visual impairments to quickly and efficiently use the app. When using VoiceOver, there are additional commands to move around the apps, such as moving to the top left corner of the app/beginning of the document or the bottom right corner/end of the document.

TEACHER HINT: AS APPS ARE UPDATED, SYMBOLS AND OPTIONS MAY CHANGE; HOWEVER, THE GENERAL APP LAYOUT SHOULD REMAIN SIMILAR. KNOWING HOW TO EXPLORE AN APP WILL ENABLE STUDENTS WITH VISUAL IMPAIRMENTS TO ADAPT QUICKLY TO FUTURE CHANGES.

Some apps, such Mail and Reminders have a layout with a list of items on the left one-third of the page and the open document displayed on the right two-thirds of the page. Other apps will fill the entire screen.

TEACHER HINT: STUDENTS SHOULD BE TAUGHT THE LAYOUT OF DIFFERENT APPS IN ORDER TO EFFICIENTLY NAVIGATE AROUND THE APP.

2.3 Review: Dropbox, Pages and Mail using VoiceOver Gestures

Dropbox version 4.2.3; Pages version 2.6.1

During this training, we will be using Dropbox to share and organize materials. Note: You must have Internet access in order to access Dropbox. Dropbox is a cloud storage system that can be synched between devices and that enables users to share and/or edit documents and folders.

Dropbox has a one-third and two-thirds layout with a Tool bar above both sections and a Tool bar below the one-third side. The Tool bar at the bottom of the one-third side has Recents, File, Photos, Offline and Settings. Under Settings, you have the option to turn Camera Upload on/off. For most students, automatically saving pictures in Dropbox will quickly use up the free Dropbox space!

Select the File button in the bottom Tool bar.

When on the Drobox home screen and VoiceOver is Off, you can touch the Actions Menu button (small circle to the right of the document/folder name). This opens a popup menu with the options: Invite People to Collaborate, Send Link, Copy, Move and Folder Settings. Folder Settings enables you to delete the entire folder.

You can also tap the More Actions button (elipsis symbol located in Tool bar on the left one-third of the screen). The Action button gives the options: Create a New File, Upload File, Create Folder, Select and Sort by Date. Under Select, you can then Delete, Copy or Move a folder/document.

TEACHER HINT: “ACTIVATE” MEANS WHEN THE VOICEOVER CURSOR IS ON THE ITEM, YOU WILL “ACTIVATE” BY DRAGGING YOU FINGER TO THE ITEM TO HEAR THE ITEM, THEN SPLIT TAP TO SELECT THE ITEM.

Activity 2.3a Create a Dropbox Folder using VoiceOver Gestures

We will complete the following activities using VoiceOver gestures. Often the most efficient way to find items on the screen is to learn the spatial layout and quickly drag your finger to the desired item. You can choose to use other methods (flick left or right; four finger tap at the top or bottom of the screen to move to top left or bottom right corners). **There are two gestures that will activate an item: double tap or split tap.** The activity directions assume you are dragging your finger across the screen to find the item, then you use the double tap or split tap command to activate the item. Remember, once VoiceOver says the desired item, you can double tap anywhere on the screen. Or, when you drag your finger to find the item, simply keep your index finger on the item and do a split tap (tap the screen with a second finger or thumb.)

The most efficient way to navigate around the Dropbox screen is to poke the left one-third or the right two-thirds of the screen to move the VoiceOver cursor near the desired location.

TEACHER HINT: STUDENTS WITH SEVERE VISUAL IMPAIRMENTS SHOULD INITIALLY EXPLORE THE SCREEN BY SYSTEMATICALLY DRAGGING ONE FINGER AROUND THE SCREEN. THIS APPROACH IS MUCH MORE EFFICIENT THAN RANDOMLY POKING THE SCREEN WITH ONE FINGER. THE ONE FINGER DRAG METHOD CAN QUICKLY BE FOLLOWED WITH A SPLIT TAP GESTURE WHEN A DESIRED ITEM IS FOUND.

TEACHER HINT: REMEMBER, YOU MUST HEAR VOICEOVER SAY THE ITEM BEFORE YOU CAN DOUBLE TAP OR SPLIT TAP.

From your iPad, create **your own** new Dropbox folder and name it with your initials then the word “training”. **Be sure that you are starting on the Files screen and not starting within a folder!**

1. Open Dropbox: (Drag finger to Dropbox then activate Drobox).
2. Start from the Dropbox home screen: (If necessary, activate the Back button until you are on the Dropbox home screen. “Files” will appear in the Tool bar at the top of the screen).
3. Open More Actions Menu: (Tap on the More Actions button – elipsis symbol in Tool Bar).
4. Create a new folder: (Activate Create Folder button).
5. Type in name of folder: (Type your initials then the word “training” and press Enter).
6. Select Create button: (Activate the Create button in the Tool bar).

Activity 2.3b Open Dropbox Document in Pages using VoiceOver Gestures

Select a Dropbox document and Open in Pages.

Prior to this training, the instructor sent an email with a Dropbox folder invitation. Each participant should have accepted the Dropbox folder. For the next activity, use the “The Woolly Bear” located in that shared Dropbox folder.

TEACHER HINT: TO SCROLL UP/DOWN THE PAGE: TOUCH THE SCREEN ON THE LEFT ONE-THIRD OF THE SCREEN TO BRING THE VOICEOVER CURSOR TO THE LIST OF FOLDERS. DRAG THREE FINGERS UP/DOWN TO SCROLL UP/DOWN THROUGH THE LIST OF FOLDERS. IF YOU HAVE NUMEROUS DROPBOX FOLDERS, YOU MAY NEED TO SCROLL IN ORDER TO ACCESS THE DESIRED SHARED FOLDER. THE FOLDERS ARE SET IN ALPHABETICAL ORDER; HOWEVER, YOU DO HAVE THE OPTION OF ORGANIZING BY MOST RECENT.

Dropbox should already be open.

1. Start from the Dropbox home screen: (Activate the Back button if necessary to move to the Dropbox home screen).
2. Select the shared keyboard training folder: (Activate the folder).
3. Select “The Woolly Bear”: (Activate “The Woolly Bear”).
4. Send the document to Pages: (Activate the Share button in Tool bar, fourth button from the right).
 - a. Activate Open In button: (Right flick to Open In button and activate).
 - b. Activate Open in Pages button: (Right flick to Pages and activate).
 - c. Activate the Done button if necessary: (Right flick to Done and activate to close the popup).
5. Open document: (Right flick multiple times stopping on The Woolly Bear” and activate).
6. If VoiceOver begins reading, pause VoiceOver: (Two finger single tap).

Activity 2.3c Open Dropbox Document in Pages using VoiceOver Gestures

*Repeat activity above using “Jupiter Inlet Lighthouse” document; try to complete the activity *without reading the directions again*. If you are comfortable with the iPad, then try this activity with the screen curtain On.

Go to Dropbox, select the “Jupiter Inlet Lighthouse” document and open this document in Pages.

Activity 2.3d Email using VoiceOver Gestures

Many apps allow information to be shared; the steps should be the same even in different apps. Follow the steps below to Share or email a document. For this activity, each participant will email the Pages document “The Woolly Bear” to herself/himself. This document should already be open in Pages.

1. Email document to yourself: (Activate Share button in the Tool bar, second button from the right).
 - a. Activate Send a Copy button.
 - b. Activate Mail button.
 - c. Activate Word.
 - d. Activate “To:” textfield.
 - e. Type in your email address.
 - f. Activate Send button located in top right corner of the popup.

TEACHER HINT: REMEMBER, YOU MUST ACTIVATE THE TEXTFIELD BEFORE YOU CAN TYPE IN A TEXTFIELD. IF THE BLINKING CURSOR IS NOT IN THE TEXTFIELD, THEN THE TEXTFIELD HAS NOT BEEN ACTIVATED.

Activity 2.3e Read and Reply to Email

The Mail app is laid out with the list of received emails on the left one-third of the screen and the open email on the right two-thirds of the screen. With VoiceOver On, tapping the desired side of the screen is the most efficient way to move the VoiceOver focus. Use three fingers up or down to scroll through the email list. Activating the desired email will place that email on the right two-thirds of the screen. To read the desired email, tap anywhere on the right side of the screen to move the VoiceOver focus to the email then use a two finger swipe up to read the email from the top.

To reply to the opened email, activate the Reply button in the Tool bar, second button from the right. Your choices may include Reply, Reply All, Forward, Save Images (if applicable) and Print. Activate Reply button, then begin typing your desired response. Activate Send button in the top right corner of the popup.

TEACHER HINT: TO INCREASE EFFICIENTLY, TEACH STUDENTS TO MOVE TO THE TOP LEFT CORNER OF THE SCREEN USING A FOUR FINGER TAP AT THE TOP OF THE SCREEN. OR, TEACH THE STUDENT TO USE HIS/HER LEFT HAND AND PLACE THAT HAND SO THAT TWO FINGERS ARE ON THE TOP EDGE OF THE IPAD AND TWO FINGERS ARE ON THE LEFT EDGE OF THE IPAD. THIS HELPS ORIENT THE STUDENT TO THE CORNER OF THE IPAD. THEN, USE THE LEFT THUMB TO DRAG TO THE DESIRED BUTTON. USE THE RIGHT HAND TO QUICKLY MOVE TO THE TOP RIGHT CORNER OF THE IPAD.

1. Activate “The Woolly Bear” email: (Drag one finger down the list of received emails, split tap on desired email or right flick through the list and double tap).
2. Read the opened email document: (Tap on right side of the screen then use two fingers flick up).
3. Pause reading: (Two finger, single tap).
4. Reply to email: (Drag finger to Reply button in the Tool bar then split tap).
5. Activate Reply button in popup.
6. Type “Today’s Homework.”
7. Send email: (Drag one finger to the Send button in the top right corner of the popup and activate the Send button).

2.4 Review: Google Drive and Google Docs using VoiceOver Gestures

Google Drive version 4.6; Google Docs version 1.2016.04203

In most trainings, we will use Pages and Dropbox. However, since some schools are now using Google Docs and Drive, the directions to these apps are included in this manual.

Google Drive

Google Drive is a cloud storage system that can be synched between devices. Google Drive can be accessed through any web browser or through the Google Drive app on the iPad or computer. You can invite others to collaborate or view documents located in Google Drive. You can create and edit documents directly in Google Drive and documents created in Google Docs can be automatically saved in Google Drive. Google Drive requires Internet to access the documents, as the documents physically reside in a cloud. With Dropbox, you cannot edit documents directly in Dropbox; Dropbox is only a storage system. Documents are not automatically stored in Dropbox; documents must go through the various steps (Share > Open in Another App > Dropbox).

The Home screen of Google Drive is basically the same as Google Docs – Google Docs will have “Docs” in the Tool bar to the right of the Main Menu button, while Google Drive will have “My Drive” in the Tool bar to the right of the Main Menu button. Google Drive is designed to store all your documents; Google Drive has the option of organizing these documents in Folders or as individual documents. To create a new folder in Google Drive, go to: Create New button (right side of the top Tool bar) > New Folder button > type name of the new folder. Google Docs is designed to temporarily house your working documents so that you can access these documents off-line. Google Docs does not have the option of folder organization.

Google Docs

Google Docs is a word processing app. Documents in Google Docs can physically reside on the iPad; therefore, Internet access is not required. Documents that are available off-line will have a visual image of a thumbtack beside the title of the document. VoiceOver will say the name of the document, the date it was last opened, and “files available on device or off-line use”. If the document does not physically reside on the iPad, there will not be a visual thumbtack beside the title of the document; VoiceOver will only say the name of the document and the date the document was last opened. This document can only be opened when there is an Internet connection.

Keeping Documents Offline

To make a document physically reside on the iPad or offline, go to: More Actions button (to the right of the desired document) > Download & keep in sync.

TEACHER HINT: STUDENTS SHOULD KEEP CURRENT SCHOOL ASSIGNMENTS “OFFLINE” WHICH MEANS THAT THESE DOCUMENTS PHYSICALLY RESIDE ON THE IPAD.

Saving Documents in Google Docs

When a document is created using Google Docs, any changes will be automatically saved. **When a document was originally created using Word and opened in Google Docs, activate the Back button in the top left corner of the Tool bar while you are editing in order to save your changes.**

For more information about Google Docs, activate the Main Menu button > Settings.

TEACHER HINT: WHEN INTRODUCING A NEW APP SUCH AS GOOGLE DOCS TO STUDENTS, ENCOURAGE THE STUDENT TO INITIALLY EXPLORE THE TOOL BAR. DRAGGING THE FINGER ACROSS THE TOOL BAR WILL PROVIDE THE STUDENT WITH CRITICAL SPATIAL LAYOUT INFORMATION. MOST APPS HAVE A HELP SCREEN LOCATED WITHIN THE SETTINGS PAGE OF THE APP. AFTER EXPLORING THE TOOL BAR, ENCOURAGE THE STUDENT TO EXPLORE THE SCREEN. IN GOOGLE DOCS, THE CREATE NEW BUTTON IS LOCATED AT THE BOTTOM RIGHT CORNER, EVEN THOUGH RIGHT FLICKING ACROSS THE TOOL BAR WILL JUMP TO THE CREATE NEW DOCUMENT THEN TO THE SEARCH FIELD THEN TO THE AVAILABLE LIST OF DOCUMENTS.

Google Docs: More Actions

From the Google Docs home screen, activate More Actions button (three dots to the far right of the desired document name). The popup menu options are:

Rename, Share & Export, Download and Keep in Sync, Details, Remove

TEACHER HINT: “ACTIVATE” MEANS WHEN THE VOICEOVER CURSOR IS ON THE ITEM, YOU WILL “ACTIVATE” THE ITEM BY FIRST TOUCHING THE ITEM TO HEAR THE ITEM, THEN DOUBLE TAP; OR YOU CAN “ACTIVATE” BY DRAGGING YOUR FINGER TO THE ITEM TO HEAR THE ITEM, THEN SPLIT TAP TO SELECT THE ITEM. USE THE UP + DOWN ARROWS TO ACTIVATE WITH THE BLUETOOTH KEYBOARD.

Activity 2.4a Create a Google Drive Folder using VoiceOver Gestures

We will complete these activities using VoiceOver gestures. Often the most efficient way to find items on the screen is to learn the spatial layout and quickly drag your finger to the desired item. You can choose to use other methods (flick left or right; four finger tap at the top or bottom of the screen to move to top left or bottom right corners). There are two gestures that will activate an item: double tap or split tap. The activity directions assume you are dragging your finger across the screen to find the item, then you use the double tap or split tap command to activate the item. Remember, once VoiceOver says the desired item, you can double tap anywhere on the screen. Or, when you drag your finger to find the item, simply keep your index finger on the item and do a split tap (tap the screen with a second finger or thumb).

TEACHER HINT: STUDENTS WITH SEVERE VISUAL IMPAIRMENTS SHOULD INITIALLY EXPLORE THE SCREEN BY SYSTEMATICALLY DRAGGING ONE FINGER AROUND THE SCREEN. THIS APPROACH IS MUCH MORE EFFICIENT THAN RANDOMLY POKING THE SCREEN WITH ONE FINGER. THE ONE-FINGER DRAG METHOD CAN QUICKLY BE FOLLOWED WITH A SPLIT TAP GESTURE WHEN A DESIRED ITEM IS FOUND.

TEACHER HINT: REMEMBER, YOU MUST HEAR VOICEOVER SAY THE ITEM BEFORE YOU CAN DOUBLE TAP OR SPLIT TAP. FOR MOST USERS, THE MOST EFFICIENT METHOD IS TO DRAG A FINGER TO FIND THE ITEM, LISTEN TO VOICEOVER SAY THE ITEM, THEN PERFORM A SPLIT TAP.

From your iPad, create your own new Google Drive folder and name it with your initials then the word “training”.

1. Open Google Drive: (Drag finger to Google Drive then activate).
2. Start from the Google Drive home screen: (If necessary, activate the Back button until you are on the Dropbox home screen. “My Drive” will appear in the Tool bar at the top of the screen).
3. Open Add Item button: (Activate the Add Item button – plus sign in the bottom right corner of the Tool Bar).
4. Select New Folder button: (Right swipes stopping on New Folder button. Activate).
5. Type in name of folder: (Type your initials then the word “training” and hit Enter).
6. Select Create button: (Activate the Create button in the Tool bar).

TEACHER HINT: STUDENTS SHOULD KEEP CURRENT SCHOOL ASSIGNMENTS “OFFLINE” WHICH MEANS THAT THESE DOCUMENTS PHYSICALLY RESIDE ON THE IPAD.

Activity 2.4b Open Drive Document in Google Docs using VoiceOver Gestures

Prior to this training, the instructor sent shared a Google Drive folder named “iPad Training”. Each participant should have accepted the this folder. For the next activity, use the *The Wooly Bear* located in that shared Google Drive folder.

1. Start from the Google Drive home screen: (Activate the Back button if necessary to move to the Google Drive home screen if a document is currently open).
2. Select the shared iPad Training folder: (Drag finger down the screen or right flicks stopping on iPad Training and activate).
3. Select *The Wooly Bear* document: (Right flicks stopping on *The Wooly Bear* and activate). The document will automatically open in Google Docs.

TEACHER HINT: TO SCROLL UP/DOWN THE PAGE WITH VOICEOVER ON: TOUCH THE SCREEN ON THE LEFT ONE-THIRD OF THE SCREEN TO BRING THE VOICEOVER CURSOR TO THE LIST OF FOLDERS; THEN DRAG THREE FINGERS UP/DOWN TO SCROLL UP/DOWN THROUGH THE LIST OF FOLDERS. IF YOU HAVE NUMEROUS DROPBOX FOLDERS, YOU MAY NEED TO SCROLL IN ORDER TO ACCESS THE DESIRED SHARED FOLDER. THE FOLDERS WILL BE LISTED IN ALPHABETICAL ORDER.

Activity 2.4c Open Google Docs document using VoiceOver Gestures

Google Docs should already be open from the last activity. Remember, the home screens for Google Drive and Google Docs look similar. The Tool bar will display either My Drive or Docs.

1. Start from the Google Docs home screen: (Activate the Back button if necessary to move to the Google Docs home screen).
2. Select *The Wooly Bear*: (Right flicks stopping on *The Wooly Bear*. Activate).
3. If necessary, pause VoiceOver: (Two finger single tap).

Activity 2.4d Email Google Document using VoiceOver Gestures

Many apps allow information to be shared; the steps are the same for a document in Google Drive or Google Docs. For this activity, each participant will email the document *The Woolly Bear* to herself/himself. In Google Docs, you can email the document directly from both the Google Docs Home screen or from the opened document. When on the Home screen, the More Actions button is located to the right of the document title. When the document is open, the More Actions button* is located in the top right corner of the Tool Bar. *Currently this More Actions button is called Overflow button.

This document should already be open in Google Docs.

1. Activate the More Actions button.
2. Select Share & Export: (Right flick stopping on Share and Export. Activate).
3. Select Send a copy: (Right flick to Send a Copy. Activate).
 - If necessary, select Word (.docx): (Right flick stopping on Word. Activate)
 - Select OK: (Right flick to OK button. Activate)
4. Open in Mail app: (Right flick to Mail. Activate).
5. Activate "To": textfield: (Right flick to To. Activate).
6. Type in your email address.
7. Activate Send button located in top right corner of the popup.

TEACHER HINT: REMEMBER, YOU MUST ACTIVATE THE TEXTFIELD BEFORE YOU CAN TYPE IN A TEXTFIELD. IF THE BLINKING CURSOR IS NOT IN THE TEXTFIELD, THEN THE TEXTFIELD HAS NOT BEEN ACTIVATED.

2.5 Review: Mail using VoiceOver Gestures

Navigating Mail App

The Mail app is laid out with the list of received emails on the left one-third of the screen and the open email on the right two-thirds of the screen. With VoiceOver On, tapping the desired side of the screen is the most efficient way to move the VoiceOver focus. **You can also use a four finger single tap at the top of the screen to move the VoiceOver focus to the first item on the page (Mailboxes back button in the top left corner) or a four finger single tap at the bottom of the screen to move the VoiceOver focus to the last item on the page (the very end of the opened email).** When the VoiceOver focus is on the email list, use three fingers up or down to scroll through the email list. Activating the desired email will open that email on the right two-thirds of the screen. To read the desired email, tap anywhere on the right side of the screen to move the VoiceOver focus to the open email (or a four finger single tap at the bottom of the page) then use a two finger swipe up to read the email from the top.

To reply to the opened email, activate the Reply button in the Tool bar, second button from the right. Your choices are Reply, Reply All, Forward, Save Images (if applicable) and Print. Activate Reply button, then begin typing your desired response. Activate Send button in the top right corner of the popup.

TEACHER HINT: TO EFFICIENTLY DRAG FINGER TO THE TOP LEFT OF THE SCREEN, TEACH THE BVI STUDENT TO USE THE LEFT HAND AND PLACE TWO FINGERS ON THE TOP EDGE OF THE IPAD AND TWO FIGNERS ON LEFT SIDE EDGE OF THE IPAD; THEN, USE THE LEFT THUMB TO DRAG TO THE DESIRED BUTTON. WHEN LOCATING A BUTTON IN THE TOP RIGHT CORNER OF THE SCREEN, USE THE RIGHT HAND AND PLACE TWO FINGERS ON THE TOP EDGE OF THE IPAD AND TWO FINGERS ON THE RIGHT SIDE EDGE OF THE IPAD; THEN, USE THE RIGHT THUMB TO DRAG TO THE DESIRED BUTTON.

To delete an email, move the VoiceOver focus to the desired email on the left one third of the screen. Flick down stopping on Delete. Activate delete.

The options are: Mark Unread, Flag, More, Delete, Activate Item – default action)

Activity 2.5 Read and Reply to Email

1. Activate *Jupiter Inlet Lighthouse* email: (drag finger down the list of received emails split tap on desired email).
2. Read opened email document: (tap on right side of the screen then use two finger flick up)
3. Pause reading: (two finger, single tap).
4. Reply to email: (Drag finger to Reply button in the Tool bar then split tap).
5. Activate Reply button in popup.
6. Type "Today's Homework."
7. Send email: (drag finger to the Send button in the top right corner of the popup. Activate).

2.6 Review: iBooks Manipulating Text with VoiceOver Gestures

iBooks offers interactive, “multi-touch” books and textbooks that enable students to highlight and take notes within the book itself and to copy and paste the desired information into a Pages document. These Highlights and Notes are automatically added to the book’s Notes and are automatically organized by chapters. Some multi-touch textbooks have built-in glossary Study Cards (digital flash cards) and have the option for students to create their own study cards.

iBooks Study Cards

When in a multi-touch textbook, such as *Reach for the Stars: Touch, Look, Listen, Learn*, all of the glossary terms are already available in a digital “flashcard” format called a Study Cards. A Study Card is also automatically generated each time a user creates a note. The highlighted word, phrase or sentence is placed on the front side of the card and the typed note is placed on the flip side of the Study Card.

To view the Study Cards with VoiceOver On, activate the Notes button which is the third button from the left in the Tool Bar. When on the Notes screen, activate the Study Card button (located in the Tool bar on the right two thirds of the screen; the Study Card button is on the left corner of that section of the Tool bar). Double tap to flip the card over. Use a three finger swipe right or left to move to the next/previous Study Card. When finished, activate the Done button at the top right corner of the screen. Notes and Study Cards are organized by chapter. If the Study Card does not flip over, that indicates that the word/phrase was only highlighted and was not associated with a Margin Note.

iBooks has a variety of accessibility options; however, some publishers do not utilize all of the available options. Keep in mind that not all books within iBooks will react in the same manner, since the individual publishers determine how the book will interact. In this manual we will discuss how the book should react, then give options if the book has not been created with all the accessibility options. As more publishers are aware of the options, more books will have these options.

Manipulate text (select, highlight, create a note, copy) using VoiceOver Gestures – iBooks

This section is a review with VoiceOver gestures. Chapter 3 will discuss how to create highlights and other editing information using the Bluetooth keyboard commands. It is more efficient to use the Bluetooth keyboard commands vs. VoiceOver gestures when editing.

To highlight a word, phrase, sentence or paragraph, move the VoiceOver cursor to the desired word then, double tap or split tap on the desired word. The first word will be selected. Pinch out to expand the selected words. If you set the rotor to Words and pinch out, the text will be selected by Words not by characters or Lines. (Lines is not an option in some books.) Once the text is selected, set the rotor to Edit; use the 1 finger swipe down to move through the following menu:

Copy, Highlight, Note, Search, Share

Activate the desired menu.

Reach for the Stars: Touch, Look, Listen, Learn is a good example of an iBook with these accessibility features. Remember, not all iBook publishers incorporate all of the available accessibility features.

Create a Note

Select the word, phrase, sentence or paragraph (see above) then activate Note. A popup appears and VoiceOver states, “note. Text field is editing.” Type your desired Note and press Return. Exit the popup using a 2 finger scrub.

Listen to the Note

After a note has been created, VoiceOver will read the text and will say, “yellow highlight” after the word that is highlighted. VoiceOver will say the name of the color you choose to use for the highlight. To have VoiceOver read the Note, set the Rotor to Highlight then use a one finger swipe down. The VoiceOver focus will move to the first highlight on the page and will announce the highlighted words and then the note. Double tap to edit the Note or delete the highlight and note. Some iBooks will also have the Rotor option Notes.

Remember, some books do not utilize all of the accessibility features. If double tapping selects the word and a popup bar appears, you can only select one word - the book does not utilize all the accessibility features. (Currently, only one word can be highlighted in the book, *A Very Wimpy Kid*.)

Use the two finger scrub gesture (move two fingers back and forth quickly) to dismiss a popup.

Activity 2.6 iBooks Textbook: Create a Study Card using VoiceOver Gestures

We will use the free iBooks textbook *Reach for the Stars: Touch, Look, Listen, Learn* - Chapter 2 section 4, page 20. Tap on the Table of Contents button in the Tool bar to quickly navigate to the desired page. The Tool bar at the top of the page is often hidden; to display the Tool bar, tap anywhere on the page (except on the Status bar or on a picture). The Tool bar will then be displayed briefly. If VoiceOver is On when the book is opened, the Tool bar will remain displayed on the page. The Table of Contents is the second button from the left in the Tool bar. Tap on the Table of Contents button, then tap on the Table of Contents in the popup. Scroll through the chapters (3 fingers swipe left) stopping on Chapter 2 . Then, touch section 2.4 and activate. Or, simply use the Search button in the Tool bar second button from the right. Activate the Search button and type in “Edwin Hubble” and select the first option.

1. Move VoiceOver cursor to the name “Edwin Hubble” located in the second paragraph:
 - a. Drag finger finger to the second paragraph
 - b. Change the Rotor to Words
 - c. Move word by word: (1 finger swipe down until VoiceOver reads the word “Edwin”)
 - d. Activate the word “Edwin”
 - e. Pinch out to include the word “Hubble”
2. Create a note:
 - a. Change the Rotor to Edit
 - b. Select Note: (One finger swipe down stopping on Note, then activate)
 - c. Type “Hubble provided evidence about galaxies beyond the Milky Way.”
 - d. Exit Note popup: (two finger scrub)
3. Read paragraph and pause after the highlight is read:
 - a. Two finger swipe down
 - b. Pause after “Edwin Hubble, yellow highlight”: (Two finger single tap)
4. Use the Rotor to locate the highlighted text:
 - a. Two finger twist, stopping on highlight
 - b. Move to highlight: (One finger swipe down)
 - c. Edit Note: (Double Tap; when popup appears, double tap again)
 - d. Exit Note: (Two finger scrub)
5. View the Study Card:
 - a. Activate the Notes button in the Tool bar, located third button from the left.
 - b. Tap the right two-thirds of the screen to view the Notes.
 - c. Tap the left one-thirds to select another chapter.

- d. Activate the Study Cards button in the Tool bar.
- e. Tap the middle of the screen to listen to the first Study Card.
- f. Double tap to flip the card over.
- g. Three finger swipe left or right to move to the next Study Card.*

*If the card does not flip, that indicates that the card is only highlighted text and is not associated with a Margin Note.

2.7 Review: Safari using VoiceOver Gestures

When an article is open in Safari, you often have the option of selecting the Reader. The Reader button is located in the Tool bar to the left of the URL address. The Reader button removes the excess information found on most websites. When the Reader is activated, only the main text of the article – without the complimentary information typically displayed on the left and right - is displayed on the screen.

For easier typing when using the on-screen keyboard, set the Rotor to Typing Mode; use the down arrow stopping on Touch Typing. Touch Typing allows you to drag your finger across the on-screen keyboard. When you hear the desired character, lift your finger off the screen and that character is “typed”. Standard Typing is when you drag your finger to the desired letter, you listen as VoiceOver says the letter, then activate using a double tap.

Some students may be more efficient using Siri or to dictate their desired search topic. Currently, dictation is only available when the on-screen keyboard is visible. When using a Bluetooth keyboard, press the hide/show on-screen keyboard key. The dictation button is to the left of the space bar on the virtual keyboard.

Activity 2.7a Safari: Reader using VoiceOver Gestures

For the next several activities, we will use the website Paths to Technology (www.perkinselearning.org/technology)

Use VoiceOver gestures for this activity.

1. Activate Safari.
2. Navigate to the URL: (Right swipe multiple times stopping on Address textfield (if the text field is blank) or name of previous URL and “Edits the URL”).
3. Clear previous URL if necessary:
 - If a previous website is in the URL, VoiceOver will say the URL and “Edits the URL”
 - Activate URL
 - VoiceOver will say the current URL address and “selected” (URL address will be highlighted)
4. Type “Paths to Technology” and press Go/Enter key:
 - Drag finger down the left side of the screen to locate Paths to Technology Perkins eLearning.
 - Activate link
5. Activate Skip to Content link
 - The VoiceOver focus should be on Skip to Content. Hint: The first time on a new website it is best to explore the website by moving item by item or by headings to understand the basic layout and content of the website instead of using the Skip to Content option.)
6. Select Tech Ideas
 - Set rotor to Headings
 - Navigate to Teach Ideas: (1 finger swipe down, stopping on Teach Idea Link).
 - Activate Tech Ideas
7. Activate Skip to Content Link
8. Select a post
 - Rotor is already set to Headings, navigate by headings to a post: (1 finger swipe down, stopping on a desired post).
 - Activate a post. (The post will open and VoiceOver will say “reader available, Skip to Content link).
9. Select Reader:
 - Drag one finger to the URL at the top center of the page,
 - Left flick once to Reader button

- Activate the Reader button

***Do not close this article as we will use it in the next activity.**

TEACHER HINT: THE READER OPTION DOES NOT ALWAYS INCLUDE THE PICTURES AND VIDEOS THAT ARE EMBEDDED WITHIN THE ARTICLE/POST.

Activity 2.7b Safari: Reading List with VoiceOver Gestures

The Reading List allows the user to save an article for easy access at a later time. When an article is saved in the Reading List, the article can be accessed at any time, even when the iPad is off-line.

TEACHER HINT: SAVING ARTICLES TO THE READING LIST IS PARTICULARLY USEFUL FOR STUDENTS WHO DO NOT HAVE ACCESS TO THE INTERNET AT HOME. SOME STUDENTS WILL ACCESS INTERNET ARTICLES FROM THE READING LIST WHILE TRAVELING ON THE BUS OR IN A CAR.

Bookmarks is a way to save the URL link to a website. Bookmarking favorite websites that a student may frequently enables the student to quickly access these websites from Bookmarks.

This activity uses the Teaching Coding and Programming Logic to Young Students post (in the Reader mode); however, you can chose any Tech Ideas post. If you closed the article after the previous activity, follow the directions above (Safari: Reader activity) to open the article again.

1. Activate Share button located to the left of the Reader button. The Share button looks like a rectangle with an upward arrow).
2. Select Add to Reading List: (Right flick multiple times, stopping on Add to Reading List; activate Add to Reading List).
3. Dismiss the post: (Two finger scrub anywhere on the screen).
4. Add a URL to Bookmarks:
 - Select the Share button: (Drag finger to Share button – third button from the right in the Tool bar – and activate the Share button).
 - Select Add Bookmarks: (Right flick multiple times stopping on Add Bookmark button; activate Add Bookmark)
5. Open the Reading List:
 - Go to Bookmarks located at the top left side of the Tool bar and activate Bookmarks (the screen becomes one-third list of bookmarks and website on the right two-thirds)
 - The three options are Bookmarks, Reading List, and Social Links. Activate Reading List
 - To see other articles in the Reading List, drag your finger down the list. Right swipes will also move down the list of articles, once the VoiceOver focus is on the list
6. Close Bookmarks: (Go to Bookmark in the top left side of the Tool bar and activate).

***Do not close this article as we will use it in the next activity.**

Activity 2.7c Safari: Copy and Paste into Pages with VoiceOver Gestures

It is easy to copy important information from an internet article and paste that information into a Google document. Open Pages and then open Safari, leaving Safari open (these will now be the last two opened apps). Use the four finger swipe left or right to move between the last two opened apps – which should now be Safari and Pages.

Next we will review how to copy and paste using VoiceOver gestures. It is easier to copy and paste using Bluetooth keyboard commands.

iOS 9 has added the Rotor option, Text Selection. This is a foolproof way to select the desired text. Simply move to the beginning of the desired text. Set the Rotor to Text Selection. Swipe down to choose from the following options: Character Selection, Word Selection, Line Selection, Page Selection, Select All. Stop on the desired unit of text. Then, swipe left will select by that unit of text. Swipe left will deselect by that unit of text.

Open Pages, create a new document and label the document the name of your chosen post.

1. Move to Pages: (Four finger swipe left (or right) to Pages).
2. Create a new document:
 - Move to Create Document: (Multiple right swipes stopping on Create Document. Activate. A popup appears)
 - Rename document: Move to Blank document in the center of the Tool bar. Activate Blank button
 - Type the name of the post and hit Return (Example: “Teachng Coding”)

Move between two open apps (Safari and Pages) to copy and paste information.

3. Move back to your post in Safari: (4 finger swipe right).
4. Choose and copy a sentence from your post:
 - Use the Rotor set to Words (or lines) to move to the first desired word.
 - Enter Text Selection Mode: (One finger double tap and hold)
 - Pinch out to select the desired words. When the Rotor is set to Words, pinching out will select word by word. Pinch in (fingers move together) will deselect word by word.

Or (new feature in iOS 9!)

- Set the Rotor to Text Selection. Flick down to Word Selection.

- Right Swipes will now select text word by word. Flick right multiple times until the desired words are selected.
 - Change the rotor to Edit.
 - Use 1 finger swipe down stopping on Copy
 - Activate Copy; VoiceOver will read the selected text then say “copy”
5. Move back to Pages: (4 finger swipe left).
 6. Paste sentence:
 - Activate the text field
 - The Rotor should still be on Edit
 - Use 1 finger swipe down stopping on Paste
 - Activate Paste; VoiceOver will read the selected text then say “Paste”
 7. Go back to the Pages Home screen: (activate the Documents button in the top left corner).

TEACHER HINT: IT HAS BEEN CHALLENGING TO SELECT THE DESIRED WORD. YOU CAN SET THE ROTOR TO WORDS THEN MOVE WORD BY WORD TO THE DESIRED WORD. THEN, WHEN YOU SELECT (PINCH OUT), THE DESIRED WORD IS SELECTED.

2.8 Low Vision Students using Bluetooth Keyboard Commands

In this section, we will learn the advantages of using the iPad paired with a Bluetooth keyboard and VoiceOver for students with low vision. Generally, students with severe low vision struggle to complete reading assignments, often attempting to read print even though this causes headaches, eye fatigue and in some cases, nausea. Most of these students struggle to keep up with the large amounts of reading that is required in high school and college and they rarely read for pleasure.

The next activity will provide a glimpse of the challenges that students with low vision frequently face when using magnification to read and to complete a homework assignment. This is a great activity to share with classroom teachers and parents to help them understand the advantages and challenges of magnification.

Activity 2.7 Zoom

At the beginning of the training, we set Triple-Click Home to Zoom, Invert Colors and Voiceover. (See Chapter 1: Settings, Triple-Click Home for directions.) During this activity we will have Zoom On and VoiceOver Off. Turn the Bluetooth Keyboard Off and use the on-screen keyboard. Start from the Home screen.

1. Turn Zoom On: (Triple-Click Home and tap on Zoom; three finger double tap and hold, then drag up until there is only one app icon per page).
2. Open Google Docs: (Three finger drag to scroll around the Home screen to find Google Docs, Activate Google Docs).
3. Open *Jupiter Inlet Lighthouse*: (Tap on *Jupiter Inlet Lighthouse*).
4. Read the first two sentences: (3 finger drag to scroll across the page).
5. Type your name at the top of the page: (3 finger scroll to the top of the page and type your first name beside "Name:" using the on-screen keyboard. *

* Hint: Tap beside "Name:" to activate the on-screen keyboard; the on-screen keyboard is located at the bottom of the screen. If the iPad is connected to a Bluetooth keyboard, tap the Hide/Show On-Screen key normally located in the top row of the Bluetooth keyboard.

The Zoom activity above demonstrates how challenging it is to read and write using a high level of magnification for those students who have severe low vision. Even though these students can physically see and read zoomed text, scrolling across the page in order to read the full line of text and trying to find the beginning of the next line is frustrating, not efficient and often causes the student to feel nauseas. Some students have to hunch over the text – their faces literally within inches – in order to visually access the text. The iPad allows new options for students with low vision – best practice is no longer restricted to the limitations of magnification and large text!

Low vision students are successfully and efficiently using a combination of Zoom, large text and Voiceover to access materials, complete assignments and to take tests. VoiceOver paired with the Bluetooth keyboard allows the student to competently navigate the iPad using their ears supplemented by vision, without frustration and eye fatigue. The Bluetooth keyboard commands enable the student to easily navigate around the iPad, as well as to read, write, edit, and search the internet.

When Screen Readers are Strongly Recommended

- If scrolling is required to read the text/passage, the student should be using a screen reader. Or . . .
- If the student’s face is within 12 inches of the screen, the student should be using a screen reader. Or . . .
- If the student’s reading speed is slower than the reading speed of his/her’s peers.

Using the Bluetooth Keyboard for Students who are Visually Impaired or Blind

Navigating the iPad with VoiceOver and the Bluetooth keyboard is significantly more efficient for students with low vision versus trying to use with iPad with residual vision only. Students who are blind also significantly benefit from using the Bluetooth keyboard and/or the refreshable braille display. Braille students should first learn the mechanics of reading and writing through paper braille and refreshable braille. Research shows that before third grade, students are “learning to read”; after third grade, students are “reading to learn”. As these braille students become proficient braille readers and as they learn keyboarding skills, most braille students transition from using the refreshable braille display to using the Bluetooth keyboard. Currently, this transition frequently occurs during middle school years; now that technology is being embraced by the mainstream in elementary schools, this transition may happen towards the end of elementary school. Braille students find that it is easier to edit using the Bluetooth keyboard versus using the refreshable braille display.

Even though the iPad is relatively new technology, it is quickly being integrated into academic classrooms. The iPad, with its combination of refreshable braille, auditory output and printed text, is being used as the reading and writing tool in kindergarten classrooms by students with visual impairments. The iPad, Bluetooth keyboard, and refreshable braille devices are tools in a student's toolbox; using a computer with a screen reader is another tool in the toolbox; paper braille is another tool in the toolbox. Each tool has strengths and weaknesses. The iPad is easy to use, even for very young students and is often the preferred tool for students/adults with visual impairments to do internet searches. Computers continue to be the main tool used in the workplace; having proficient keyboarding skills makes the transition to computers that much easier.

Please keep in mind that each student has unique needs and skills, which should be taken into consideration. As a student matures, he/she should have options and the opportunity to choose which option works best in various situations. (Example: A panel of successful blind college students stated that they use a variety of technology throughout the day: dictation on the phone for text messages, the iPad and Bluetooth keyboard for internet searches and a computer with a screen reader or a braille note taker for writing notes in class.)