iOS 6

2013

iPad: Accessibility

VoiceOver
Zoom
Braille Displays
& other accessibility features

Bluetooth

Robert Miller, CTVI & AT Instructor
Miranda Anderson, AT Lab Asst
Oklahoma School for the Blind
March 1, 2013

iPad and Accessibility

TABLE OF CONTENTS

TABLE OF CONTENTS (Continued)

Overview

About this booklet:

1. This booklet is designed to help you access or teach others how to access the iPad if you are blind or visually impaired. It is broken into three components to help you quickly access the instructional information. The components are: table of contents, seven major parts with tasks to complete to learn the gestures and commands and an appendix for quick reference to the gestures and commands.

2. Each of the six parts of this booklet will walk you through a series of tasks as you learn how to navigate web pages in Safari (web browser), read an eBook in iBooks and type using the Notes app with the on-screen keyboard or one of three refreshable braille displays.

3. This booklet is divided into 7 parts and 2 appendixes:
   Part 1: iPad & Mainstream Access
   Part 2: iPad & VoiceOver Access
   Part 3: iPad & Zoom Access
   Part 4: iPad & Refreshabraille-18 braille display
   Part 5: iPad & Focus 40 Blue Classic braille display
   Part 6: iPad & Braille Note Apex as a braille display
   Part 7: iPad & Other Accessibility Features (Large Text, Inverted Colors, and Guided Access)
   Appendix A: Quick reference of VoiceOver gestures and braille display commands
   Appendix B: Quick reference table of VoiceOver gestures and braille display commands

What is the iPad?

1. It's a tablet computer designed, developed and marketed by Apple.
2. It serves primarily as a platform for audio-visual media including books, periodicals, movies, music, games, presentations and web content.
3. It's available in black or white.
4. The iPad 2 and iPad 3 have a lithium-ion rechargeable battery that lasts up to 10 hours.
5. This booklet was developed using iOS 6.1.

How do you navigate the iPad?

1. Whether you are blind, have low vision, or are fully sighted, you will use what Apple calls gestures to navigate the iPad (iPhone & iPod Touch).
2. You use gestures to get the iPad to do something.

How do the blind and visually impaired access the iPad?

1. There are several accessibility features that give access to those with visual impairments, such as VoiceOver, Zoom, Large Text, Invert Colors and VoiceOver with a braille display. With iOS 6 you can now enable VoiceOver and Zoom at the same time. Note: running VoiceOver and Zoom at the same time will change some gestures. These gestures will be noted when necessary.

   a. *VoiceOver:* If you are blind or have very limited vision you will want to use VoiceOver, which is the screen reader for the iPad, iPhone and the iPod Touch.

   b. *Zoom:* If you have low vision you may want to use Zoom, which is the screen magnifier that magnifies the entire screen.

   c. *VoiceOver with a Bluetooth Braille Display:* If you are a braille user, you can connect a refreshable braille display via a Bluetooth connection. Now you have VoiceOver and the braille display to navigate the iPad, iPhone or iPod Touch.

Part 1: iPad and the Mainstream Approach

Section 1.1: Physical Controls

Note: All instructions, unless otherwise directed, will assume that the iPad is positioned in the landscape orientation position with the **(Home)** button to the right.

1. **To turn on the iPad from shutdown:**
   a. Press & hold the **(Sleep/Wake)** button for 3-5 seconds.
   b. Slide right the **(Slide to Unlock)** button.

2. **To shut down the iPad:**
   a. Wake up iPad if asleep; press & release the **(Home)** button.
   b. Press & hold the **(Sleep/Wake)** button for 3-5 seconds.
   c. Press & release the **(Slide to Power off)** button.

3. **Lock the iPad by putting it to sleep:**
   a. Turn on the iPad, then press & release the **(Sleep/Wake)** button.

4. **Unlock iPad from sleep:**
   a. After a few seconds the iPad goes to sleep. To wake it up press and release the **(Home)** or **(Sleep/Wake)** button.

5. **Locate the following physical controls:**
   a. *Side Switch* located on back edge, left corner, the edge that is away from your body.
   b. *Volume control* located right of the **(Side Switch)** on back edge.
   c. *Head Phone Jack* located on left edge, corner closest to your body.
   d. *FaceTime Camera* located on left border of screen, opposite the **(Home)** button.
   e. *iSight Camera* located on the underneath side, next to the **(Sleep/Wake)** button.
   f. *Dock Connector* located on right edge, underneath the **(Home)** button.

6. **Use the (Side Switch) to lock screen "rotation" or "mute" the sound**:
   a. During training or used by students it is beneficial to have the **(Side Switch)** set to *"Lock Rotation"* in Settings. This will provide a quick way to lock the screen rotation to keep the screen from unintentional rotation.
   b. You can change the setting of the **(Side Switch)** to between *"Lock Rotation"* and *"Mute"* by going to (Settings > General > Use Side Switch To, then check one of the two items).
   c. **Locking and unlocking the screen rotation:**
      i. Slide the **(Side Switch)** to the left to unlock the screen rotation.
      ii. Raise the iPad in the vertical position with its edge on table surface.
      iii. Rotate the iPad so the edge with the **(Home)** button is touching the table surface. You will notice that the screen rotated right-side up.
      iv. Again, unlock and rotate iPad back in the landscape orientation position with the **(Home)** button to the right and use the **(Side Switch)** to lock the screen rotation.

Figure labels: Sleep/Wake Button, Side Switch (Mute/Rotation Lock), Volume, Home Button, Edge: Dock Connector, Head Phone Jack, FaceTime Camera
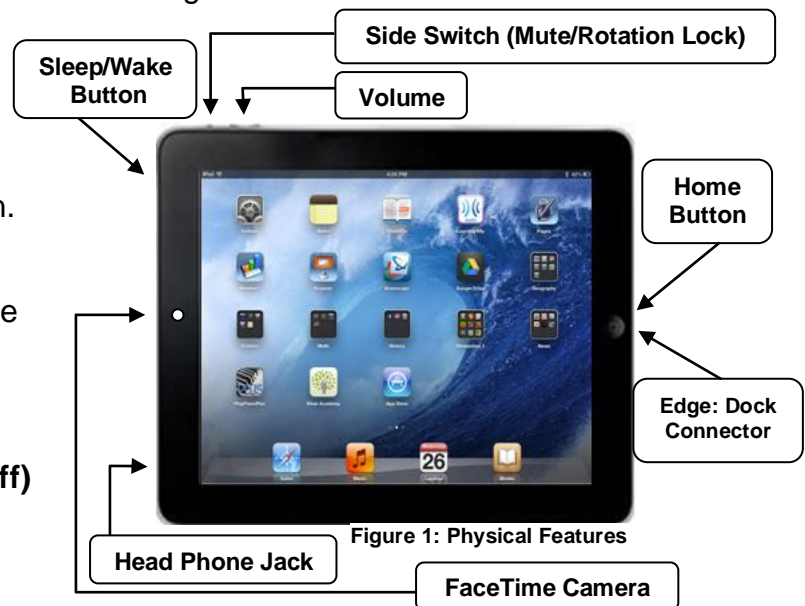
Figure 1: Physical Features

Section 1.2: Navigating the Home Screen – Rearranging Apps – Folders

Task 1: Moving between Search & Home Screen Pages

1. Move to the *Search Screen*; **(1-Finger_SWIPE RIGHT)**.

2. Move back to page 1 and on to page 2 of the **"Home"** screen **(1-Finger_SWIPE LEFT)**.

    a. Note: the number of Home screen pages will depend on number of icons you have for apps and folders.

3. Move back to page 1 of the **"Home"** screen; **(1-Finger_SWIPE RIGHT)**.

Task 2: Rearranging the App icons on the Home Screen

1. *Rearranging the App & Folder Icons* on the "Home" screen **(1-Finger_TOUCH & DRAG)**:

    a. Go to the *"Home"* Screen; press **(Home)** button.

    b. Place the "Home" Screen Apps into *"Jiggle"* mode:
        i. Pick an app icon from the first row and **(1-Finger_TOUCH & HOLD)** the app, don't lift your finger up.

    c. With the finger still touching the screen, drag the app down to the second row of icons and lift your finger.

    d. While the icons are in the "Jiggle" mode, move another app to another location, using the **(1-Finger_TOUCH & DRAG)** gesture.

    e. Now, disable *"Jiggle"* mode by pressing the **(Home)** button once.

Task 3: Creating Folders

1. *Creating folders* on the "Home" screen **(1-Finger_TOUCH & DRAG)**:

    a. Go to the **"Home"** Screen; press **(Home)** button.

    b. Place the Home Screen icons into *"Jiggle"* mode:

        i. Choose an app icon and **(1-Finger_TOUCH & HOLD)** the app.

    c. Now pick two apps that you want together in the same folder and drag one of the apps onto the other app and lift finger **(1-Finger_TOUCH & DRAG)**.

    d. The iPad will automatically create a folder and give a folder name based on the type of apps. You can keep the folder name or rename it. To rename the folder, do the following:

        i. Select the edit bar with the folder name to bring up the on-screen keyboard; press **(1-Finger_TOUCH)**.
        ii. Clear the existing folder name by touching the *X* at the end of the edit bar and type your new folder name.
        iii. Then press the *"Done"* key on the keyboard.

2. Close the folder and take the iPad out of *"Jiggle"* mode; press twice the **(Home)** button.

Section 1.3: Surfing the Internet with Safari

Note: During this section you will learn how to use several gestures to open Safari (the web browser), go to a website, navigate web pages, and zoom in & out.

Task 1: Launch Safari

1. **Selecting an Item (1-Finger_TOUCH):**

    a. On the **Home Screen**, find the **"Safari"** app and launch it **(1-Finger_TOUCH)**.

Task 2: Launch the website, "www.animalfactguide.com" & web page, "Animal Facts"

1. Launch **"www.animalfactguide.com"**: (**Note:** typing www is not necessary)

    a. Move to **"Address Bar"** **(1-Finger_TOUCH)**.

    b. Select the **"Clear Text" button** **(1-Finger_TOUCH)**.
       i. Note: This step may not be necessary unless you have already typed text and want to clear it.

    c. Touch **keys** to type "**animalfactguide.com**" **(1-Finger_TOUCH)**.

    d. Select the **"Go"** button **(1-Finger_TOUCH)**.

2. Select the **"Animal Facts"** link at the top of page **(1-Finger_TOUCH)**.

Task 3: Scrolling the web page

1. **Scrolling the page (1-Finger_SWIPE):**

    a. **Scroll down the page** to find the different animals **(1 Finger_SWIPE UP)**.

    b. **Scroll up the page** to find **"Atlantic Puffin"** **(1-Finger_SWIPE DOWN)**.

    c. Now, select the **"Atlantic Puffin"** link **(1-Finger_ TOUCH)**.

    d. On the **Toolbar**, top-left, select the **"Back" button** **(1-Finger_TOUCH)**.

    e. Now, find and select the **"Bald Eagle"** link **(1-Finger_ TOUCH)**.

    f. Again, select the **"Back" button** to the **"Animal Facts"** page **(1-Finger_ TOUCH)**.
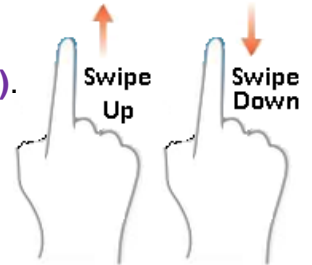
Task 4: Creating web page "Tabs"

1. **Create a new web page Tab:**

    a. On the web page, **(1-Finger_TOUCH & HOLD)** on the **"African Elephant"** link to bring up its **"Pop-up Menu"**.

    b. Select **"Open in New Tab"** to create a **New Tab** for the African Elephant; **(1-Finger_TOUCH)**. Now you should have two Tabs at the top of the web page, just below the Address Bar.

    c. Now, touch each Tab to switch between the "Animal Facts" web page and the "African Elephant" web page **(1-Finger_TOUCH)**.

    d. Lastly, select the **"Animal Facts"** Tab to switch to that web page.

Task 5: Defining "Words" on the web page

1. **Define word "Animal" on the web page:**

   TAP & Hold

   a. From the previous task you should be on the *"Animal Facts"* web page.

   b. At the top of the web page *find* the title *"Animal Facts"*.

   c. Bring up the *"Pop-up" menu* for the word "Animal" **(1-Finger_TOUCH & HOLD)** on the word *"Animals"* and then lift your finger. This will bring up a menu with two items: Copy and Define.

   d. Select *"Define"* **(1-Finger_TOUCH)**.

   e. *Scroll* down the pop-up menu to read definition **(1-Finger_SWIPE UP)**.

   f. *Close* the "Pop-up" **(1-Finger_TOUCH)** *outside* the "Pop-up".
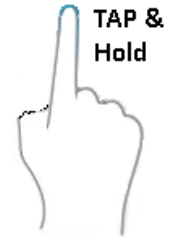
Task 6: Mainstream Zooming in & out

Note: During this task you will use the *"Pinch"* gesture to zoom in & out. This gesture works with pictures, web pages, mail & maps. This doesn't replace the Zoom accessibility feature.

1. Zoom IN on the web page **(2-Finger_PINCH)**: Place your *thumb* and *index finger* together on the screen and then slide them apart. Now pan vertically & Horizontally **(1-Finger_SWIPE)**

2. Zoom OUT on the web page **(2-Finger_PINCH)**: Place your *thumb* and *index finger* apart on the screen and then slide them together.

Section 1.4: Multitasking Gestures

Note: This section shows you how to use Multitasking Gestures to go to the "Home" screen, reveal the Multitasking Bar and switch between apps. To turn this option **ON** go to Settings > General > and select the On/Off button.

Task 1: Going to the "Home" screen

1. Launch **"Safari" (1-Finger_TOUCH)**.

2. Use the "Multitasking Gesture" to go to the "Home" screen **(4/5-Finger_PINCH)**: Place 4 or 5 fingers on the screen and slide the fingertips together.
Note: you can also press the **(Home)** button to go to the "Home" screen.
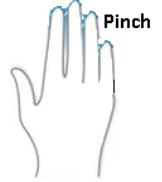
Task 2: Reveal the "Multitasking Bar"

Note: The "Multitasking Bar" appears at the bottom of the screen and displays the recently opened apps, apps not fully closed.

1. Let's launch a few apps. Launch **"Settings"** then use the **Multitasking Gesture** to go to the **"Home"** screen. Repeat the steps to launch **"Safari"** and go back to the **"Home"** screen.

2. Now, use the "Multitasking Gesture" to reveal **"Multitasking Bar" (4/5-Finger_SWIPE UP)**. Notice at the bottom of the screen a row of apps.

3. Next, close the "Multitasking Bar" **(4/5-Finger_SWIPE DOWN)**.

4. Again, use the "Multitasking Gesture" to reveal **"Multitasking Bar" (4/5-Finger_SWIPE UP)**.

5. Scroll through the recently opened apps **(1-Finger_SWIPE LEFT or RIGHT)**.

6. From the row of apps, launch **"Safari" (1-Finger_TOUCH)**.
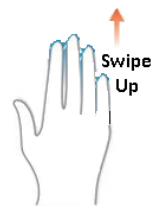
   Notes: You can also reveal the "Multitasking Bar" by pressing the **(Home)** button twice, quickly. Press once to close the "Multitasking Bar".

Task 3: Switch to Between Apps:

Note: If you have an app open you can use the "Multitasking Bar" to switch between other apps you have recently opened.

1. Launch Safari if not already open.

2. Switch to the Next open app **(4/5-Finger_SWIPE LEFT)**.

3. Switch to the Previous open app **(4/5-Finger_SWIPE RIGHT)**.
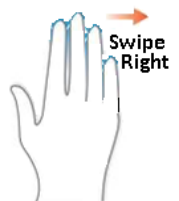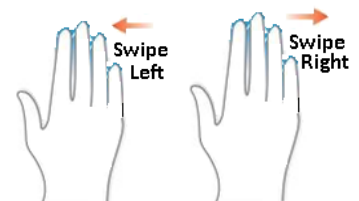
Section 1.5: iBooks (reading a book)

Note: During this section you will learn how to navigate a book in iBooks. iBooks is a free app that you must download from the Apps Store. You can download books to iBooks using the "Store" button in iBooks. Also, you can download ePub, PDF and iBook files to your computer and sync them to your iPad. Although you can read books in *portrait* or *landscape orientation*, some books *only* allow you to adjust the font size when it's in the portrait orientation so we will use *portrait orientation* for these tasks.

Task 1: Set the iPad to the Portrait Orientation

1. Slide the **(Side Switch)** to the left to unlock it.

2. Tilt the iPad up on its edge and rotate it so the **(Home)** button is at the bottom.

3. Slide the **(Side Switch)** back down to relock the rotation, then lay the iPad back on the table.

Task 2: Launch the "iBooks" app

Figure 2: Group view
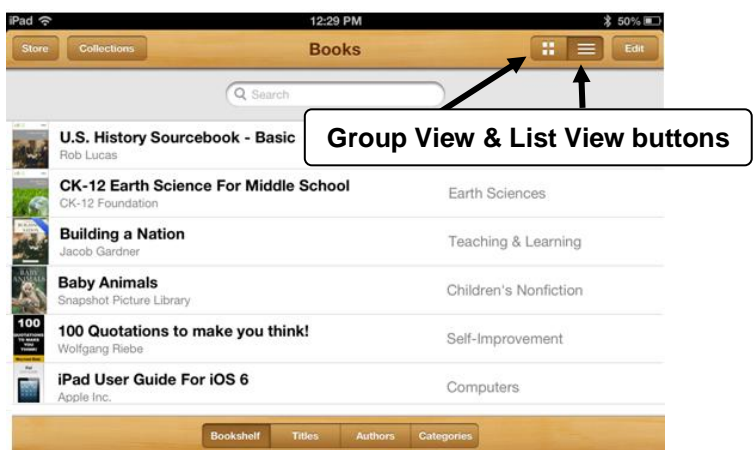
Figure 3: List View

Note: The iBooks library has two main views, "Group View" (bookshelf look) and "List View". Both views have five buttons across the top on the toolbar; they are: Store, Collections, Group View, List View and Edit. The "Store" button takes you to the Internet to search for books to download. The "Collections" button allows you to switch between your collections of books, purchased books, PDF files, etc. The Group View and List View buttons allow you two ways to arrange the books [Figs. 2-3]. The Group View has the books standing up on shelves, showing their covers. In the List View the books are in one vertical list and you have four additional buttons across the bottom of the screen. They are: Bookshelf, Titles, Authors and Categories. Selecting the Edit button allows you to move or delete books.

1. Go to the "Home" screen, press the **(Home)** button.

2. Select the *"Home" screen page* with the *iBooks* app **(1-Finger_FLICK LEFT or RIGHT)**.

3. Select & Activate the *iBooks* app **(1-Finger_TAP)**.

4. Open the iBooks *"Library"*, if not open already, by using **(1-Finger_TAP)** on the *"Library"* button located at the top-left corner of screen on the toolbar. You may have to tap the screen once to reveal the toolbar. If it is already open you will not see the "Library" button.

Task 3: Launch a Book in iBooks
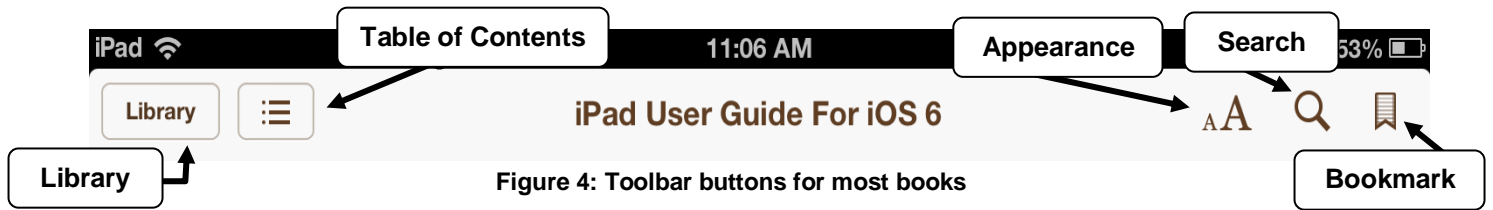
Figure 4: Toolbar buttons for most books

1. Select & open the book, *"iPad User Guide"* **(1-Finger_TOUCH)**. If the Guide isn't in iBooks, select the "Store" button and download the app. It's free!

   Note: Once you have launched the "iPad User Guide" you will notice a Toolbar running across the top of the screen with six buttons. They are the Library, Table of Contents, Appearance, Search and Add/Remove Bookmark buttons [See Figure 4]. Other books may have two additional buttons, Audio and Brightness.

   o The *"Library"* button takes you back to the library with your books.

   o The *"Table of Contents"* button takes you to the Table of Contents with tabs for Contents, Bookmarks and Notes.

   o The *"Appearance"* button gives you some adjustment options such as brightness, font size, font type, color contrast and page format.

   o The *"Search"* button allows you to search for text within the book.

   o The *"Add/Remove Bookmark"* button allows you to add or remove bookmarks within the book.

Task 4: Open "Table of Contents" to select "Accessibility"

1. Select book's *"Table of Contents"* button **(1-Finger_TOUCH)**.
2. Scroll down the Table of Content list **(1-Finger_SWIPE UP)**.
3. Select *"Accessibility"* **(1-Finger_TOUCH)**.

Task 5: Turning the Book Pages

1. **Turn Pages Slowly:**
   a. Turn to the *next page* slowly, from page's right edge **(1-Finger_TOUCH & DRAG LEFT)**.
   b. Turn to the *previous page* slowly, from page's left edge **(1-Finger_TOUCH & DRAG RIGHT)**.

2. **Turn Pages Quickly:**
   a. Turn to the next page; on right edge **(1-Finger_TOUCH)**.
   b. Turn to the previous page; on left edge **(1-Finger_TOUCH)**.

Task 6: Working with Bookmarks

Note: You don't have to set a bookmark when you close the book to keep your place; iBooks will remember your page and return you to it when you re-open the book. Setting bookmarks is nice when you want to mark numerous pages of book.

1. *Adding Bookmarks:*

    a. Make sure the iPad User Guide is open.

    b. *Add* a Bookmark at your current page **(1-Finger_TOUCH)** on the Toolbar, top-right corner.

    c. Turn the pages three or four times **(1-Finger_SWIPE LEFT)** repeatedly.

    d. *Add* another **Bookmark (1-Finger_TOUCH)** on the Toolbar, top-right corner.

    e. Repeat steps and add 2 or 3 more Bookmarks.

2. *Navigating Your Bookmarks:*

    a. Select the *"Table of Contents"* button on the Toolbar **(1-Finger_TOUCH)**.

    b. Select the *"Bookmarks"* tab **(1-Finger_TOUCH)**.

    c. Select one of your *"Bookmarks"* **(1-Finger_TOUCH)**.

3. *Remove a Bookmark:*

    a. Select the *"Remove Bookmark"* button (red ribbon) at the top-right corner of Toolbar **(1-Finger_TOUCH)**.

    b. Again, select the "Table of Contents" button on the Toolbar **(1-Finger_TOUCH)**.

    c. Again, select the "Bookmarks" tab **(1-Finger_TOUCH)**.

    d. Select one of the remaining Bookmarks **(1-Finger_TOUCH)**.

    e. Repeat the process to remove all your Bookmarks.

    f. When finished, move back to the "Home" screen; press **(Home)** button or use the "Multitasking Gesture" **(4/5-Finger_PINCH)**.

Section 1.6: Typing with the "Notes" App

Note: The Notes app allows you to type notes using the on-screen or wireless Bluetooth keyboard. When you work in Notes in Landscape orientation you have two panes, a narrow pane to the left with a list of previously created notes and a wider pane with the page for your text. In Portrait orientation you have one pane which is your text page. To access your list of previous notes, you must activate the "Notes" button.

With an iCloud account you can sync your notes with your other iDevices and computer. Notes can be emailed, as well.
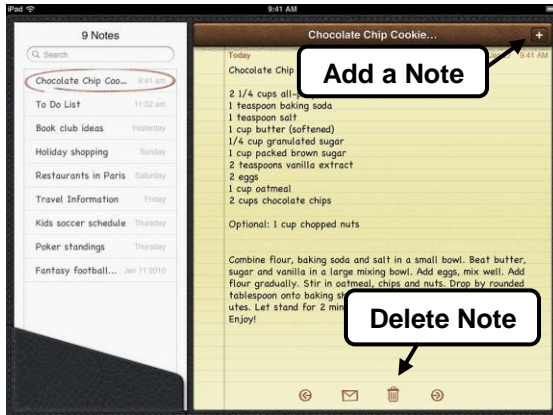
Fig. 5: Landscape Orientation
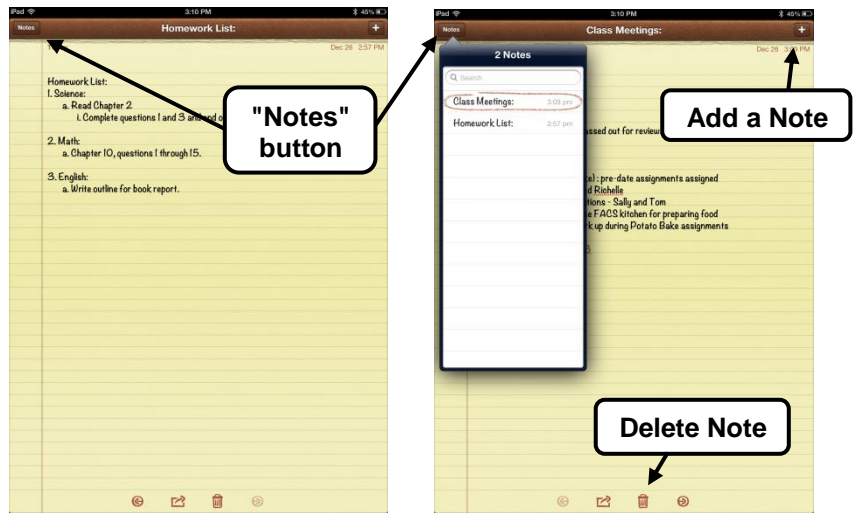
Fig. 6: Portrait Orientation

Task 1: Launch "Notes"

1. For tasks 1 and 2 make sure you have the iPad in **Landscape orientation** [Fig. 5].
2. To launch **"Notes"**, first go to the **"Home"** screen; press **(Home)** button.
3. Select & Activate the **Notes** app **(1-Finger_TOUCH)**.

Task 2: Create two Notes and Type Sentences

1. **Create note 1**: select the **"Add a Note"** button **(1-Finger_TOUCH)**.
   Note: If the "Add a Note" button is **grayed out/not available**, you are in a **new** note.
   a. Use keys on the keyboard to type **"The sky is blue."** **(1-Finger_TOUCH)**.
   b. Select the **"Keyboard"** key to close the keyboard **(1-Finger_TOUCH)**.
2. **Create note 2**: select the **"Add a Note"** button **(1-Finger_TOUCH)**.
   Note: If the "Add a Note" button is **grayed out/not available**, you are in a **new** note.
   a. Use keys on the keyboard to type, **"The grass is green."**; **(1-Finger_TOUCH)**.
   b. Select the **"Keyboard"** key to close the keyboard **(1-Finger_TOUCH)**.

Task 3: Switch between notes

1. In Landscape orientation, select one of the notes in the left pane **(1-Finger_TOUCH)**.
2. In Portrait orientation [Fig. 6], select "Notes" button & one of the notes in list **(1-Finger_TOUCH)**.

Task 4: Delete notes

1. Select the **"Delete"** icon **(1-Finger_TOUCH)**.
2. Select the **"Delete Note"** button **(1-Finger_TOUCH)**.

PART 2: iPad with VoiceOver

Before We Get Started

Introduction:

1. VoiceOver is an accessibility feature that announces what appears on the screen. VoiceOver navigation is different than mainstream navigation. VoiceOver gestures require 1 to 4 fingers doing a series of tapping, flicking, sliding and dragging movements. This feature is available out of the box; there aren't any drivers or software programs to install. Go to Settings to turn VoiceOver on.

2. When you select an element/item on the iPad, a "Black Rectangle," which is called the "VoiceOver Cursor," encircles it and VoiceOver speaks the text and gives you necessary navigation and/or orientation information. This information could be an app icon on the "Home" screen, page of text in a book, a paragraph on a web page, etc.

3. With iOS 6 you can now use VoiceOver and Zoom together. There are a few VoiceOver gestures, as well as typing methods that change when running both VoiceOver and Zoom together. These changes will be noted when necessary.

Initial VoiceOver Setup:

1. **Launch VoiceOver initially:**

   Note: The steps to initially turn on VoiceOver will need to be conducted by someone with vision.
   a. Turn on the iPad.
   b. Select the *"Settings"* icon from the *"Home"* screen.
   c. On the left pane, select and open the *"General"* menu.
   d. On the right pane, select and open the *"Accessibility"* menu.
   e. On the right pane, select and open the *"VoiceOver"* menu.
   f. On the right pane, select the *Off/On button* to turn on VoiceOver.

2. **The "Triple-click Home" feature:**

   Note: The "Triple-click Home" feature gives you an easy way to cycle between two or more accessibility features by pressing the **(Home)** button three times quickly. If you have more than one feature checked, then you will get a pop-up menu with your selected features. The accessibility features are VoiceOver, Zoom, Invert Colors, and Assistive Touch. The following items show you how to make settings configurations for three situations.
   a. **Triple-click Home configuration 1 (VoiceOver only):**

      Note: This Settings configuration allows any user (blind or sighted) to quickly turn OFF or ON VoiceOver using the (Home) button. This works well in a classroom where VoiceOver is not always required. To use the other accessibility features, such as Zoom, you will have to go to Settings and enable them. The steps to setting up this configuration are:
      i. Launch the *"Settings"* app from the *"Home"* screen.
      ii. On the left pane, select and open the *"General"* menu.
      iii. On the right pane, select and open the *"Accessibility"* menu.
      iv. On the right pane, select and open *"Triple-click Home"* menu, then select "VoiceOver" and uncheck all other accessibility features.
      v. *Practice:* press the **(Home)** button 3 times quickly to turn ON and OFF VoiceOver.

b. **Triple-click Home configuration 2 (Triple-click Home – VoiceOver only) and (Zoom checked in Settings):**

Note: This Settings configuration allows the visually impaired user needing VoiceOver and/or Zoom (Accessibility Zoom) to quickly turn on or off these features, while at the same time allowing the blind user to turn on and off VoiceOver. If we added the Zoom to the Triple-click Home option, the blind user would have difficulty turning on VoiceOver from the Triple-click Home pop-up menu. This is the menu that pops up after you press the (Home) button three times. The steps to setting up this configuration are:

   i. Launch the *"Settings"* app from the *"Home"* screen.

   ii. On the left pane, select and open the *"General"* menu.

   iii. On the right pane, select and open the *"Accessibility"* menu.

   iv. On the right pane, select and open *"Triple-click Home"* menu, then select **"VoiceOver"**.

   v. At the top, select the *"Accessibility"* button to take you back to the previous page.

   vi. Select and open the *"Zoom"* menu. Enable Zoom by setting the On/Off button to ON.

   vii. *Practice the configuration:*

      1. Press the **(Home)** button 3 times quickly to turn VoiceOver ON. Again, press the **(Home)** button 3 times quickly to turn OFF VoiceOver. With VoiceOver off, use the Accessibility Zoom gesture (3-Finger_DOUBLE TAP & SLIDE UP) to *zoom in*.

      2. Repeat item 1 to turn VoiceOver *ON*. Now both Zoom & VoiceOver are on.

      3. Use the gesture (3-Finger_DOUBLE TAP & SLIDE DOWN) to zoom out.

      4. Press the **(Home)** button 3 times quickly to turn VoiceOver OFF.

c. **Triple-click Home configuration 3 (VoiceOver – Zoom – Invert Colors):**

Note: This Settings configuration allows the fully sighted and visually impaired user to quickly select one or more of the 4 accessibility features using the **(Home)** button. When the **(Home)** button is pressed 3 times a menu will pop up with the selected accessibility features. This configuration DOES NOT give the BLIND speech to turn on VoiceOver. It works well with visually impaired users. The settings configuration steps are:

   i. Launch the *"Settings"* app from the *"Home"* screen.

   ii. On the left pane, select and open the *"General"* menu.

   iii. On the right pane, select and open the *"Accessibility"* menu.

   iv. On the right pane, select and open *"Triple-click Home"* menu and then select the *VoiceOver, Invert Colors* and *Zoom* features.

   v. **Practice the configuration:**

      1. Press the **(Home)** button 3 times quickly to bring up the menu. Select the *"Invert Colors"* button.

      2. Again, press the **(Home)** button 3 times quickly to bring up the menu. Select the *"Zoom"* button.

      3. Press the **(Home)** button 3 times quickly to bring up the menu again. Select the *"VoiceOver"* button; you may have to use the (3-finger_SLIDE) to find the menu.

      4. Now you have all 3 accessibility features enabled.

      5. Press the **(Home)** button 3 times quickly to bring up the menu. Select and activate *"Invert Colors"* button then with one finger double tap to *uncheck* the button.

      6. Press the **(Home)** button 3 times quickly to bring up the menu and *uncheck* the remaining accessibility features, leaving VoiceOver for last.

Section 2.1: Physical Controls

Note: All instructions, unless otherwise directed, assume that the iPad is positioned in the landscape orientation with the **(Home)** button to the right and iPad laying on a flat surface. Use the ***Triple-click Home configuration 1*** to turn ***only*** VoiceOver on (refer to page 14, item 2-a).

Do the following to locate the ***external controls*** and learn how to ***turn on and off*** the iPad [Fig. 7].

1. The iPad has a 7/8" (2 cm) border that is either white or black and does not respond to touch.

2. **To turn on the iPad from shutdown:**

    a. Locate, press & hold the **(Sleep/Wake)** button for 5 seconds, then release. It's located on left edge, back corner. Wait until VoiceOver makes an announcement, then select the **(Slide to Unlock)** button.

3. **To shut down the iPad:**

    a. Wake up iPad if asleep; press & release the **(Home)** button.
    b. Press & hold the **(Sleep/Wake)** button until VoiceOver says, **(Slide to Power off)**; then release button.
    c. Activate the selected button **(1-Finger_DOUBLE TAP)** on screen.

Figure 7: Physical Features

Labels: Sleep/Wake Button · Side Switch (Mute/Rotation Lock) · Volume · Home Button · Edge: Dock Connector · Head Phone Jack · FaceTime Camera

4. **Lock the iPad by putting it to sleep:**

    a. Turn on the iPad. Then press & release the **(Sleep/Wake)** button.

5. **Unlock iPad from sleep:**

    a. After a few seconds the iPad goes to sleep. To wake it up press and release the **(Home)** or **(Sleep/Wake)** button.

6. **Locate the following physical controls:**

    a. ***Side Switch*** located on back edge, left corner, the edge that is away from your body.
    b. ***Volume control*** located to the right of the **(Side Switch)** on back edge.
    c. ***Head Phone Jack*** located on left edge, corner closest to your body.
    d. ***FaceTime Camera*** located on left border of screen, opposite the **(Home)** button.
    e. ***iSight Camera*** located on the underneath side, next to the **(Sleep/Wake)** button.
    f. ***Dock Connector*** located on right edge, underneath the **(Home)** button.

7. **Use the (Side Switch) to lock screen rotation or mute the sound**:

    a. During training or use by students, it is beneficial to have the **(Side Switch)** set to *"Lock Rotation"* in Settings. This quickly locks the rotation to prevent unintentional rotation.
    b. You can change the setting of the **(Side Switch)** from *"Lock Rotation"* to *"Mute"* by going to (Settings > General > Use Side Switch To, then check one of the two items.
    c. **Locking and unlocking the screen rotation:**
        i. Slide the **(Side Switch)** to the left to unlock the screen rotation.
        ii. Raise the iPad in the vertical position with its edge on table surface.
        iii. Rotate the iPad so the edge with the **(Home)** button is touching the table surface. You will notice that the screen rotated right-side up.
        iv. Again, rotate the iPad back in the landscape orientation position with the **(Home)** button to the right and use the **(Side Switch)** to lock the screen rotation.
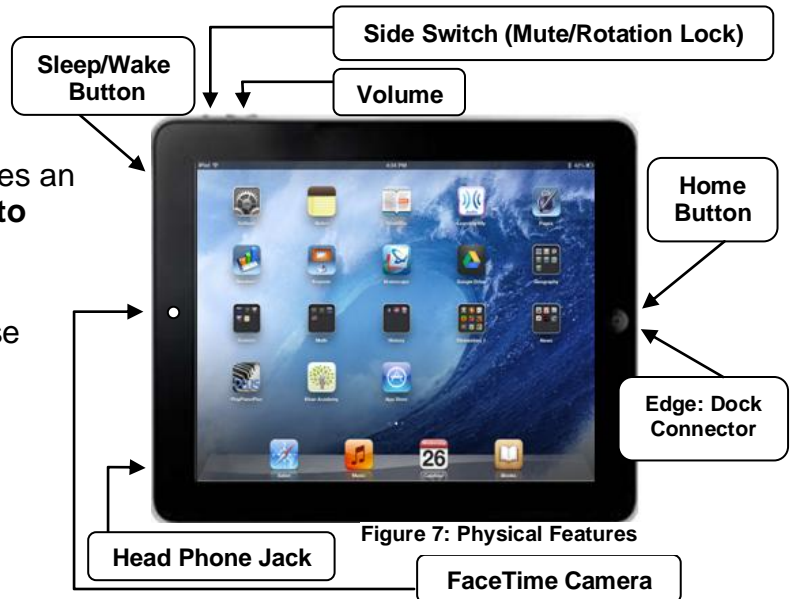
Section 2.2: Rotor – Speech – Home Screen – Rearranging Apps – Folders

Note: All instructions, unless otherwise directed, will assume that the iPad is positioned in landscape orientation with the **(Home)** button to the right and iPad laying on a flat surface.

Task 1: Turning on iPad and going to the "Home" screen

Note: There are two methods to select different items: (1-Finger_TAP & SLIDE) and (1-Finger_Flick Right or Left). With method one, tapping (touching) the screen selects what's under your finger; then sliding your finger in a grid pattern allows you to select items in any direction. With method two, flicking one finger right or left anywhere on the screen moves your focus to the next or previous item; the finger must be in motion as it touches the screen or it will redirect the focus to your fingertip.

1. As before, from the shut-down, power on the iPad, press & hold the **(Sleep/Wake)** button.
2. Unlock screen and go to the **"Home"** screen:

   a. Method 1: (1-Finger_TAP & SLIDE)

      i. Tap and slide one finger on the screen up from the front-center edge until you hear the **"Slide to Unlock"** button announced **(1-Finger_TAP & SLIDE UP)**.

      ii. Activate the button to unlock and place focus on the **"Home"** screen **(1-Finger_DOUBLE TAP)** anywhere on the screen.

   b. Method 2: (1-Finger_FLICK)

      i. Select the **"Slide to Unlock"** button **(1-Finger_FLICK RIGHT or LEFT)** until the **"Slide to Unlock"** button is announced.

      ii. Activate **"Slide to Unlock"** button to unlock screen **(1-Finger_DOUBLE TAP)**.
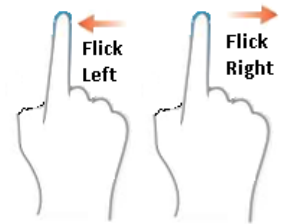
Task 2: Navigating "Settings"

Note: During this task you will learn how to navigate **Settings**, which lets you make changes to the iPad, accessibility options and many of its apps. The **Settings** page has two panes. The **title** of the left pane is **Settings** and the width of the pane is about two inches. The left pane has the menu list of Settings topics. The title of the right pane depends on what topic is selected from the left pane and takes up the remaining width of the screen. The right pane is a menu list relating to the selected topic.

1. **Move to and launch Settings:**

   a. Move to the **"Home"** screen; press **(Home)** button.

   b. Move to the **Settings** icon **(1-Finger_FLICK RIGHT or LEFT)**.

   c. Activate the **Settings** icon **(1-Finger_DOUBLE TAP)**.

2. **Navigate the Left Pane with the Settings topics:**

   a. Move down the list of topics **(1-Finger_TAP & SLIDE DOWN)** in the left pane.

   b. Scroll down to the next group of topics **(3-Finger_TAP & SLIDE UP)** in the left pane.

   c. Move down this group of topics **(1-Finger_TAP & SLIDE DOWN)** in the left pane.

   d. Again, scroll down the list of topics **(3-Finger_TAP & SLIDE UP)** in the left pane.

   e. Explore this group of topics in the left pane **(1-Finger_TAP & SLIDE DOWN)**.

   f. Scroll up to the first group of topics **(3-Finger_TAP & SLIDE DOWN)** repeatedly.

   g. Using the flicking gesture, move down to the list to the next topic in the left pane to select *General* **(1-Finger_FLICK RIGHT)**.

   h. *Activate* the *General* topic to review its menu items in the right pane **(1-Finger_DOUBLE TAP)**.

3. **Navigate the Right Pane with the Menu items:**

   Note: The menu item displayed in the right pane relates to the General topic.

   a. Move down the menu list **(1-Finger_TAP & SLIDE DOWN)** in the right pane.

   b. Scroll down to the next group of items **(3-Finger_TAP & SLIDE UP)** in the right pane.

   c. Using the flicking gesture, move down the menu list in the right pane to select *Accessibility* **(1-Finger_FLICK RIGHT)**.

   d. *Activate* to display the *Accessibility* menu items in the right pane **(1-Finger_DOUBLE TAP)**.

   e. Again, move down the right pane's menu list to select *"VoiceOver"* **(1-Finger_FLICK RIGHT)**.

   f. *Activate* to display the *VoiceOver* menu items in the right pane **(1-Finger_DOUBLE TAP)**.

   g. Move down the right pane to discover the menu items **(1-Finger_FLICK RIGHT)** or **(1-Finger_TAP & SLIDE DOWN)**.

4. Move back to the *previous Settings page* by placing two fingers on the screen and sliding them, quickly, to the right, left and back right again in a *"z"* pattern **(2-Finger_SCRUB)**.

5. Again, move back to the *previous Settings page* using the **(2-Finger_SCRUB)** gesture.

6. Now, leave the Settings app and go to the "Home" screen, press the **(Home)** button.
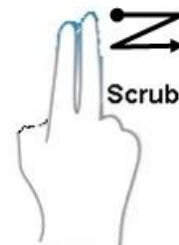
Task 3: VoiceOver "Rotor"

Note: The VoiceOver *"Rotor"* feature is a virtual control that mimics a physical dial. The *"Rotor"* gives you unique navigational options. These navigational options will depend on the screen focus and which items you have set to the *"Rotor"* in the *Settings*. During this task you will **add** and **remove** items from the *"Rotor"* to use when navigating.

1. **Move to the "Rotor" option in Settings:**

   a. Go to the *"Home"* screen, press **(Home)** button.

   b. Move to the **"Settings"** app **(1-Finger_FLICK RIGHT or LEFT)**. Then Activate the app **(1-Finger_DOUBLE TAP)**.

   c. *"Settings"* has two panes. The left pane has the list of setting topics and the right pane has the menu list of options for the selected topic. Move to and select *"General"* in the left pane **(1-Finger_SLIDE DOWN or UP)**. Activate and open the *"General" menu* **(1-Finger_DOUBLE TAP)** anywhere on the screen.

   d. Select the right pane **(1-Finger_TAP)**.

   e. Move to *"Accessibility"* **(1-Finger_FLICK RIGHT)** repeatedly. Activate and open the *"Accessibility" menu* **(1-Finger_DOUBLE TAP)** anywhere on the screen.

   f. Move to *"VoiceOver"* **(1-Finger_FLICK RIGHT)** once or twice. Activate and open the *"VoiceOver" menu* **(1-Finger_DOUBLE TAP)** anywhere on the screen.

   g. Move to *"Rotor"* **(1-Finger_FLICK RIGHT)** repeatedly. Activate and open the *"Rotor" menu* **(1-Finger_DOUBLE TAP)** anywhere on the screen.

2. **Adding and removing items from the "Rotor" list:**

   a. Select *"Rotor" heading* at the top of the right pane **(1-Finger_TAP)**. This pane has the different *"Rotor" items*.

   b. Move to *"Speech Rate"* **(1-Finger_FLICK RIGHT)** repeatedly. Now, check this item **(1-Finger_DOUBLE TAP)**. A checkmark is added and VoiceOver says, *"Selected"*. There's no announcement if an item isn't selected/checked.

   c. Move to *"Volume"* **(1-Finger_FLICK RIGHT)** repeatedly. Now, check this item **(1-Finger_DOUBLE TAP)**.

   d. For the tasks in this booklet, make sure you have the following items checked: Speech Rate, Volume, Headings, Form Controls, Links, Characters, Words and Lines.

   Note: You can repeat the process to uncheck/unselect any item that's checked/selected.

Task 4: Speech Options

1. **Change the Speech Rate:**

   a. Make sure the *"Speech Rate"* and *"Volume"* items have been added to the Rotor. If not, go back and complete Task 2.

   b. Access the *"Rotor"* and select *"Speech Rate"* **(2-Finger_ROTATE)**.

   c. Increase or Decrease *"Speech Rate"* **(1-Finger_SWIPE UP or DOWN)**.

2. **Change the Volume:**

   a. Access the *"Rotor"* and select *"Volume"* **(2-Finger_ROTATE)**.

   b. Increase or Decrease *"Volume"* **(1-Finger_SWIPE UP or DOWN)**.

3. **Pause and Resume Speech:**
    a. *Pause Speech:* While the VoiceOver is reading text **(2-Finger_TAP)**.
    b. *Resume Paused Speech:* After pausing speech **(2-Finger_TAP)** again.
4. Turn *Speech OFF*, then back *ON* **(3-Finger_DOUBLE TAP)**.

    Note: If VoiceOver is on and the Accessibility Zoom is enabled **(3-Finger_TRIPLE TAP)**.
5. Turn *VoiceOver OFF* then back *ON*, press **(Home)** button 3 times, quickly.

Task 5: Two Methods of Navigating the App icons

1. Use the following two methods to navigate the apps icons on the **"Home"** screen.
    a. **Method 1: (1-Finger_TAP & SLIDE):**
        i. Go to the **"Home"** screen, press the **(Home)** button.
        ii. Slide 1 finger back and forth on the screen in a grid pattern **(1-Finger_TAP & SLIDE)**.
    b. **Method 2: (1-Finger_FLICK):**
        i. Go to the **"Home"** screen, press the **(Home)** button.
        ii. Move forward to the next apps one at a time **(1-Finger_FLICK RIGHT)** repeatedly.
        iii. Move backwards one app at a time **(1-Finger_FLICK LEFT)** repeatedly.

Task 6: Move between Search & Home Screen Pages (3-Finger_SWIPE):

1. Move to the *Search Screen* **(3-Finger_SWIPE RIGHT)**.
2. Move back to *Page 1* of the Home Screen **(3-Finger_SWIPE LEFT)**.
3. Move to *Page 2* of the Home Screen **(3-Finger_SWIPE LEFT)**.
4. Move back to *Page 1* of the Home Screen **(3-Finger_SWIPE RIGHT)**.

Task 7: Rearrange App Icons on Home Screen

1. Select an app icon to move to a different row and column **(1-Finger_FLICK RIGHT or LEFT)**.
2. Place all apps in *"Jiggle"* mode **(1-Finger_DOUBLE TAP & HOLD)**.
3. While still holding down the second tap, drag the app to a different row and column. Notice that "VoiceOver" announces the new row or column the app is in.
4. Exit the "Jiggle" mode; press the **(Home)** button.

Task 8: Create New Folders on Home Screen

1. Select an app icon to create a folder **(1-Finger_FLICK RIGHT or LEFT)**.
2. Place all apps in *"Jiggle"* mode **(1-Finger_DOUBLE TAP & HOLD)**.
3. While still holding down the second tap, drag the app onto another app icon and raise your finger. The folder is automatically created.

Section 2.3: Surfing the Internet with Safari

Notes: During this section you will learn how to use several gestures to open Safari (web browser), go to websites, select links and navigate text and other elements.

Task 1: Launch "Safari"

Note: During this task you will learn two methods to launch an app.

1. Method 1: (1-Finger_TAP & SLIDE)

   a. Tap and slide one finger across the screen in a grid pattern to select the *"Safari"* app icon **(1-Finger_TAP & SLIDE)**.

   b. *Activate* and launch the selected *"Safari"* app **(1-Finger_DOUBLE TAP)**.

2. Method 2: (1-Finger_FLICK)

   a. *Flick* one finger to the right or left to select *"Safari"*; **(1-Finger_FLICK)** right or left.

   b. *Activate* and launch the selected *"Safari"* app **(1-Finger_DOUBLE TAP)**.

Task 2: Launch the website "www.animalfactguide.com" & web page "Animal Facts"

Note: During this task you will learn to launch a website using three methods of typing: standard (select & double tap), standard (2 finger split-tap) and touch typing.
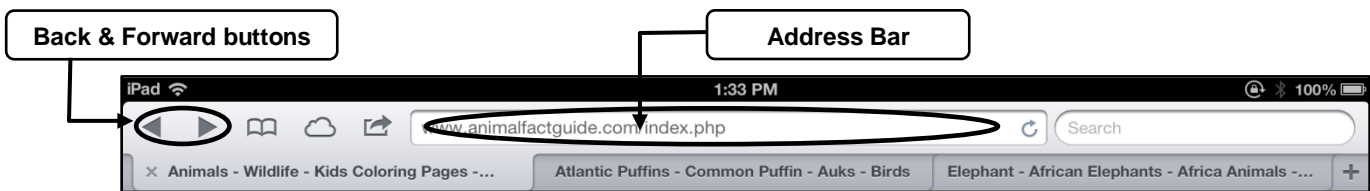
Figure 8: Safari Toolbar

1. Move to and enter the *"Address Bar"* [See Figure. 8]**:**

   a. **Method 1: (1-Finger_Tap & Slide)**

      i. Locate top-center of screen and move down to "Address Bar" **(1-Finger_TAP & SLIDE DOWN)**.

      ii. Enter the "Address Bar"; **(1-Finger_DOUBLE TAP)**.

      iii. The on-screen keyboard will pop up and fill the lower half of the screen.
      Note: Sometimes after the double tap, VoiceOver will announce the **(Back)** button, disregard this and continue.

   b. **Method 2: (1-Finger_Flick)**

      i. Move left back to the "Address Bar" **(1-Finger_FLICK LEFT),** repeatedly.

      ii. Enter the "Address Bar"; **(1-Finger_DOUBLE TAP)**.

      iii. The on-screen keyboard will pop up and fill the lower half of the screen.
      Note: Sometimes after the double tap, VoiceOver will announce the **(Back)** button, disregard this and continue.
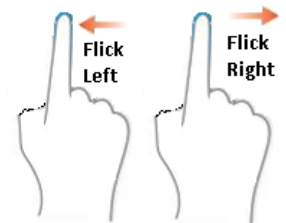
2. ***Clearing*** the ***text*** in the "Address Bar":

Note: Complete this step. Unless this step is completed, the Rotor doesn't recognize the address bar as an edit field, which means you cannot change the Typing Mode options. For future reference if you have the Rotor set to the desired Typing Mode than clearing the text is not necessary. The Typing Mode options will be discussed in the next step.

   a. Move right to the ***"Clear Text"*** button **(1-Finger_ FLICK RIGHT)**.

   b. Activate the ***"Clear Text"*** button **(1-Finger_DOUBLE TAP)**.

3. **Type the Web Address *"animalfactguide.com"*:**

Note: We are going to use 3 different methods of typing: standard (select & double tap), standard (2 finger split-tap) and touch typing.

   a. **Method 1: Standard typing (select & double tap)**

      i. Access the ***"Rotor"*** and change it to ***"Typing Mode"*** **(2-Finger_ROTATE)**.

      ii. Select ***"Standard Typing"*** **(1-Finger_SWIPE UP or DOWN)**.

      iii. Select the first letter of the address, which is ***"a"*** **(1-Finger_FLICK Right or Left)** or **(1-Finger_TAP & SLIDE)**.

      iv. ***Type*** the selected letter ***"a"*** **(1-Finger_DOUBLE TAP)**.

      v. Repeat the previous two steps to type the letters, "***n i m a l***"

   b. **Method 2: Standard typing (2-Finger_SPLIT TAP)**

Note: We are continuing to type the address ***"animalfactguide.com"***, using a different typing method.

      i. With the index finger tap and slide to the letter ***"f"*** key, then tap the screen with another finger to type the letter **(2-Finger_SPLIT-TAP)**.

      ii. Keep the index finger touching the screen and slide it to the letter ***"a"***. Tap the screen with another finger to type the letter **(2-Finger_SPLIT- TAP)**.

      iii. Finish typing ***"fact"***, by repeating the 2 finger split- tap method to type ***"c"*** and ***"t"***.

   c. **Method 3: Touch Typing**

Note: Use the third typing method to finish typing the address ***"animalfactguide.com"***.

      i. Access the ***"Rotor"*** and change it to ***"Typing Mode"*** **(2-Finger_ROTATE)**.

      ii. Select ***"Touch Typing"*** **(1-Finger_SWIPE UP or DOWN)**.

      iii. With the index finger, tap and slide to the letter ***"g"*** and lift your finger to type the letter.

      Note: If it doesn't type the letter you may have the Accessibility Zoom checked. To resolve this issue, **(3-Finger_DOUBLE TAP, HOLD & DRAG DOWN)**. This will zoom out to the normal view (no magnification). Now retry typing the ***"g"*** using the previous step.

      iv. Repeat the ***"Touch Typing"*** method to finish typing the letters "***u i d e***", then the "***.com***" key.

      v. Move to and select the ***"Go"*** button on the keyboard **(1-Finger_DOUBLE TAP)**.
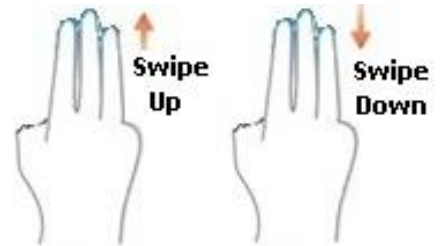
4. Select the ***"Animal Facts"*** link:

   a. Move to the ***"Animal Facts"*** link **(1-Finger_FLICK RIGHT)**.

   b. Activate link & launch web page **(1-Finger_DOUBLE TAP)**.

Task 3: Scrolling the web page

1. *Scrolling* (3-Finger_SWIPE):

   a. Scroll down to page 5 of 5 **(3-Finger_SWIPE UP)**.

   b. Scroll up to page 1 of 5 **(3-Finger_SWIPE DOWN)**.

Task 4: (2-Finger Scrub, Right & Left) to close Pop-ups or activate (Back) button

Note: The gesture will dismiss an alert, pop-up or activate the **(Back)** button.

1. **Dismissing the Bookmark drop-down menu:**

   a. Move to the *"African elephant"* link **(1-Finger_FLICK RIGHT)** repeatedly.

   b. *Activate link* & launch web page **(1-Finger_DOUBLE TAP)**.

   c. Move to the *"Bookmark"* button **(1-Finger_FLICK LEFT)** repeatedly.

   d. *Activate* the "Bookmark" button and open drop-down menu **(1-Finger_DOUBLE TAP)**.

   e. *Close* the "Bookmark" drop-down menu by placing two fingers on the screen and sliding them back and forth quickly, in a *"z"* pattern **(2-Finger_SCRUB)**.
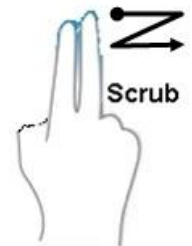
2. **Move back to the previous web page:**

   a. *Activate* the *"Back"* button by using the **(2-Finger_SCRUB)** *"z"* pattern gesture. This will move you back to the previous web page.

Task 5: Accessing Popup Menus – Creating New Tabs – Canceling a Popup/list

Note: Safari gives you the option to open web pages in Tabs. Tabs are an easy way to switch between desired web pages. The Tabs are located just below the Address bar. During this task you will create Tabs for two web pages and switch between them.

1. **Access a Popup Menu and launch a web page in a New Tab:**

   a. Open the *"American Bison"* web page in a *New Tab*:

      i. Move to, *but do not* activate the *"American Bison"* link **(1-Finger_FLICK RIGHT)**.

      ii. Open this link's *"Popup Menu"* **(1-Finger_DOUBLE TAP & HOLD)**.

      iii. Move down menu & select the item **"Open in New Tab"** **(1-Finger_FLICK RIGHT)** [See Figure 9].

      iv. *Activate* the *"Open in New Tab"* item **(1-Finger_DOUBLE TAP)**.
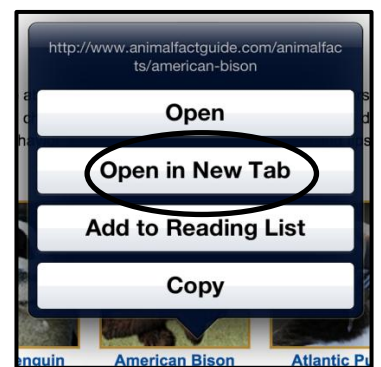
   Note: You are still on the same web page, but now you have a new Tab for the *"American Bison"* web page.

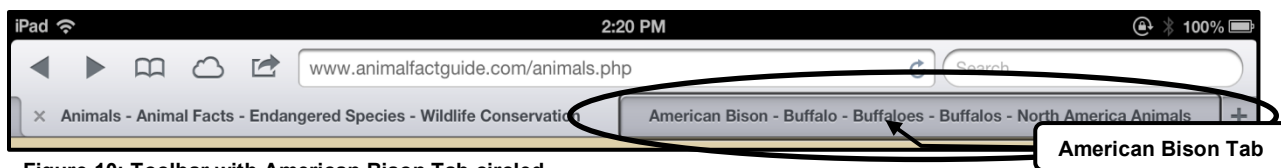**Figure 9: Popup (Open in New Tab)**

**Figure 10: Toolbar with American Bison Tab circled**

2. **Now switch** to the **"American Bison"** Tab [See Figure 10]:

   a. Move to your new **"American Bison" Tab** **(1-Finger_FLICK LEFT)** repeatedly, listening carefully for the web page, **"American Bison…, Tab"**; the word **Tab** is announced last.

   b. Activate this **Tab** to go to the "American Bison" web page **(1-Finger_DOUBLE TAP).**

3. **Switch back** to the **"Animal Facts" Tab** web page:

   a. Move back to the **"Animal Facts" web page** by moving to the **"Animal Facts" Tab** **(1-Finger_FLICK LEFT)** repeatedly, listening carefully for the web page, **"Animal Facts…, Tab"**; the word **Tab** is announced last.

   b. Activate the **Tab** to go to the **"Animal Facts"** web page **(1-Finger_DOUBLE TAP).**

4. **Delete** the **"American Bison"** Tab:

   a. Move back to your new **"American Bison" Tab** **(1-Finger_FLICK LEFT).**

   b. Activate the **Tab** to go to the **"American Bison"** web page **(1-Finger_DOUBLE TAP).**

   c. Move to the **"Close Tab" Button** for the **"American Bison" Tab** **(1-Finger_FLICK LEFT).**

   d. Activate **"Close Tab" Button** for the **"American Bison" Tab** **(1-Finger_DOUBLE TAP).**

5. **Open and Cancel** Popup menus:

   a. Move to the **"Fun Stuff"** link just after the "Animal Facts" link **(1-Finger_FLICK RIGHT).**

   b. Open the link's **"Popup Menu"** **(1-Finger_DOUBLE TAP & HOLD).**

   c. **Cancel** the menu "Popup" **(2-Finger_SCRUB).**

Task 6: Use the "Rotor" to move by "Headings" – Reading Text

Note: During this task you are going to the set the "Rotor" to "Headings" and navigate a web page by "Headings". Web pages have different types of elements, such as text, links, headings, form controls, etc. Choosing the most efficient element to navigate with, will help you find what you are looking for quicker. The "Rotor" is a virtual dial that makes it possible to choose which element to navigate.

1. If not already there, in Safari, go to **animalfactguide.com** and move to and activate the **"Animal Facts"** web page; refer to Task 2, if needed.

2. Launch the **"Bald Eagle"** web page:

   a. Move to the **"Bald Eagle"** link **(1-Finger_FLICK RIGHT).**

   b. Activate the link **(1-Finger_DOUBLE TAP).**

3. **Change** the **"Rotor"** to **"Headings"**:

   a. Change the "Rotor" to "Headings" by placing your **Thumb** and **Index finger** on the screen and rotating them as if you were turning a dial **(2-Finger_ROTATE)** repeatedly.

   b. As you change the "Rotor" to "Headings", VoiceOver will announce the number of "Headings" on the web page.

4. Move down the page by **"Headings"** to the **last** "Heading" **(1-Finger_FLICK DOWN)** repeatedly. You will hear a ping sound and VoiceOver will say, "Heading not found" when you get to the last "Heading".

5. Move back up the page by *"Headings"* to *"Conservation Status"* **(1-Finger_FLICK UP)** repeatedly.

6. Move to the information under the *"Conservation Status"* Heading **(1-Finger_FLICK RIGHT)**.

7. Continue up the page by *"Headings"* to *"Bald Eagle"* **(1-Finger_FLICK UP)** repeatedly.

8. Move to the information under the *"Bald Eagle"* Heading **(1-Finger_FLICK RIGHT)** twice.

9. *Pause speech*; **(2-Finger_TAP)**.

10. *Resume speech* and listen to the paragraph **(2-Finger_TAP)**.

11. Move to the next paragraph **(1-Finger_FLICK RIGHT)**.

12. *Pause speech* **(2-Finger_TAP)**.

13. *Start reading* from your *position* **(2-Finger_SWIPE DOWN)**.

14. *Start reading* from the top of the page **(2-Finger_SWIPE UP)**.
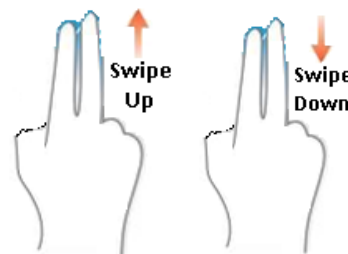
Task 7: Use the "Rotor" to move by "Links"

Note: During this task you will go to a *new website* and navigate a webpage by *Links*. Links, when activated, moves you to a new webpage or location on the same page.

1. Make sure *Safari* is launched.

2. Now, go to *bookshare.org* website:

   a. Move to the Address Bar using one of the following methods:

      i. **Method 1:** Locate top-center of screen and slide down to "Address Bar" **(1-Finger_TAP & SLIDE DOWN)** and then enter the "Address Bar" **(1-Finger_DOUBLE TAP)**. The on-screen keyboard will pop up and fill the lower half of the screen.

      ii. **Method 2:** Move left back to the "Address Bar" **(1-Finger_FLICK LEFT),** repeatedly. Then enter the "Address Bar" **(1-Finger_DOUBLE TAP)**. The on-screen keyboard will pop up and fill the lower half of the screen.

      Note: Sometimes after the double tap, VoiceOver will announce the **(Back)** button, disregard this and continue.

   b. Type and go to *bookshare.org* using 1 of the following 3 typing methods; refer to Task 2, Item 3.

      Note: The *Typing Mode* in the *Rotor* should still be set to *Touch Typing* (method 3).

      i. Method 1: Standard Typing (select & double tap).
      ii. Method 2: Standard Typing (split finger).
      iii. Method 3: Touch Typing.

3. Change *"Rotor"* to *"Links"* **(2-Finger_ROTATE RIGHT)** repeatedly.

4. Move down the web page by *"Links"* to the *"Facebook"* link **(1-Finger_FLICK DOWN)** repeatedly.

5. Move back up the web page by *"Links"* to the *"Browse"* link **(1-Finger_FLICK UP)** repeatedly.

6. *Activate* the *"Browse"* link to launch this webpage **(1-Finger_DOUBLE TAP)**.

7. *Jump* to the *top* of the page **(2-Finger_SWIPE UP)** and pause the speech **(2-Finger_ TAP)**.

8. Again, move down by *"Links"* to the *"Grades"* link **(1-Finger_FLICK DOWN)** repeatedly.

9. Finally, move back up by *"Links"* to the *"Authors"* link **(1-Finger_FLICK UP)** repeatedly.

Task 8: Use the "Rotor" to move by "Form Controls"

Note: During this task you will navigate a web page by **Form Controls** and **conduct a search** for a book on Bookshare.org. Form Controls are elements such as Edit boxes, Combo/Popup boxes, Check boxes and Buttons. Most web pages will have search boxes, which are Edit boxes, also called "Text Fields". Online forms will have Edit boxes as well as many of the other elements listed above.

1. If not already there, go to **bookshare.org** using Safari and activate the "Browse" link to go to the **"Browse"** web page; refer to Task 8, if needed.

2. Change **"Rotor"** to **"Form Controls" (2-Finger_ROTATE RIGHT)** repeatedly. Listen for the number of **"Form Controls"** on the web page.

3. **Jump** to the **top** of the page **(2-Finger_SWIPE UP)** and pause the speech **(2-Finger_ TAP)**.

4. Move down the web page by **"Form Controls" (1-Finger_FLICK DOWN)** repeatedly. When you get to the end of the page VoiceOver makes bumping sound and says, **"Form Controls not found"**.

5. **Move to the Email "Text Field":**
   a. Slowly move up the web page by **"Form Controls"** to the **"Email"** Text Field **(1-Finger_FLICK UP)**.
   b. Slowly move down the web page by **"Form Controls"** to the **"Search"** Text Field **(1-Finger_FLICK DOWN)**.
   c. Activate to open the on-screen keyboard **(1-Finger_DOUBLE TAP)**.
   d. Use 1 of the following 3 typing methods to **type** the search string, **"The Outsiders"**; refer to Task 2, Item 3 if needed. Then move to the **"GO" button** on the on-screen keyboard and **(1-Finger_DOUBLE TAP)** to launch the **Search Results** web page.
      i. Method 1: Standard Typing (select & double tap).
      ii. Method 2: Standard Typing (split finger).
      iii. Method 3: Touch Typing.

6. **Move through and listen to the different types of** **"Form Controls"**:
   a. **Jump** to the **top** of the page **(2-Finger_SWIPE UP)** and pause the speech **(2-Finger_ TAP)**.
   b. Slowly move down the web page by **"Form Controls"** to the **"GO" button (1-Finger_FLICK DOWN)**. This is the last **"Form Control"** on this page.

7. **Read** the two paragraphs on the **Search Results** web page about **"The Outsiders" (1-Finger_FLICK RIGHT)** repeatedly.

Note: The *"Reader"* is a feature that allows you to view an article in a new page without the advertisements, links and sidebar information. During this task you will go to the *"read2go.org"* website and use the *"Reader"* to view information about the Apple's *"Read2Go"* app.

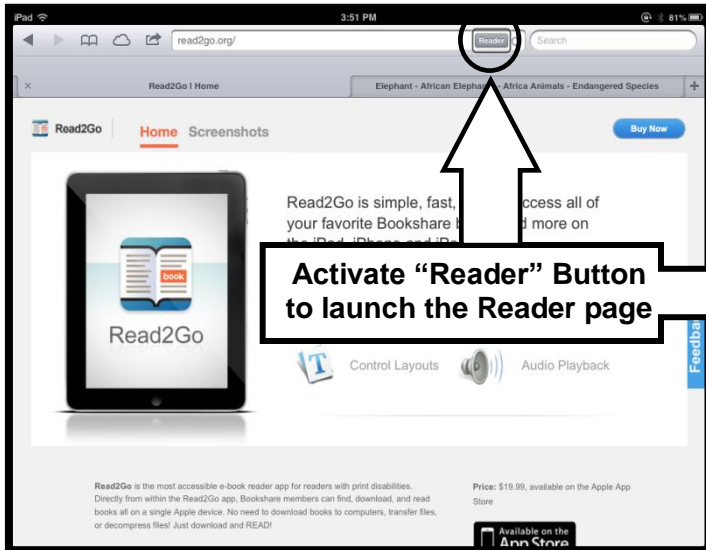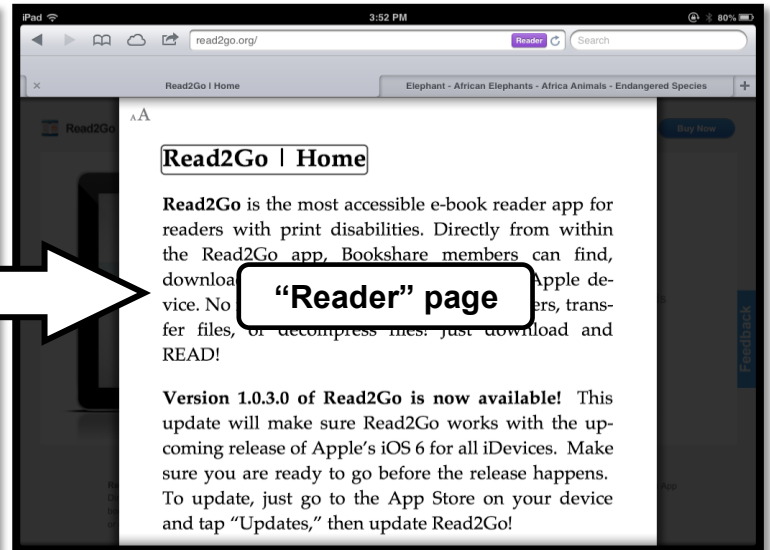**Figure 11: Safari Read2Go web page**

Figure 12: "Reader" page

1. Make sure you have Safari launched.

2. **Launch the *"read2go.org"* website:**

   a. Move to the Address Bar using the following method: Locate top-center of screen and slide down to "Address Bar" **(1-Finger_TAP & SLIDE DOWN)** and then enter the "Address Bar" **(1-Finger_DOUBLE TAP)**. The on-screen keyboard will pop up and fill the lower half of the screen.

   b. Use one of the 3 typing methods discussed in Task 2, Item 3 to type *read2go.org* in the address bar. Use the *"More numbers/letters" button* to switch the on-screen keyboard between *letters* and *numbers*. Then move to the *"GO" button* on the on-screen keyboard to launch the website.

      i. Method 1: Standard Typing (select & double tap).
      ii. Method 2: Standard Typing (split finger).
      iii. Method 3: Touch Typing.

3. Move to and select the *"Reader" button* [See Figure 11]:

   a. Move to the toolbar located at the top of screen and select the *"Reader"* button just right of the Address Bar **(1-Finger_TAP)** and **(1-Finger_FLICK RIGHT)** repeatedly.

   b. Activate the *"Reader"* button **(1-Finger_DOUBLE TAP)**. A new page opens with just the information about the *main article* on the page.

4. *Read* one paragraph at a time **(1-Finger_FLICK RIGHT)** repeatedly.

5. Now, *start reading* from the top of page **(2-Finger_SWIPE UP)**.

6. Pause the speech **(2-Finger_TAP)**.

7. Close the *"Reader" page* to go back to the original webpage **(2-Finger_SCRUB)** or activate the **(Back)** button on the toolbar.
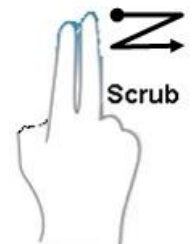
## Section 2.4: Multitasking Gestures – Rearranging App Icons

Task 1: Rearranging the App Icons on the "Home" screen:

1. Go to the *"Home"* Screen **(4/5-Finger_PINCH)**.
2. Place the Home Screen into *"Jiggle"* mode:
   a. Select the *"Notes"* app icon **(1-Finger_FLICK RIGHT or LEFT)**.
   b. Place in *"Jiggle"* mode **(1-Finger_DOUBLE TAP & HOLD)**.
3. Drag the *"Notes"* app up to be the first icon, row 1 column 1 **(1-Finger_DOUBLE TAP & DRAG)**.
4. Exit the *"Jiggle"* mode; press the **(Home)** button.

Task 2: Multitasking Gestures (Multitasking Bar)

Note: During this task you will learn how to use "Multitasking Gestures" to go to the "Home" screen, reveal the "Multitasking Bar" and "Switch" to another app.

1. Go to the *"Home"* screen **(4/5-Finger_PINCH)**.
2. Launch *"Safari"* **(1-Finger_FLICK RIGHT or LEFT)** and **(1-Finger_DOUBLE TAP)**.
3. Again, go to the "Home" screen; **(4/5-Finger_PINCH)**.
4. Launch *"Settings"* **(1-Finger_FLICK RIGHT or LEFT)** and **(1-Finger_DOUBLE TAP)**.
5. Reveal the "Multitasking Bar":
   a. Use the "Multitasking Gesture" to reveal *"Multitasking Bar"* **(4/5-Finger_SWIPE UP)**.
   b. From the list, move to "Safari" **(1-Finger_FLICK RIGHT or LEFT)**.
   c. Activate "Safari" **(1-Finger_DOUBLE TAP)**.
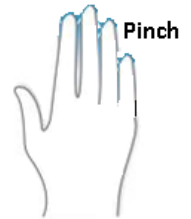
Task 3: Switch between Apps

1. Safari should still be open.
   Note: Must be in an app and have at least one other app opened.
2. *Switch* to the Next App **(4/5-Finger_SWIPE)** left.
3. *Switch* to the Previous App **(4/5-Finger_SWIPE)** right.
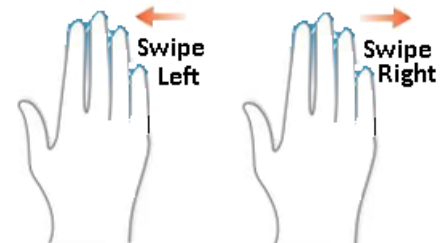
Task 4: Turn ON/OFF the Curtain

1. Turn ON the *Curtain* **(3-Finger_TRIPLE TAPS)**, toggle.
   Note: If VoiceOver is on and Accessibility Zoom is enabled **(3-Finger_FOUR TAPS)**.
2. Go to the *"Home"* screen; press **(Home)** button.
3. Navigate to last app icon on the "Home" screen **(1-Finger_FLICK RIGHT)**.
4. Navigate back to the first app icon on the *"Home"* screen **(1-Finger_FLICK LEFT)**.
5. Turn OFF the Curtain **(3-Finger_TRIPLE TAP)**, toggle.
   Note: If VoiceOver is on and Accessibility Zoom is enabled **(3-Finger_FOUR TAPS)**.

Section 2.5: iBooks (reading a book)

Note: During this section you will learn how to navigate a book in iBooks. iBooks is a free app that you must download from the Apps Store. You can download books to iBooks using the "Store" button in iBooks. Also, you can download ePub, PDF and iBook files to your computer and sync them to your iPad. iBooks is accessible to blind and visually impaired users through VoiceOver, ZOOM, or VoiceOver with a braille display. Although you can read books in portrait or landscape orientation, some books only allow you to adjust the font size when it's in the portrait orientation; so we will use portrait orientation for these tasks.

Task 1: Set the iPad to the Portrait Orientation

1. Slide the *"Side Switch"* to the left to unlock it.
2. Tilt the iPad up on its edge and rotate it so the **(Home)** button is at the bottom.
3. Slide the *"Side Switch"* back down to relock the rotation.

Task 2: Launch the "iBooks" app

Figure 13: Group view
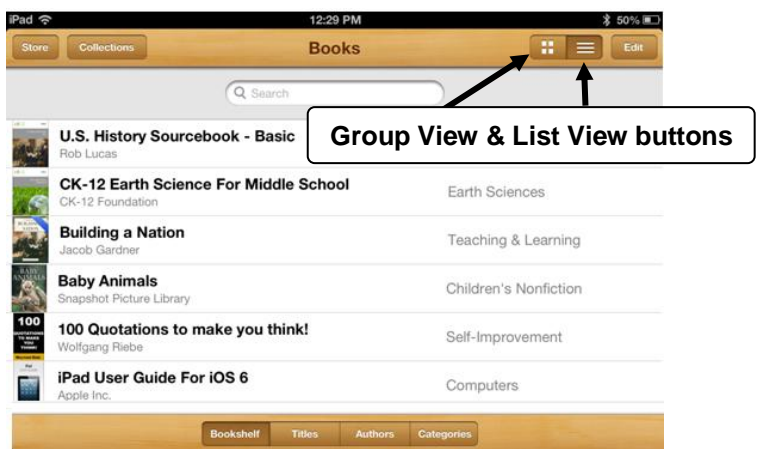
Figure 14: List View

Note: The iBooks library has two main views, "Group View" (bookshelf look) [See figure 13] and "List View" [See Figure 14]. Both views have five buttons across the top on the toolbar; they are: Store, Collections, Group View, List View and Edit. The "Store" button takes you to the Internet to search for books to download. The "Collections" button allows you to switch between your collections of books, purchased books, PDF files, etc. The Group View and List View buttons allow you two ways to arrange the books. The Group View has the books standing up on shelves, showing their covers. In the List View the books are in one vertical list and you have four additional buttons across the bottom of the screen. They are: Bookshelf, Titles, Authors and Categories. Selecting the Edit button allows you to move or delete books.

1. Go to the "Home" screen, press the **(Home)** button.
2. Select the *"Home" screen page* with the *iBooks* app **(3-Finger_FLICK LEFT or RIGHT)**.
3. Select & Activate the *iBooks* app **(1-Finger_TAP)** and then **(1-Finger_DOUBLE TAP)**

Note: iBooks will open either to the last page of your book and VoiceOver will announce the "Library" button or it will open to the "Library" and VoiceOver will announce the "Store" button.

4. Open the iBooks *"Library"*, if not open already, by using **(1-Finger_DOUBLE TAP)** on the *"Library"* button located at the top-left corner of screen on the toolbar. Remember, if you hear the "Store" button announced you are already in the "Library".

Task 3: Launch a Book in iBooks

iPad 🛜 | **Table of Contents** | 11:06 AM | **Appearance** | **Search** | 53% 🔋
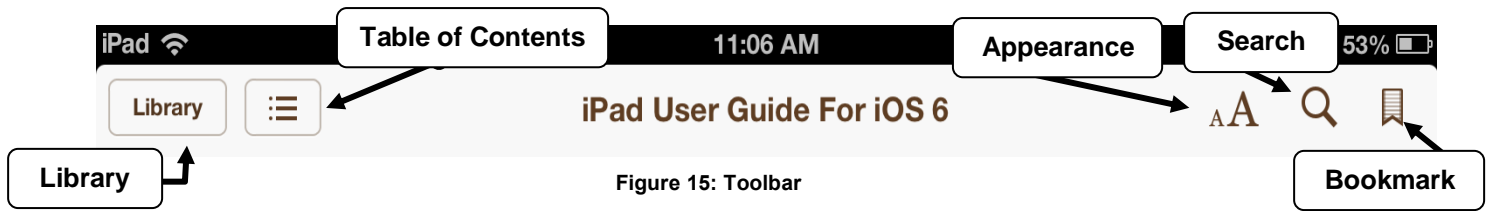
Library | ☰ | iPad User Guide For iOS 6 | A A | Q | 🔖

Library

Bookmark

Figure 15: Toolbar

1. Open the book *"iPad User Guide"*:
   a. **Note:** If the Guide isn't in iBooks, select the "Store" button and download the app; it's free!
   b. Select the book *"iPad User Guide"* **(1-Finger_FLICK RIGHT or LEFT)**.
   c. Activate the book *"iPad User Guide"* **(1-Finger_DOUBLE TAP)**.
2. Once you have launched the "iPad User Guide" you will notice a Toolbar running across the top of the screen with six buttons. They are the Library, Table of Contents, Appearance, Search, and Add/Remove Bookmark buttons (See Figure 15). Other books may have two additional buttons, Audio and Brightness. Move across the following items on the toolbar using the gesture **(1-Finger_FLICK RIGHT or LEFT)**:
   a. Move to the *"Library"* button, which takes you back to the library with your books, when activated.
   b. Move to the *"Table of Contents"* button, which takes you to the Table of Contents with tabs called, Contents, Bookmarks and Notes, when activated.
   c. Move to the *"Appearance"* button, which gives you adjustment options such as brightness, font size, font type, color contrast and page format, when activated.
   d. Move to the *"Search"* button, which allows you to search for text within the book, when activated.
   e. Move to the *"Add/remove"* button, which allows you to add or remove bookmarks.

Task 4: Open "Table of Contents" to select "Accessibility"

1. Select the book's *"Table of Contents"* button **(1-Finger_FLICK RIGHT or LEFT)**.
2. Activate the book's *"Table of Contents"* button **(1-Finger_DOUBLE TAP)**.
3. Move down the Table of Contents list to *"Accessibility"* **(1-Finger_FLICK RIGHT)**.
4. Activate *"Accessibility"* **(1-Finger_DOUBLE TAP)**.

Task 5: Turning Book Pages (3-Finger Swipe & Page Chooser)

1. **3-Finger_Flick Method:**
   a. Move focus to the text on the page **(1-Finger_FLICK RIGHT)** or **(1-Finger_TAP)**.
   b. Pause VoiceOver **(2-Finger_ TAP)**.
   c. Turn to the *next page* **(3-Finger_SWIPE LEFT)** from page's right edge.
   d. Turn to the *previous page* **(3-Finger_SWIPE RIGHT)** from page's left edge.
   e. Pause VoiceOver **(2-Finger_ TAP)**.
2. **Page Chooser Method (located at the bottom of screen):**
   a. Move to "Page Chooser" **(1-Finger_FLICK RIGHT)** or **(1-Finger_TAP)** at bottom of screen.
   b. Method 1: Turning pages **(1-Finger_SWIPE DOWN or UP)**.
   c. Method 2: Turning pages **(1-Finger_DOUBLE TAP & HOLD, DRAG LEFT OR RIGHT)** at bottom of screen.

Task 6: Reading the pages

1. **Method 1 Reading from the top:**

   a. *Jump* to the top of page and start reading **(2-Finger_SWIPE UP)**.

   Note: VoiceOver will start reading from the top of page and will continue reading the book until you pause it.

   b. *Pause* the reading **(2-Finger_TAP)** toggle.

   c. *Resume* & *Pause* the reading again **(2-Finger_TAP)** toggle.

2. **Method 2 Reading from your location:**

   a. Start reading from your *focused* location **(2-Finger_SWIPE DOWN)**.

3. **Method 3 Read one screen at a time:**

   a. *Jump to the top* of page and start reading **(2-Finger_SWIPE UP)**.

   b. Move to the *"Text Box"* just after the "Add Bookmark" button **(1-Finger_FLICK RIGHT)**.

4. **Method 4 Line by Line**

   a. Read line by line **(1-Finger_TAP)** on each line of text.

Task 7: Bookmarks

Note: You don't have to set a bookmark when you close the book to keep your place; iBooks will remember your page and return you to it when you re-open the book. Setting bookmarks is nice when you want to mark numerous pages of the book.

1. *Add A Bookmark:*

   a. Make sure the iPad User Guide is open.

   b. Move to the *"Add a Bookmark"* button on the toolbar **(1-Finger_FLICK RIGHT or LEFT)** and then **(1-Finger_DOUBLE TAP)** to activate.

   c. Place *focus* on page **(1-Finger_FLICK RIGHT)** and *pause* speech **(2-Finger_TAP)**.

   d. Turn the pages three or four times **(3-Finger_SWIPE LEFT)** repeatedly.

   e. Move to the *"Add a Bookmark"* button **(1-Finger_FLICK LEFT)**.

   f. Activate the *"Add a Bookmark"* button **(1-Finger_DOUBLE TAP)**.

   g. Repeat the steps to turn the page and add another *"Bookmark"*.

2. *Navigating Your Bookmarks:*

   a. Select the *"Table of Contents"* button on the Toolbar **(1-Finger_FLICK LEFT or RIGHT)**.

   b. Activate the *"Table of Contents"* button **(1-Finger_DOUBLE TAP)**.

   c. Move to and activate the *"Bookmarks"* tab **(1-Finger_FLICK RIGHT)**, then **(1-Finger_DOUBLE TAP)**.

   d. Move to and activate one of your *"Bookmarks"* **(1-Finger_ FLICK RIGHT)** then **(1-Finger_DOUBLE TAP)**. This will close the "Table of Contents" and move you to the page.

3. *Remove A Bookmark:*

   a. Move to the *"Remove Bookmark"* button on toolbar **(1-Finger_FLICK RIGHT or LEFT)**.

   b. Activate the *"Remove Bookmark"* button **(1-Finger_DOUBLE TAP)**.

Section 2.6: Typing with the "Notes" App

Note: The Notes app allows you to type notes using the on-screen keyboard, an external Bluetooth keyboard, or a refreshable braille display. Although in this section you will be using the on-screen keyboard to complete tasks, the on-screen keyboard is not the most appropriate tool for writing lengthy notes or assignments. When you work in Notes in Landscape orientation you have two panes, a narrow pane to the left with a list of previously created notes and a wider pane with the page for your text. In Portrait orientation you have to select "Notes" button to access the list of previously created notes, you have one page which is your text page.

With an iCloud account you can sync your notes with your other iDevices and computer. Notes can be emailed as well.
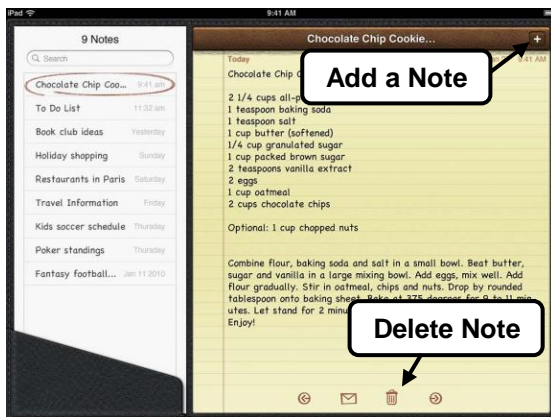
Figure 16: Landscape Orientation
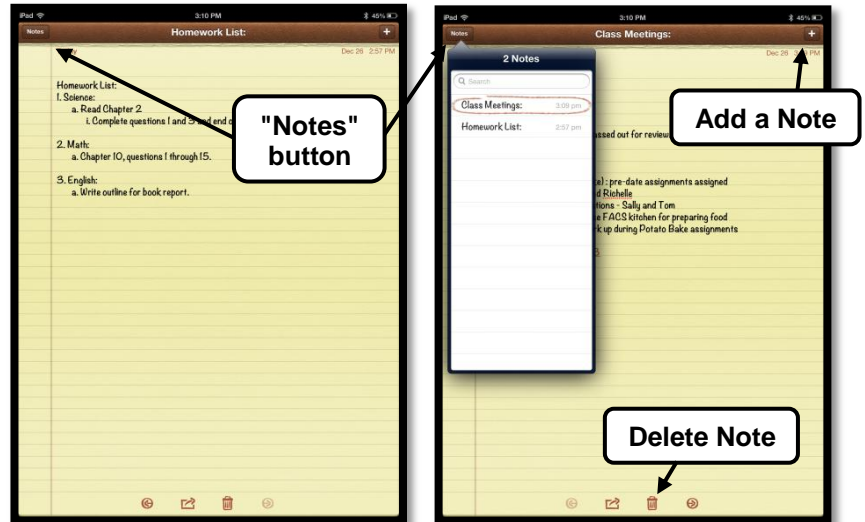
Figure 17: Portrait Orientation

Task 1: Launch "Notes"

1. For tasks 1 and 2 make sure you have the iPad in *Landscape orientation* [See Figure 16].
2. First go to the *"Home"* screen, press **(Home)** button.
3. Move to and activate the *"Notes"* app **(1-Finger_ FLICK RIGHT or LEFT)**, then **(1-Finger_ DOUBLE TAP)**.

Task 2: Create "Sample Note 1" – Typing Method 1

1. **Create your first note using Method 1 Standard typing (select & double tap):**
   a. Select and activate the *"Add a Note"* button **(1-Finger_FLICK RIGHT or LEFT)**, then **(1-Finger_DOUBLE TAP)**.

   Note: If the "Add a Note" button is *grayed out/not available*, you are in a *new* note.

   b. Access the *"Rotor"* and select *"Typing Mode"* **(2-Finger_ROTATE)**.
   c. Select *"Standard Typing"* **(1-Finger_SWIPE UP/DOWN)**.

2. **Typing words:**

   a. Type the words, "*Sample Note 1"* using the gesture **(1-Finger_FLICK Right or Left)** or **(1-Finger_TAP & SLIDE)** to select the letter and **(1-Finger_DOUBLE TAP)** to type them. This is the first line of text.

   b. Use the same gestures to move to and select the *"Return"* key. This will move you to the second line.

   c. Now, continue to use this method and type, *My name is…*

   d. Use the same gestures to move to and select the *"Return"* key.

   e. Again, use this method and type the sentence, *The sky is blue.*

3. **Navigating your text:**

   a. To *jump* back and forth between the *beginning* and *end* of your **text**, first **(1-Finger_TAP)** just *above* the on-screen keyboard to place the *focus* on the page. Then **(1-Finger_DOUBLE TAP)** repeatedly.

   b. To navigate by lines, words, or characters, first set the "Rotor" to lines, words, or characters **(2-Finger_ROTATE)**. Then use **(1-Finger_SWIPE UP/DOWN)** to navigate by the selected item.

4. Select the *"Hide Keyboard"* key to close the keyboard **(1-Finger_FLICK Right or Left)** or **(1-Finger_TAP & SLIDE)** then **(1-Finger_DOUBLE TAP)** to activate and close keyboard.

Task 3: Create "Sample Note 2" – Typing Method 2

1. **Create your second note using Method 2 Standard Typing (2-Finger_SPLIT- TAP):**

   a. Select and activate the *"Add a Note"* button **(1-Finger_FLICK RIGHT or LEFT)** and then **(1-Finger_DOUBLE TAP)**.

   b. Make sure the *"Rotor"* is still set to *"Typing Mode"* **(2-Finger_ROTATE)**, set to Standard Typing **(1-Finger_SWIPE UP/DOWN)**.

   c. Type the words **"*Sample Note 2"*** using one finger to select each letter **(1-Finger_TAP & SLIDE)** and another finger to tap the screen to type the letters **(2-Finger_Split-Tap)**.

   d. On the next line, continue to use method 2 and type the sentence, "***The grass is green."***

   e. Select the *"Hide Keyboard"* key to close the keyboard **(1-Finger_FLICK Right or Left)** or **(1-Finger_TAP & SLIDE)** then **(1-Finger_DOUBLE TAP)** to activate and close keyboard.

Task 4: Create "Sample Note 3" – Typing Method 3

1. **Create your third note using Typing Method 3 Touch Typing:**

   a. Select and activate the *"Add a Note"* button **(1-Finger_FLICK RIGHT or LEFT)** and then **(1-Finger_DOUBLE TAP)**.

   b. Access the *"Rotor"* and select *"Typing Mode"* **(2-Finger_ROTATE)**.

   c. Select *"Touch Typing"* **(1-Finger_SWIPE UP/DOWN)**.

   d. Type the words, **"*Sample Note 3"*** using the third typing method, Touch Typing. This is accomplished by using the index finger to tap and slide to each key and then lifting your finger to type the character.

   e. On the next line, continue to use method 3 and type the sentence **"*The red car is fast."***

   f. Select the *"Hide Keyboard"* key to close the keyboard **(1-Finger_FLICK Right or Left)** or **(1-Finger_TAP & SLIDE)** then **(1-Finger_DOUBLE TAP)** to close keyboard.

Task 5: Switch between notes

1. In *Landscape orientation*, select one of the notes in the left pane [See Figure 16]:
   a. Move to *Sample Note 1* **(1-Finger_FLICK RIGHT or LEFT)**.
   b. Activate the note to open it **(1-Finger_DOUBLE TAP)**.
   c. Move to and read note **(1-Finger_FLICK RIGHT)** repeatedly.
2. In *Portrait orientation*, select one of your notes [See Figure 17]:
   a. Rotate the iPad to *Portrait orientation*.
   b. Move to the *"Notes"* button **(1-Finger_FLICK LEFT)** repeatedly.
   c. Activate button and open the list of notes **(1-Finger_DOUBLE TAP)**.
   d. Move to *Sample Note 3* **(1-Finger_FLICK RIGHT)**.
   e. Activate the note to open it **(1-Finger_DOUBLE TAP)**.
   f. Move to and read note **(1-Finger_FLICK RIGHT)** repeatedly.

Task 6: Delete notes

1. In the *Portrait orientation*, move to the *"Delete"* button; **(1-Finger_FLICK RIGHT OR LEFT)** repeatedly, then **(1-Finger_DOUBLE TAP)**. *Repeat* gesture to activate the next *"Delete"* button that pops up.
2. Repeat the steps to delete the other 2 notes.
   Note: If the *"Delete"* button is *unavailable*, move to and enter the "Notes" page, close the keyboard and then move to and activate the *"Delete"* button.

Part 3: iPad with ZOOM

Before We Get Started

Introduction:

1. The iPad has two Zoom features: "Mainstream Zoom" and "Accessibility Zoom". Although it depends on the user's visual impairment, many users may want to use a combination of these two zoom features.

2. The "Mainstream Zoom" is limited to apps such as photos, webpages, mail and maps. It will not magnify the "Home" screen, Settings, Notes, Calendar, iBooks and other similar apps. Also, it only allows you to zoom in on the page itself, not on the title bar or toolbar.

3. The "Accessibility Zoom" magnifies the entire screen, including the title bar and toolbar. It works on the "Home" screen and with apps. You can use "Accessibility Zoom" and "VoiceOver" together. Also, you can use both "Mainstream Zoom" with "Accessibility Zoom".

4. The navigation of the iPad and its apps, when using the Accessibility Zoom, is the same as Mainstream navigation, except for a few gestures that control zooming and panning.

Section 3.1: Physical Controls

Note: All instructions, unless otherwise directed, assume that the iPad is positioned in the landscape orientation with the **(Home)** button to the right and iPad laying on a flat surface.

1. **To turn on the iPad from shutdown:**

    a. Press & hold the **(Sleep/Wake)** button for 3-5 seconds.

    b. Slide right the **(Slide to Unlock)** button.

2. **To shut down the iPad:**

    a. Wake up iPad if asleep; press & release the **(Home)** button.

    b. Press & hold the **(Sleep/Wake)** button for 3-5 seconds.

    c. Press & release the **(Slide to Power off)** button.

3. **Lock the iPad by putting it to sleep:**

    a. Turn on the iPad, then press & release the **(Sleep/Wake)** button.
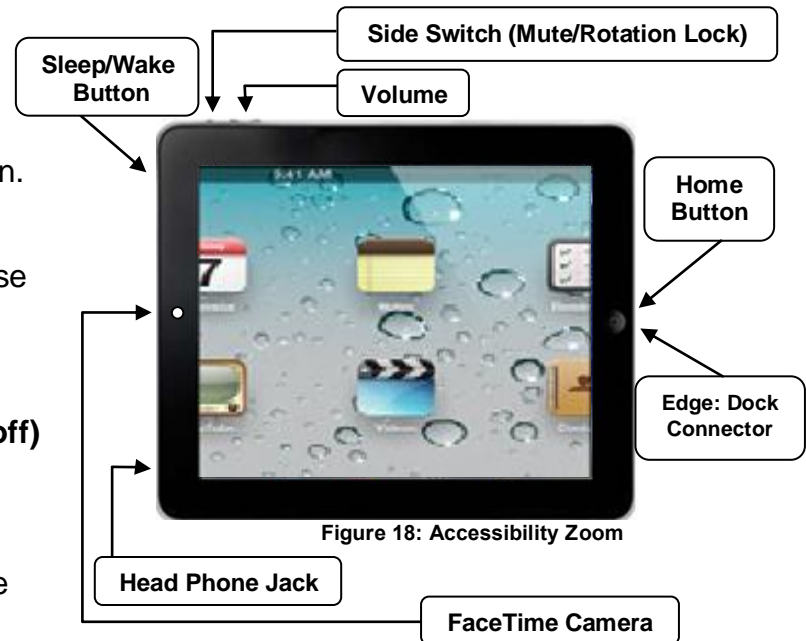
4. **Unlock iPad from sleep:**

    a. After a few seconds the iPad goes to sleep. To wake it up press and release the **(Home)** or **(Sleep/Wake)** button.

Figure 18: Accessibility Zoom

5. **Locate the following physical controls:**

    a. *Side Switch* located on back edge, left corner, the edge that is away from your body.
    b. *Volume control* located right of the **(Side Switch)** on back edge.
    c. *Head Phone Jack* located on left edge, corner closest to your body.
    d. *FaceTime Camera* located on left border of screen, opposite the **(Home)** button.
    e. *iSight Camera* located on the underneath side, next to the **(Sleep/Wake)** button.
    f. *Dock Connector* located on right edge, underneath the **(Home)** button.

6. **Use the (Side Switch) to lock screen "rotation" or "mute" the sound**:

    a. During training or used by students it is beneficial to have the **(Side Switch)** set to *"Lock Rotation"* in Settings. This provides a quick way to lock the screen rotation to keep the screen from unintentional rotation.

    b. You can change the setting of the **(Side Switch)** from *"Lock Rotation"* to *"Mute"* by going to (Settings > General > Use Side Switch To), then check one of the two items.

    c. **Locking and unlocking the screen rotation:**

        i. Slide the **(Side Switch)** to the left to unlock the screen rotation.

        ii. Raise the iPad in the vertical position with its edge on table surface.

        iii. Rotate the iPad so the edge with the **(Home)** button is touching the table surface. You will notice that the screen rotated right-side up.

        iv. Again, unlock and rotate iPad back in the landscape orientation position with the **(Home)** button to the right and use the **(Side Switch)** to lock the screen rotation.

Section 3.2: Triple-click Home – Navigating the "Home" screen & Settings

Note: All instructions, unless otherwise directed, assume that the iPad is positioned in the landscape orientation with the **(Home)** button to the right and iPad laying on a flat surface.

Task 1: Triple-click Home Settings Configuration 2

Note: During this task you will set the *"Triple-click Home"* feature to give both the blind and visually impaired user the ability to switch between *VoiceOver* and the *Accessibility Zoom*. The "Triple-click Home" feature gives you an easy way to cycle between four accessibility features by pressing the **(Home)** button three times quickly. *Refer back to "Part 2: iPad and VoiceOver" for more details on this feature.*

1. **Setting "Triple-click Home" to "VoiceOver":**

   a. Turn on the iPad and go to the *"Home"* screen.

   b. Launch the *"Settings"* app **(1-Finger_TAP)**.

   c. In the left pane, select and open the *"General"* menu **(1-Finger_TAP)**.

   d. In the right pane, select and open the *"Accessibility"* menu **(1-Finger_TAP)**.

   e. In the right pane, select and open *"Triple-click Home"* menu **(1-Finger_TAP)**.

   f. In the right pane, select **"VoiceOver" (1-Finger_TAP)**.

2. **Enable the Accessibility Zoom feature:**

   a. At the top, on the toolbar, select the *"Accessibility"* button to take you back to the previous page **(1-Finger_TAP)**.

   b. In the right pane, scroll to the top of the menu and open the *"Zoom"* menu. Enable Zoom by setting the on/off button to ON.

   Note: Review the three gestures located on this screen (below the off/on button), you will use these gestures throughout Part 3.

3. **Practice your Settings:**

   Note: It is very important to make sure all 3 fingers are on the screen as you make the **(3-Finger)** gestures for the Accessibility Zoom. If you accidently lift one finger during the gesture you will not get the desired results.

   a. Move to the *"Home"* screen, press the **(Home)** button once.

   b. Zoom *IN* **(3-Finger_DOUBLE TAP & SLIDE UP)**. Note: Slide up on the second tap.

   c. Toggle between your *zoomed in magnification* and *zoomed out no magnification* **(3-Finger_DOUBLE TAP)**.

   d. Again, zoom *IN* **(3-Finger_DOUBLE TAP & SLIDE UP)**.

   e. Zoom *OUT* until there is *no* magnification **(3-Finger_DOUBLE TAP & SLIDE DOWN)**.

   Note: Start the gesture at the top of the screen and slide to the bottom.

   f. Turn *on VoiceOver*, press the **(Home)** button 3 times quickly. You now have *VoiceOver* and *Accessibility Zoom* enabled.

   g. Turn *off VoiceOver*, press the **(Home)** button 3 times quickly. You now *only* have the *Accessibility Zoom* enabled. VoiceOver will remain off for Part 3.

Task 2: Panning icons on the "Home" screen page

Note: It is very important to make sure all 3 fingers are on the screen as you make the **(3-Finger)** gestures for the Accessibility Zoom. If you accidently lift one finger during the gesture you will not get the desired results.

1. You should be on the *"Home"* screen with the icon apps, if not press the **(Home)** button once. Also, you should be *zoomed out* with *no* magnification, if not refer to Task 1, Item 3.

2. The pages of the *"Home"* screen have 5 rows and 5 columns of app icons. *Look* at your *"Home"* screen and make note of the app icons in *top* and *bottom* rows. Also, make note of the app icons in the *first* and *last* columns.

3. *Adjust* your zoom *IN or OUT* until you *only* have *3 columns* of *icons* visible on the *"Home"* screen **(3-Finger_DOUBLE TAP & SLIDE UP or DOWN)** [See Figure 19].

4. *Pan* the screen to the *far left* of page **(3-Finger_TAP & SLIDE RIGHT)** repeatedly if needed.

5. *Pan* to the *top* of the screen until you see the word, *"iPad"* and the *"wifi icon"* on the "Status Bar" **(3-Finger_TAP & SLIDE DOWN)** repeatedly if needed.

Figure 19: 3 columns

6. *Pan* to the *bottom* of the screen until you see the bottom row of app icons **(3-Finger_TAP & SLIDE UP)** repeatedly if needed.

7. *Pan* the screen to the *far right* of page until you see the last app icon on the bottom row **(3-Finger_TAP & SLIDE LEFT)** repeatedly if needed.

Note: The gestures you have learned in this task will be used throughout Part 3.

Task 3: Navigating between the "Search" screen and the "Home" screen pages

Note: In most cases, you will use a combination of *Mainstream gestures* and *Accessibility Zoom gestures* to navigate.

1. You should be on the *"Home"* screen with the apps icons, if not press the **(Home)** button once.

2. Again, adjust your zoom *IN or OUT* until you *only* have *3 columns* of *icons* visible on the *"Home"* screen **(3-Finger_DOUBLE TAP & SLIDE UP or DOWN)** [See Figure 19].

3. Move to the *Search Screen* **(1-Finger_TAP & SLIDE RIGHT)**.

4. Move back to page 1 of the *"Home"* screen **(1-Finger_TAP & SLIDE LEFT)**.

5. Next, move on to page 2 of the *"Home"* screen **(1-Finger_TAP & SLIDE LEFT)** again.

   a. Note: the number of *"Home"* screen pages will depend on number of app and folder icons you have on the *"Home"* screen.

6. Move back to page 1 of the **"Home" screen (1-Finger_TAP & SLIDE RIGHT)**.

Task 4: Rearranging the App Icons on the "Home" screen

1. Go to the *"Home"* Screen; press **(HOME)** button.

2. Adjust your zoom *IN or OUT* until you *only* have *3 columns* of *icons* visible on the *"Home"* screen **(3-Finger_DOUBLE TAP & SLIDE UP or DOWN)** [See Figure 19].

3. Place the *"Home"* screen into *"Jiggle"* mode by **(1-Finger_TAP & HOLD)** and drag the *desired icon* to a different location.

4. *Disable* the *"Jiggle"* mode by pressing the **(Home)** button once.

Task 5: Create "Folders" on the "Home" screen

1. Go to the *"Home"* Screen; press **(HOME)** button.

2. Adjust your zoom *IN or OUT* until you *only* have *3 columns* of *icons* visible on the *"Home"* screen **(3-Finger_DOUBLE TAP & SLIDE UP or DOWN)** [See Figure 19].

3. Place the *"Home"* screen into *"Jiggle"* mode by **(1-Finger_TAP & HOLD)** and then dragging the *desired icon* onto *another* icon; the folder is automatically created and named.

4. *Disable* the *"Jiggle"* mode by pressing the **(Home)** button once.

5. *Close* the new folder, press the **(Home)** button again.

Task 6: Navigating the iPad "Settings"

Note: In most cases, you will use a combination of *Mainstream gestures* and *Accessibility Zoom gestures* to navigate. During this task you will go to *"Settings"* and turn on the *"Invert Colors"* accessibility feature.

1. You should be on the *"Home"* screen with the apps icons, if not press the **(Home)** button once.

2. Jump to *zoom out*, *no* magnification **(3-Finger_DOUBLE TAP)**.

3. Now, jump to *zoom in*, to your previous zoom magnification **(3-Finger_DOUBLE TAP)** again.

4. Adjust your zoom *IN or OUT* until you *only* have *3 columns* of *icons* visible on the *"Home"* screen **(3-Finger_DOUBLE TAP & SLIDE UP or DOWN)** [See Figure 19].

5. Move to the **"Home" screen** page with the *"Settings"* app icon **(1-Finger_TAP & SLIDE RIGHT or LEFT)**.

6. *Pan* the screen to *view* the *"Settings"* app **(3-Finger_TAP & SLIDE ANY DIRECTION)**.

7. Launch the *"Settings"* app **(1-Finger_TAP)**.

8. *Pan* the screen to the *left pane* **(3-Finger_TAP & SLIDE RIGHT)** and select *"General"* **(1-Finger_TAP)**.

9. *Pan* the screen to the *right pane* **(3-Finger_TAP & SLIDE LEFT)**.

10. *Scroll* and *pan* down the right pane until you see *"Accessibility"*.

    Note: To view *"Accessibility"* it may take a combination of **(1-Finger_TAP & SLIDE UP)** and **(3-Finger_TAP & SLIDE UP)**.

11. Now, select *"Accessibility"* **(1-Finger_TAP)**.

12. *Pan* the screen to view *"Invert Colors"* the *upper right pane* **(3-Finger_TAP & SLIDE DOWN)**. Now pan to the right edge of right pane to view the on/off button.

13. Now, select the *"Invert Colors" on/off* button to turn *on* feature **(1-Finger_TAP)**.

14. Select the *"Invert Colors" on/off* button again to turn *off* feature **(1-Finger_TAP)**.

15. Move back to the *"Home"* screen, press **(Home)** button once.

16. Jump to *zoom out*, *no* magnification **(3-Finger_DOUBLE TAP)**.

Section 3.3: Surfing the Internet with Safari

Note: All instructions, unless otherwise directed, assume that the iPad is positioned in the landscape orientation with the **(Home)** button to the right and iPad laying on a flat surface. The tasks in this section will demonstrate strategies using both Mainstream Zoom and Accessibility Zoom.

Task 1: Launch Safari and go to www.animalfactguide.com

1. You should be on the *"Home"* screen with the apps icons, if not press the **(Home)** button once.
2. Jump to *zoom out*, *no* magnification **(3-Finger_DOUBLE TAP)**.
3. Launch *"Safari"* **(1-Finger_TAP)**.
4. Select the *"Address Bar"* at top of screen **(1-Finger_TAP)**. This should bring up the on-screen keyboard.
5. Type *animalfactguide.com* by selecting each key and then select the *"GO"* key **(1-Finger_TAP)**.

Task 2: Mainstream Zoom (2-Finger_Pinch) & (Double Tap)

1. *Make sure* you have completed Task 1.
2. **Mainstream (2-finger pinch) Zoom:**
   a. *Zoom In* by placing your thumb and index finger *together* on the screen and slowly slide them apart about two inches **(2-Finger_PINCH)**. *Notice* that only the webpage was magnified, not the toolbar at the top.
   b. Now *Zoom Out* by placing your thumb and index finger *apart* about two inches and sliding them together **(2-Finger_PINCH)**.
   c. Again *Zoom In* by placing your thumb and index finger *together* on the screen and slowly slide them apart about two inches **(2-Finger_PINCH)**.
   d. Locate the link *"Animal Facts"*: *Pan* to the *left edge* of the webpage **(1-Finger_TAP & SLIDE RIGHT)**; then *pan up* or *down* to the *row* of links close to the top of the webpage **(1-Finger_TAP & SLIDE DOWN or UP)**.
   e. Select the *"Animal Facts"* link **(1-Finger_TAP)**. *Notice* on the new webpage there is no magnification, back to the normal view.
   f. *Zoom In* by placing your thumb and index finger together on the screen and slowly slide them apart about two inches **(2-Finger_PINCH)**.
   g. Locate the picture or link of the *"Cougar"*: *Pan* to the *left edge* of the webpage **(1-Finger_TAP & SLIDE RIGHT)**. *Pan down* the *webpage* to the picture or link of the *"Cougar"* **(1-Finger_TAP & SLIDE UP)** repeatedly.
   h. Select the *"Picture"* or *"Link"* **(1-Finger_TAP)**. Again, the new web page is not magnified.
   i. *Zoom In* by placing your thumb and index finger together on the screen and slowly slide them apart about two inches **(2-Finger_PINCH)**.
   j. Scroll to the left edge of the webpage **(1-Finger_TAP & SLIDE RIGHT)** repeatedly.
   k. Scroll to the right edge of the webpage **(1-Finger_TAP & SLIDE LEFT)** repeatedly.
   l. Scroll to the bottom edge of the webpage **(1-Finger_TAP & SLIDE UP)** repeatedly.
   m. Scroll to the left edge of the webpage **(1-Finger_TAP & SLIDE DOWN)** repeatedly.
   n. Now *Zoom Out* to normal view **(2-Finger_PINCH)**.

3. **Mainstream (1 & 2 Finger_Double Tap) Zoom:**
    a. You should still be on the *Cougar's* webpage.
    b. *Zoom in* on the left column by **(1-Finger_DOUBLE TAP)** on the left column.
    c. Scroll down the column **(1-Finger_TAP & SLIDE UP)** repeatedly.
    d. **Zoom out** back to normal view of webpage **(2-Finger_DOUBLE TAP)** on left column.

Task 3: Accessibility Zoom

Note: Figure 20 is a screen shot of the webpage zoomed in with the Accessibility Zoom. Figure 21 shows the zoomed in portion of Figure 20.
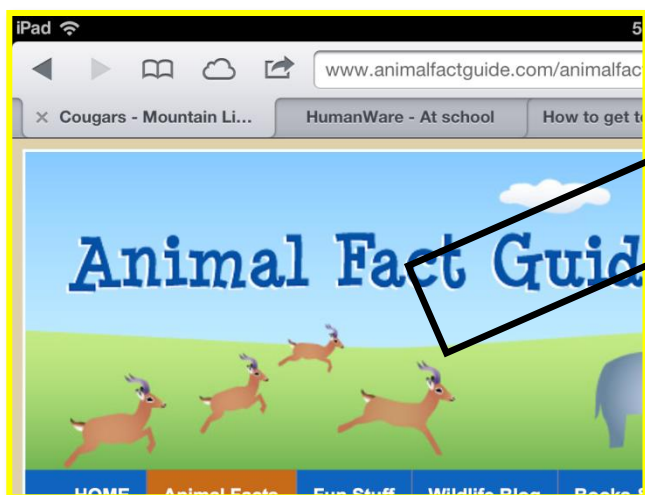

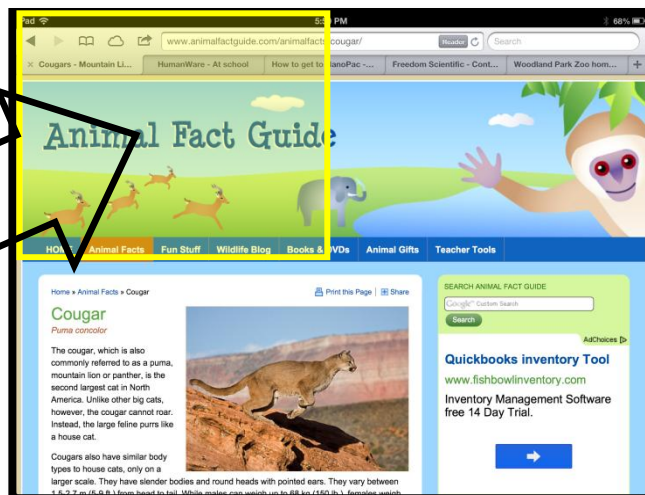
Figure 20: iPad screen-zoomed view


Figure 21: iPad screen-normal view w/figure 2 overlay

1. Make sure you have completed Tasks 1 and 2.
2. Move to the *"Home"* screen, press the **(Home)** button.
3. Adjust your zoom *IN or OUT* until you *only* have *3 columns* of *icons* visible on the *"Home"* screen **(3-Finger_DOUBLE TAP & SLIDE UP or DOWN)**. [See Figure 19].
4. *Pan* the screen to *view* the *"Safari"* app **(3-Finger_TAP & SLIDE ANY DIRECTION)**.
5. Launch the *"Safari"* app **(1-Finger_TAP)**.
6. *Pan* to the *left edge* of the webpage **(3-Finger_TAP & SLIDE RIGHT)**.
7. *Pan* to the *top* of the webpage **(3-Finger_TAP & SLIDE DOWN)**.
8. *Scroll* to the *top* of the webpage **(1-Finger_TAP & SLIDE UP)**.
9. *Scroll* to the *title/heading "Cougar"* of the webpage **(1-Finger_TAP & SLIDE UP)**.
10. *Pan* to read information about the *"Cougar"*:
    a. Scroll down the webpage to read the first paragraph **(1-Finger_TAP & SLIDE UP)**.
    b. Start *Scrolling down* **(1-Finger_TAP & SLIDE UP)** and *Panning* to the *right* and *left* **(3-Finger_TAP & SLIDE LEFT and then RIGHT)** to continue reading the next 2 paragraphs. This may take some practice to master.
    c. Practice using the above gestures to move around and read the information on this webpage.
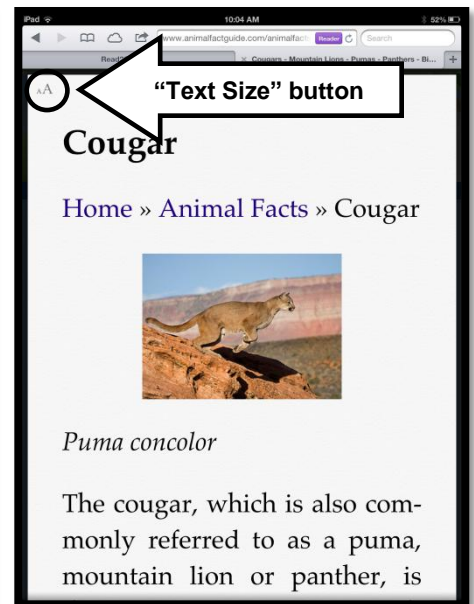
Task 4: Viewing Articles in "Reader"

Note: The *"Reader"* is a feature that allows you to view an article in a new page without the advertisements, links and sidebar information. During this task you will go to the *"Giraffe"* webpage and use the *"Reader"* to view information about the "Giraffe".
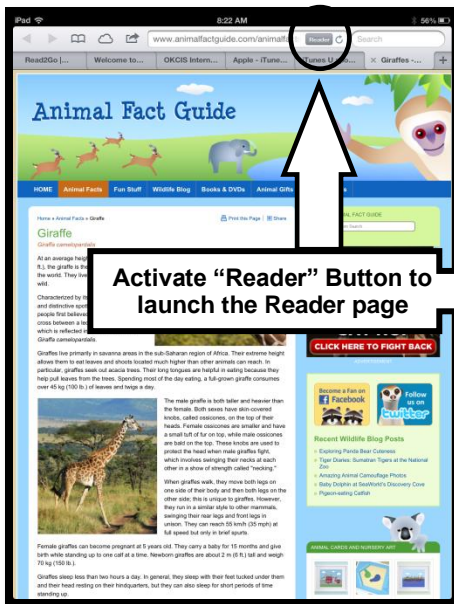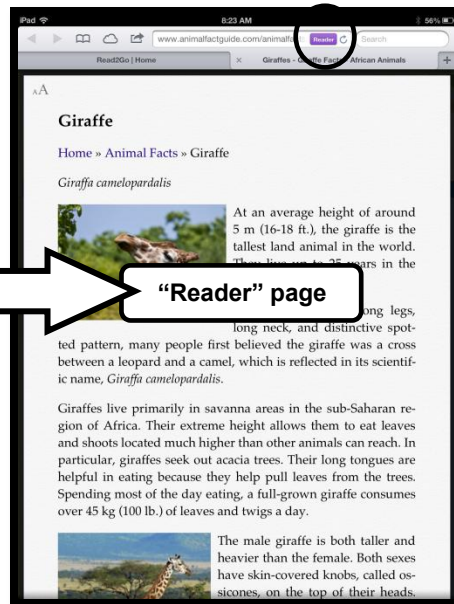
Figure 22: "Reader" page

Figure 23: "Reader" page

Figure 24: Large Text on "Reader" page

1. Make sure you have completed Tasks 2 and 3.

2. *Pan* to view the *"Address Bar"* with the *"Reader"* button **(3-Finger_DOUBLE TAP & SLIDE DOWN)**. Then pan to the right edge of webpage **(3-Finger_DOUBLE TAP & SLIDE LEFT)** [See Figure 22].

3. Select the *"Reader" button* **(1-Finger_TAP)** [See Figure 22].

4. Adjust your zoom *IN or OUT* until you have the *picture* of leaping *cougar* filling the width of the screen **(3-Finger_DOUBLE TAP & SLIDE UP or DOWN)**.

5. *Pan* the screen to *view* each paragraph **(3-Finger_TAP & SLIDE ANY DIRECTION)**.

6. Now, *zoom out*, with *no* magnification **(3-Finger_DOUBLE TAP)**.

7. *Select* the *"Text Size"* button to *increase* the *font size* on the "Reader" page [See Figure 24].

8. Select the *"Reader" button* to *close* the "Reader" page and go back to the original webpage **(1-Finger_TAP)** [See Figure 23].

9. Move to the *"Home"* screen, press the **(Home)** button.

Section 3.4: Accessing Maps (Accessibility ZOOM vs. Mainstream Zoom)

Note: All instructions, unless otherwise directed, assume that the iPad is positioned in the landscape orientation with the **(Home)** button to the right and iPad laying on a flat surface. The tasks in this section will demonstrate strategies using both Mainstream Zoom and Accessibility Zoom.

Task 1: Enable and Adjust Accessibility ZOOM

1. Move to the *"Home"* screen, press the **(Home)** button.

2. Adjust your zoom *IN or OUT* until you *only* have *4 icons* visible on the *"Home"* screen [See Figure 25] **(3-Finger_DOUBLE TAP & SLIDE UP or DOWN)** to zoom and **(3-Finger_TAP & SLIDE ANY DIRECTION)** to pan screen.

3. Zoom out to normal view **(3-Finger_DOUBLE TAP)**.

Figure 25: Accessibility Zoom with 4 icons

Task 2: Launch "Maps" app & Adjust Map size

1. You should have completed Task 1.

2. Launch the *"Maps"* app **(1-Finger_TAP)**.

3. Use the *Mainstream zoom* to adjust the *map size* so the 48 US states are framed on the screen and then *pan* map to *center* of screen [See Figure 26]:

    a. To adjust size place thumb and index finger *together* on the screen and slide them apart or together **(2-Finger_PINCH)**.

    b. To pan map to the center **(1-Finger_TAP & SLIDE ANY DIRECTION)**.

Figure 26: US Map framed screen

4. Use *Accessibility Zoom* to *pan* Oklahoma in center of screen:

    a. *Zoom in* to the *preset* zoom **(3-Finger_DOUBLE TAP)** in the center of screen.

    b. *Pan* Oklahoma in the center of the screen **(3-Finger_TAP & SLIDE ANY DIRECTION)**.

5. Use the *Mainstream zoom* to show cities in Oklahoma:

    a. *Zoom in* and *pan* to show the streets of your city or town in the center of the screen. The two gestures are **(2-Finger_PINCH)** to *zoom in or out* and **(1-Finger_TAP & SLIDE ANY DIRECTION)** to *pan* in any direction.

    b. Repeat process until you can read the street name of a known intersection.

6. Use Mainstream *(Tap & Double Tap)* to Zoom:

    a. Use *Mainstream zoom* to *zoom out* **(2-Finger_TAP)** 3 or 4 times.

    b. Use *Mainstream zoom* to *zoom in* **(1-Finger_TAP)** 3 or 4 times.

7. Use Accessibility Zoom to show 48 US States:

    a. Use *Accessibility Zoom* and zoom out to normal view **(3-Finger_DOUBLE TAP)**.

    b. Use *Mainstream Zoom* and zoom out to US States, the gestures are **(2-Finger_PINCH)** to *zoom in or out* repeatedly and **(1-Finger_TAP & SLIDE ANY DIRECTION)** to *pan* in any direction. [See Figure 26].

8. Move to *"Home"* screen, press **(Home)** button.

Section 3.5: iBooks: (reading a book)

Note: During this section you will use Accessibility Zoom to navigate the iBooks app and the book's large font to read the book. iBooks is a free app that you must download from the Apps Store. You can download books to iBooks using the "Store" button in iBooks. Also, you can download ePub, PDF and iBook files to your computer and sync them to your iPad. Although you can read books in *portrait* or *landscape orientation*, some books *only* allow you to adjust the font size when it's in the portrait orientation so we will use *portrait orientation* for these tasks.

Task 1: Set the iPad to the Portrait Orientation

1. Go to the *"Home"* screen by pressing the **(Home)** button.

2. Slide the **(Side Switch)** to the left to unlock it.

3. Tilt the iPad up on its edge and rotate it so the **(Home)** button is at the bottom.

4. Slide the **(Side Switch)** back down to relock the rotation, then lay the iPad back on the table.

Task 2: Adjust Accessibility Zoom

Note: During this task we will only use the Accessibility Zoom when needed for navigation.

1. Move to the *"Home"* screen, press the **(Home)** button.

2. Adjust your zoom **IN or OUT** until you *only* have **6 icons** visible on the *"Home"* screen [See Figure 27] **(3-Finger_DOUBLE TAP & SLIDE UP or DOWN)** to zoom and **(3-Finger_TAP & SLIDE ANY DIRECTION)** to pan screen.

Figure 27: Accessibility Zoom with only 6 icons

Task 3: Launch the "iBooks" app

1. *Make sure* you have *completed task 2,* adjusting your Accessibility Zoom, *before* completing this task.

2. If the iBooks app is on *page one* of the *"Home"* screen then **(3-Finger_TAP & SLIDE ANY DIRECTION)** to *pan* screen to view *iBooks*. If iBooks is not on page one then to move to the *"Home"* screen page with iBooks **(1-Finger_FLICK LEFT or RIGHT)** and *pan* the screen to find *iBooks* **(3-Finger_TAP & SLIDE ANY DIRECTION)**.

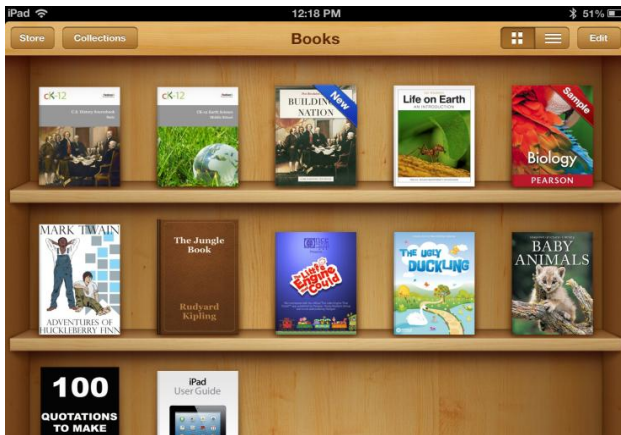3. Select & Activate the *iBooks* app **(1-Finger_TAP)**.
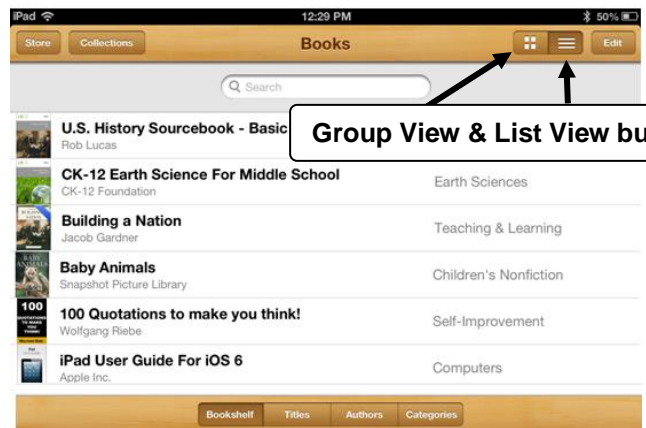
Figure 28: Group view

Figure 29: List View

Note: The iBooks library has two main views, "Group View" (bookshelf look) [See Figure 28] and "List View" [Figure 29]. Both views have five buttons across the top on the toolbar; they are: Store, Collections, Group View, List View and Edit. The "Store" button takes you to the Internet to search for books to download. The "Collections" button allows you to switch between your collections of books, purchased books, PDF files, etc. The Group View and List View buttons will arrange the books. The Group View has the books standing up on shelves, showing their covers. In the List View the books are in one vertical list and you have four additional buttons across the bottom of the screen. They are: Bookshelf, Titles, Authors and Categories. Selecting the Edit button allows you to move or delete books.

1. **Do the following to open the iBooks *"Library"*:**

   Note: If it *is already* open you will *not see* the *"Library"* button and you can move to item 2 in this task.

   a. *Make sure* you have *completed task 2,* adjusting your Accessibility Zoom, *before* completing this task.

   b. Use the Accessibility Zoom *panning gesture* to move to the first item on the toolbar; first pan to the top edge of screen **(3-Finger_TAP & SLIDE DOWN)**, then pan to the left edge of screen **(3-Finger_TAP & SLIDE RIGHT)**.

   c. Select the *"Library"* button **(1-Finger_TAP)** at the top on the toolbar.

2. **Do the following to select & open the book *"iPad User Guide"*:**

   Note: If the Guide isn't in iBooks, select the "Store" button and download the app. It's free!

   a. Use the Accessibility Zoom *panning gesture* to pan in view the book *"iPad User Guide"*; first pan to the top edge of screen **(3-Finger_TAP & SLIDE DOWN)**, then pan to the left edge of screen **(3-Finger_TAP & SLIDE RIGHT)**. Now pan left **(3-Finger_TAP & SLIDE LEFT)** across the shelves.

   b. If the book is not found then pan down to the next row **(3-Finger_TAP & SLIDE DOWN)** and begin panning to the left **(3-Finger_TAP & SLIDE RIGHT)**. Repeat the steps until the book is in view.

   c. Select & Activate the *iBooks* app **(1-Finger_TAP)**. The *"iPad User Guide"* should now be open.
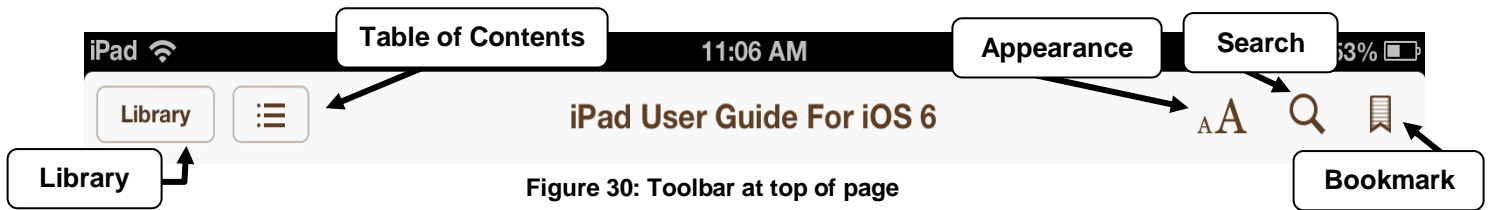
Figure 30: Toolbar at top of page

Note: Once you have launched the *"iPad User Guide"* you will notice a *Toolbar* running across the top of the screen with *six buttons*. They are the Library, Table of Contents, Appearance, Search and Add/Remove Bookmark buttons [See Figure 30]. Other books may have two additional buttons, Audio and Brightness.

- o The *"Library"* button takes you back to the library with your books.
- o The *"Table of Contents"* button takes you to the Table of Contents with tabs for Contents, Bookmarks and Notes.
- o The *"Appearance"* button gives you some adjustment options such as brightness, font size, font type, color contrast and page format.
- o The *"Search"* button allows you to search for text within the book.
- o The *"Add/Remove Bookmark"* button allows you to add or remove bookmarks within the book.

Task 5: Open "Table of Contents" to select "Accessibility" (Accessibility Zoom)

1. *Make sure* you have *completed task 2,* adjusting your Accessibility Zoom, *before* completing this task.

2. **Select book's *"Table of Contents"* button:**

   a. Use the Accessibility Zoom *panning gesture* to move to the first item on the toolbar; first pan to the top edge of screen **(3-Finger_TAP & SLIDE DOWN)**, then pan to the left edge of screen **(3-Finger_TAP & SLIDE RIGHT)**.

   b. Select the *"Table of Contents"* button **(1-Finger_TAP)** at the top on the toolbar.

3. **Move down the Table of Contents list to view "Accessibility":**

   a. *Mainstream Scroll* down the Table of Content list **(1-Finger_TAP & SWIPE UP)**. Repeat the gesture until the list stops scrolling.

   b. Now, use the Accessibility Zoom *panning gesture* to *pan* the screen down **(3-Finger_TAP & SLIDE UP)**.

4. Select to open the *"Accessibility"* menu **(1-Finger_TAP)**.

Task 6: Increasing Font Size (No Accessibility Zoom)

1. Make sure you have completed Tasks 2-5 before completing this task.
2. Open the *"Appearance" dialog box* by selecting the *"Appearance"* button [See Figure 30]:
    a. Use the Accessibility Zoom *panning gesture* to move to the last item on the toolbar; first pan to the top edge of screen **(3-Finger_TAP & SLIDE DOWN)**, then pan to the right edge of screen **(3-Finger_TAP & SLIDE LEFT)**.
    b. Select the *"Appearance"* button **(1-Finger_TAP)** [See Figure 30]. Now you have small dialog box with 5 buttons.
3. Zoom out to normal view **(3-Finger_DOUBLE TAP)**.
4. In the dialog box, locate the *button* with the *large A* and increase the font size on the pages **(1-Finger_TAP)** repeatedly 6 times.
    Note: You can also adjust the brightness, font type, and themes.
5. In the dialog box, locate and select the *"Themes" button* **(1-Finger_TAP)**.
6. Select the *"Night" button* to change the *color contrast* **(1-Finger_TAP)**. Now, select the *"White" button* to change it back to the normal contrast **(1-Finger_TAP)**.
7. *Close* the *"Appearance"* dialog box **(1-Finger_TAP)** anywhere outside the dialog box.

Task 7: Turning the Book Pages (No Accessibility Zoom)

1. Make sure you have completed Task 6 before completing this task.
2. **Turn Pages Slowly:**
    a. Turn to the *next page* slowly, from right edge of page **(1-Finger_TAP & SLIDE LEFT)**.
    b. Turn to the *previous page* slowly, from left edge of page **(1-Finger_ TAP & SLIDE RIGHT)**.
3. **Turn Pages Quickly:**
    a. Turn to the next page; on right edge **(1-Finger_TAP)**.
    b. Turn to the previous page; on left edge **(1-Finger_TAP)**.

Task 8: Working with Bookmarks

Note: You don't have to set a bookmark when you close the book to keep your place; iBooks will remember your page and return you to it when you re-open the book. Setting bookmarks is nice when you want to mark numerous pages of book.

1. Jump to your *previous Accessibility Zoomed In* setting **(3-Finger_DOUBLE TAP)**.
2. **Adding Bookmarks:**
    a. Use the Accessibility Zoom *panning gesture* to move to the last item on the toolbar; first pan to the top edge of screen **(3-Finger_TAP & SLIDE DOWN)**, then pan to the right edge of screen **(3-Finger_TAP & SLIDE LEFT)**.
    b. Select the *"Add Bookmark"* button **(1-Finger_TAP)** [See Figure 30].
    c. Turn the *next* page *3 or 4 times* and *ADD* another *Bookmark* **(1-Finger_TAP)** repeatedly on right edge of page.
    d. *Repeat* the steps 2 or 3 times to *ADD* additional *Bookmarks*.

3. **Navigating Your Bookmarks:**

   a. Make sure you have completed the *previous steps* of this task before moving on.

   b. Use the Accessibility Zoom *panning gesture* to move to the *top-left button* on the toolbar; first pan to the top edge of screen **(3-Finger_TAP & SLIDE DOWN)**, then pan to the left edge of screen **(3-Finger_TAP & SLIDE RIGHT)**.

   c. Select the *"Table of Contents"* button **(1-Finger_TAP)** [See Figure 30].

   d. Use the Accessibility Zoom *panning gesture* to move to the *center item* on the toolbar; first pan to the top edge of screen **(3-Finger_TAP & SLIDE DOWN)**, then pan to the left edge of screen **(3-Finger_TAP & SLIDE LEFT or RIGHT)**.

   e. Select the *"Bookmarks"* Tab **(1-Finger_TAP)** [See Figure 31].

   f. Now, select the *first "Bookmark"* in the list **(3-Finger_TAP & SLIDE LEFT or RIGHT)** then **(1-Finger_TAP)**.

Figure 31: Tabs

4. **Remove a Bookmark:**

   a. Zoom out to normal view **(3-Finger_DOUBLE TAP)**.

   b. Select the *"Remove Bookmark"* button (red ribbon) at the top-right corner of Toolbar **(1-Finger_TAP)**; the bookmark is now removed.

   c. Repeat the steps in items 3 and 4 to remove the remaining Bookmarks.

   d. When finished, move back to the "Home" screen; press **(Home)** button.

Section 3.6: Typing with the "Notes" App

Note: The Notes app allows you to type notes using the on-screen or wireless keyboard connected via Bluetooth. Using the on-screen keyboard with Accessible Zoom isn't as efficient as a wireless keyboard. When using a wireless keyboard the screen image follows the insertion point (cursor), always keeping it in view. When you work with *Notes* in *Landscape orientation* you have *two* panes, a narrow pane to the left with a list of previously created notes and a wider pane with the page for your text. In *Portrait orientation* you have *one* pane, which is your text page. To access your list of previous notes, you must activate the "Notes" button.

With an iCloud account you can sync your notes with your other iDevices and computer. Notes can be emailed, as well.
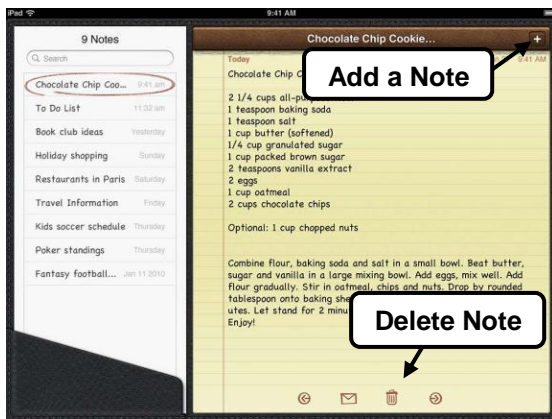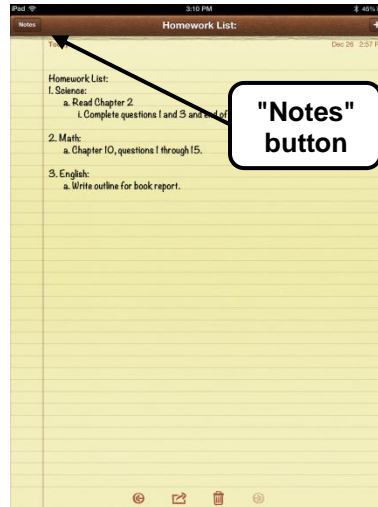
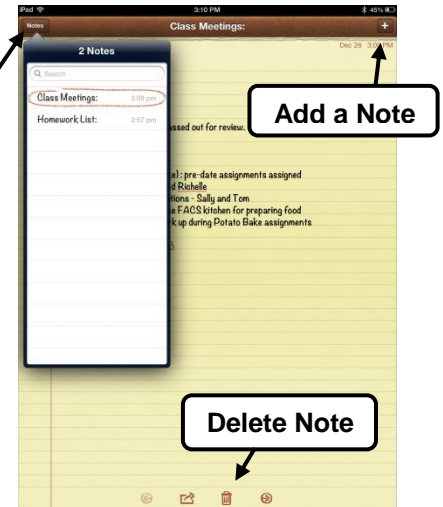**Figure 32: Landscape View**

Figure 33: Portrait View 1

Figure 34: Portrait View 2

Task 1: Launch "Notes"

1. Go to the *"Home"* screen by pressing the **(Home)** button.

2. For tasks 1 and 2 make sure you have the iPad in *Landscape orientation* [See Figure 35].

3. Adjust your zoom *IN or OUT* until you *only* have *4 icons* visible on the *"Home"* screen [See Figure 35] **(3-Finger_DOUBLE TAP & SLIDE UP or DOWN)** to zoom and **(3-Finger_TAP & SLIDE ANY DIRECTION)** to pan screen.

4. If the *Notes* app is on *page one* of the *"Home"* screen then **(3-Finger_TAP & SLIDE ANY DIRECTION)** to *pan* screen to view *Notes*. If Notes is not on page one then to move to the *"Home"* screen *page* with Notes **(1-Finger_FLICK LEFT or RIGHT)** and *pan* the screen to find *Notes* **(3-Finger_TAP & SLIDE ANY DIRECTION)**.

Figure 35: Accessibility Zoom with 4 icons

5. Select & Activate the *Notes* app **(1-Finger_TAP)**.

Task 2: Create 2 Notes and Type with the On-Screen Keyboard

1. **Create note 1: select the *"Add a Note"* button:**

   a. Use the Accessibility Zoom *panning gesture* to move to the *"Add a Note" button* at top-right of page; first pan to the top edge of screen **(3-Finger_TAP & SLIDE DOWN)**, then pan to the right edge of screen **(3-Finger_TAP & SLIDE LEFT)**.

   b. Select the *"Add a Note"* button [See Figure 32] **(1-Finger_TAP)**. This will automatically bring up the on-screen keyboard.

   c. Use the Accessibility Zoom *panning gesture* to move down to the keyboard **(3-Finger_TAP & SLIDE UP)**.

   Note: If the *"Add a Note"* button is *grayed out/not available*, you are in a *new* note.

   d. Use keys on the on-screen keyboard to type *"Sample one"* **(1-Finger_TAP)**. Use the Accessibility Zoom panning gesture to pan around the keyboard as you type **(3-Finger_TAP & SLIDE DOWN ANY DIRECTION)**.

   e. Select the *"Keyboard"* key, located bottom-right corner, to close the keyboard **(3-Finger_TAP & SLIDE DOWN ANY DIRECTION)** then **(1-Finger_TAP)**.

2. **Create note 2: select the *"Add a Note"* button:**

   a. Use the Accessibility Zoom *panning gesture* to move to the *last item* at top of page; first pan to the top edge of screen **(3-Finger_TAP & SLIDE DOWN)**, then pan to the right edge of screen **(3-Finger_TAP & SLIDE LEFT)**.

   b. Select the *"Add a Note"* button [See Figure 32] **(1-Finger_TAP)**. This will automatically bring up the on-screen keyboard.

   c. Use the Accessibility Zoom *panning gesture* to move down to the keyboard **(3-Finger_TAP & SLIDE UP)**.

   Note: If the *"Add a Note"* button is *grayed out/not available*, you are in a *new* note.

   d. Use keys on the on-screen keyboard to type *"Sample two"* **(1-Finger_TAP)**. Use the Accessibility Zoom panning gesture to pan around the keyboard as you type **(3-Finger_TAP & SLIDE DOWN ANY DIRECTION)**.

   e. Select the *"Keyboard"* key, located bottom-right corner, to close the keyboard **(3-Finger_TAP & SLIDE DOWN ANY DIRECTION)** then **(1-Finger_TAP)**.

Task 3: Switch between notes

1. In *Landscape* orientation, select the note *Sample 1*:

   a. Use the Accessibility Zoom *panning gesture* to view the left edge of screen **(3-Finger_TAP & SLIDE RIGHT)**, then **(1-Finger_TAP)** on note in the list.

2. Rotate the iPad in **Portrait orientation** and select the note *Sample 2*:

   a. Use the Accessibility Zoom *panning gesture* to move to the *"Notes"* button at top-left of page; first pan to the top edge of screen **(3-Finger_TAP & SLIDE DOWN)**, then pan to the left edge of screen **(3-Finger_TAP & SLIDE RIGHT)** [See Figure 33 & 34].

   b. Select the *"Notes"* button and one of the notes in list **(1-Finger_TAP)**.

Task 4: Delete the 2 notes

1. Use the Accessibility Zoom *panning gesture* to move to the *four buttons* at bottom of page; first pan to the bottom edge of screen **(3-Finger_TAP & SLIDE UP)**, then select the **(Delete)** button [See Figures 33 & 34] **(1-Finger_TAP)**.

2. Repeat the steps to delete the second note.

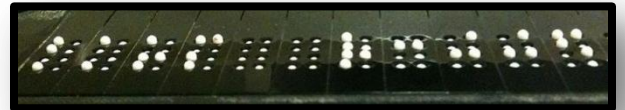# PART 4: iPad with VoiceOver and the Refreshabraille 18

Before We Get Started

Introduction:

1. **Refreshable Braille Displays:**
   a. Refreshable braille displays are electronic devices used to tactually read text that appears on the screen. They have small pins that form braille cells and that move up and down to show braille from the focused area of the screen. The braille display has anywhere from 12 to 84 cells depending on the model.
   b. Most braille displays also have controls (buttons and/or switches) that allow you to use the display to drive the device it is connected to, such as a computer or mobile device.
   c. Some braille displays have 9 braille keys that allow you to insert text on the screen using uncontracted and contracted braille.
   d. The refreshable braille displays work because the device they are connected to is running a screen reader, such as JAWS or Window Eyes for computers and VoiceOver for iDevices (iPad, iPhone, and iPod Touch) and Mac computers.

2. **The iPad and Refreshable Braille Displays:**
   a. The iPad (as well as the iPhone and iPod Touch) will connect to most Bluetooth refreshable braille displays.
   b. You must have VoiceOver on before the display will work.
   c. There are general key commands that will work on braille displays with the 9 braille dots 1-2-3-4-5-6-7-8 and space (See Quick Commands List starting on page 99).
   d. There are additional key commands that are unique to each braille display, as there are with the Refreshabraille 18 (See Quick Commands List starting on page 101).

3. **Entering commands on the Refreshabraille 18:**
   a. As you complete the tasks in Part 4, you will be asked to enter braille key commands on the braille display to drive or control the iPad. When entering a command such as (Dots 1-2-5-space) on the braille display, it means to press and release the braille keys 1, 2, 5 and space together at the same time.

Section 4.1: Physical Controls (iPad & Refreshabraille 18)

Note: All instructions, unless otherwise directed, assume that the iPad is positioned in the landscape orientation with the **(Home)** button to the right and iPad laying on a flat surface. Use the ***Triple-click Home configuration 1*** to turn ***only*** VoiceOver on (refer to page 14).

Task 1: Physical Controls (iPad)

Now do the following to locate the ***external controls*** [Figure 36] and learn how to ***turn on and off*** the iPad.

1. The iPad has a 7/8" (2 cm) border that is either white or black. This border does not respond to touch.

2. **To turn on the iPad from shutdown:**

   a. Locate, press & hold the **(Sleep/Wake)** button for 5 seconds, then release. It's located on left edge, back corner. Wait until VoiceOver makes an announcement, then select the **(Slide to Unlock)** button.

3. **To shut down the iPad:**

   a. Wake up iPad if asleep; press & release the **(Home)** button.

   b. Press & hold the **(Sleep/Wake)** button until VoiceOver says, **(Slide to Power off)**; then release button.

   c. Activate the selected button **(1-Finger_DOUBLE TAP)** on screen.

4. **Lock the iPad by putting it to sleep:**

   a. Turn on the iPad. Then press & release the **(Sleep/Wake)** button.

5. **Unlock iPad from sleep:**

   a. After a few seconds the iPad goes to sleep. To wake it up press and release the **(Home)** or **(Sleep/Wake)** button.

6. **Locate the following physical controls:**

   a. ***Side Switch*** located on back edge, left corner, the edge that is away from your body.

   b. ***Volume control*** located to the right of the **(Side Switch)** on back edge.

   c. ***Head Phone Jack*** located on left edge, corner closest to your body.

   d. ***FaceTime Camera*** located on left border of screen, opposite the **(Home)** button.

   e. ***iSight Camera*** located on the underneath side, next to the **(Sleep/Wake)** button.

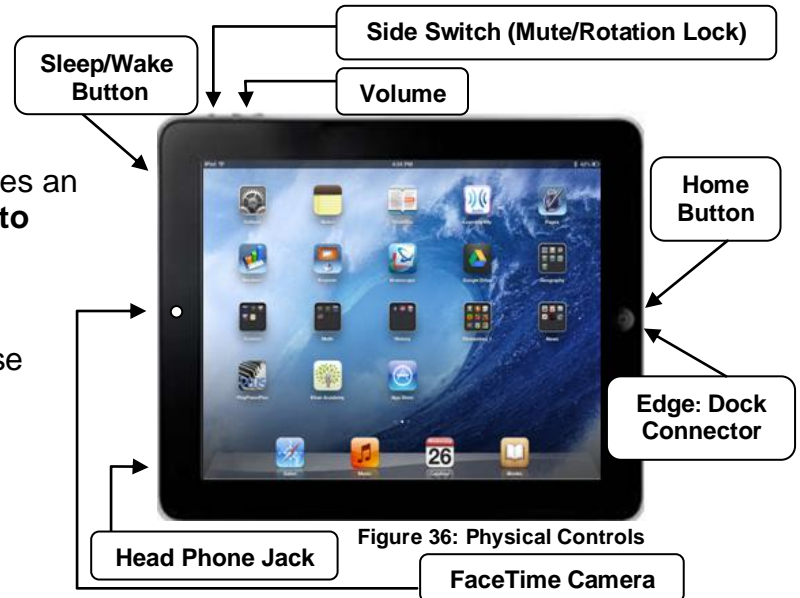   f. ***Dock Connector*** located on right edge, underneath the **(Home)** button.

Figure 36: Physical Controls

Sleep/Wake Button — Side Switch (Mute/Rotation Lock) — Volume — Home Button — Edge: Dock Connector — Head Phone Jack — FaceTime Camera

7. **Use the (Side Switch) to lock screen rotation or mute the sound**:
   a. During training or use by students, it is beneficial to have the **(Side Switch)** set to *"Lock Rotation"* in Settings. This locks the screen rotation to prevent unintentional rotation.
   b. You can change the setting of the **(Side Switch)** from *"Lock Rotation"* to *"Mute"* by going to Settings > General > Use Side Switch To, then check one of the two items.
   c. **Locking and unlocking the screen rotation:**
      i. Slide the **(Side Switch)** to the left to unlock the screen rotation [See Figure 36].
      ii. Raise the iPad in the vertical position with its edge on table surface.
      iii. Rotate the iPad so the edge with the **(Home)** button is touching the table surface. You will notice that the screen rotated right-side up.
      iv. Again, rotate the iPad back in the landscape orientation position with the **(Home)** button to the right and use the **(Side Switch)** to lock the screen rotation.

Task 2: Physical Controls (Refreshabraille 18)

1. Locate the features:
   a. Braille Display (18 cells)
   b. Cursor Routing buttons (18)
   c. Pan Left & Right buttons
   d. Braille Keys 1-6
   e. Braille Key 7 (Backspace function)
   f. Braille Key 8 (Enter function)
   g. Joystick
   h. Space Bar
   i. Power Button [See Figure 37]:
      i. Turn on the RB-18, press and hold the **(Power)** button until it vibrates.
      ii. Turn off the RB-18, press and hold the **(Power)** button until it vibrates.
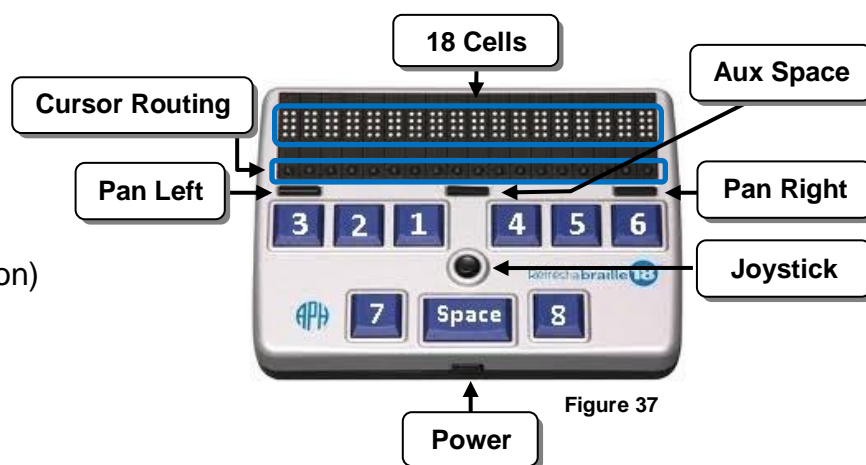   j. Aux Space

Figure 37

Entering Commands on the Refreshabraille 18 to drive the iPad

1. During Part 4 you will be asked to enter key commands on the Refreshabraille 18 to drive the iPad. For your convenience this booklet includes both the braille dot configuration and the braille letter or contraction. For example the command to go to the "Home" screen is expressed **(Dots 1-2-5-space)** [H-space]. The command to turn to the previous page is expressed **(Dots 2-4-6-space)** [OW-space].
2. When entering a command such as **(Dots 1-2-5-space)** [H-space] on the braille display, press and release the braille keys 1, 2, 5 and space together.

Section 4.2: Making the Connection (VoiceOver and the Braille Display)

Task 1: Making the Initial Bluetooth Connection (Pairing)

1. **Turn on the Refreshabraille 18:**

   a. Locate the **(Power)** button [See Figure 39] on front edge of display.

   b. Press & Hold the **(Power)** button until it vibrates & the serial number pops up in braille.
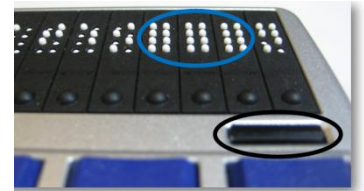
2. **Check Battery Level:**

   a. Press the **(Pan Right)** button once [See Figure 38].

   Note: If the battery is full you will see 3 cells at the end of the display with all 8 pins up. If the battery is low the display will flash "Battery Low" periodically.

Figure 38: Shows Battery Full

3. **Turn on the iPad:**

   a. When it is shut down; press & hold the **(Sleep/wake)** button [See Figure 36].

   b. When it is asleep/locked; press & release the **(Power)** or **(Sleep/wake)** button [See Figure 36].

4. **Turn on VoiceOver:**

   a. Unlock the screen.

   b. Tap "Settings".

   c. Tap "General".

   d. Tap "Accessibility".

   e. Tap "VoiceOver".

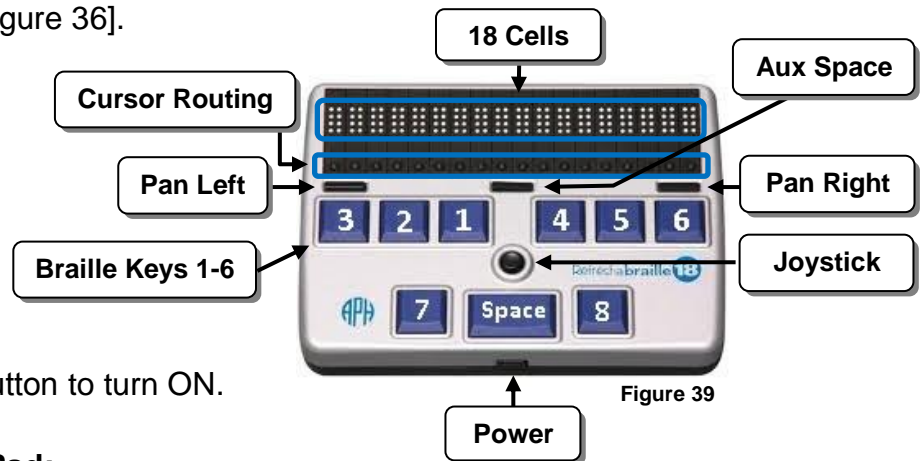   f. Tap "VoiceOver" ON/OFF button to turn ON.

Figure 39

5. **Pair the Braille Display to the iPad:**

   a. Make sure you have completed item 4 above before continuing with item 5

   b. On right pane **(1-Finger_TAP)**.

   c. To view **"Braille"** option **(3-Finger_FLICK UP)**.

   d. Select **"Braille"** option **(1-Finger_DOUBLE TAP)**.

   e. If you get a prompt to turn on **Bluetooth**, turn it on by moving to and selecting the **"YES"** button **(1-Finger_FLICK RIGHT)** then **(1-Finger_DOUBLE TAP)**.

   f. In the list of **Bluetooth devices**, select your braille display **(1-Finger_ DOUBLE TAP)**.

   g. When the on-screen keyboard appears, enter the pairing code **1 2 3 4**, then select the **"Done"** button on the on-screen keyboard **(1-Finger_Double Tap)**.

   Note: You have just a few seconds to enter the code and activate the **"Done"** button.

Task 2: Once Paired: Making the Bluetooth Connection

1. *Start* this task with VoiceOver ON and the iPad *locked*, press **(Sleep/Wake)** button.

2. Turn on the Refreshabraille 18.

3. Turn on iPad press **(Sleep/Wake)** button. You should hear the connection sound and see the display refresh itself.

Task 3: "VoiceOver Help"

Note: During this task you will learn how to *Start* and *Stop* the *Keyboard Help*. This feature allows you to press a key command to hear its function without affecting the iPad.
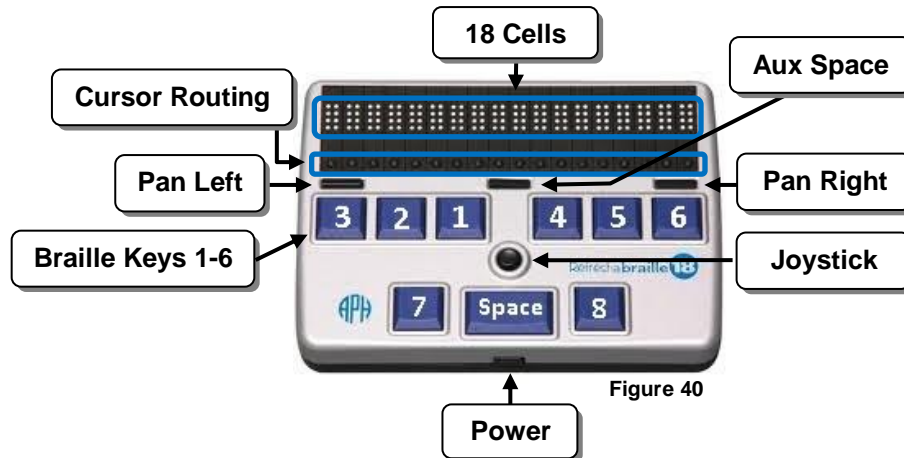
Figure 40

1. *Turn ON* "*VoiceOver Help*"; press **(Dots 1-3-space)**.

    a. Enter the following commands and listen to the key command description [See Figure 40].
    Note: When entering a command such as (Dots 1-2-5-space) on the braille display, press and release the braille keys 1, 2, 5 and space together.

        i. Press **(Dots 1-2-5-space)** [H-space].
        ii. Press **(Dot 4-space)**.
        iii. Press **(Dot 1-space)**.
        iv. Press **(Dots 1-4-5-space)** [D-space]; then try pressing **(Dot 7-space)**.
        v. Press **(Dots 1-5-space)** [E-space] then try pressing **(Dot 8-space)**.
        vi. Press **(Dots 1-3-4-space)** [M-space].
        vii. Press Down on **(Joy Stick)** as you would a button.
        viii. Rock Right on the **(Joy Stick)**.
        ix. Rock Left on the **(Joy Stick)**.

2. *Turn OFF "VoiceOver Help"*; press **(Dots 1-2-space)** [B-space].
    Note: This is the same command that activates the *"Back"* button or cancels a pop-up in Safari.

Section 4.3: Navigating the "Home" Screen

Task 1: Navigate the "HOME" screen – Adjust Volume & Speech

Note: During this task you will learn how to use braille display commands to move from one app to another on the *"Home" screen*, adjust the *VOLUME*, and turn the *SPEECH OFF* and *ON*.

1. **Adjust the Volume (Volume) button:**
   a. Increase *Volume* **(Dots 3-4-5-space)** [AR-space].
   b. Decrease *Volume* **(Dots 1-2-6-space)** [GH-space].
   c. *Speech* ON/OFF **(Dots 1-3 4-space)**.

2. **Using the "Rotor" to set the Volume:**
   Note: With this method you get the volume increase/decrease percentage.
   a. Set the *Rotor* to *Volume* **(Dots 5-6-space)** or **(Dots 2-3-space)**.
      i. Increase *Volume* **(Dot 3-space)**.
      ii. Decrease *Volume* **(Dot 6-space)**.

3. **Speech Rate:**
   a. Set the *"Rotor"* to *"Speech Rate"* **(Dots 5-6-space)** or **(Dots 2-3-space)**.
   b. Increase *Speech Rate* **(Dot 3-space)**.
   c. Decrease *Speech Rate* **(Dot 6-space)**.

4. **Navigate "Home" Screen Pages:**
   a. Go to *"Home"* Screen **(Dots 1-2-5-space)** [H-space].
   b. Move to the *"Search"* Page **(Dots 2-4-6-space)** [OW-space].
   c. Move to the *next* page **(Dots 1-3-5-space)** [O-space].
   d. Move *back* to page 1 **(Dots 2-4-6-space)** [OW-space].

5. **Navigate to the next items (app icons):**
   a. Method 1: **(Dot 4-space)**.
   b. Method 2: **(Joystick)** rock to the right.
   c. Method 3: **(Pan Right Button)**.

6. **Navigate to the previous items (app icons):**
   a. Method 1: **(Dot 1-space)**.
   b. Method 2: **(Joystick)** rock to the left.
   c. Method 3: **(Pan Left Button)**.

7. **Navigate** to the *"Notes" app* (use above methods).

8. **Activate** and **open** the *"Notes"* app:
   a. Method 1: Press **(Cursor Routing Button)**.
      Note: When the selected item is on the display you can press any cursor routing button under the letters of its name; works before and after the VoiceOver description message.
   b. Method 2: Press **(Joystick)**.
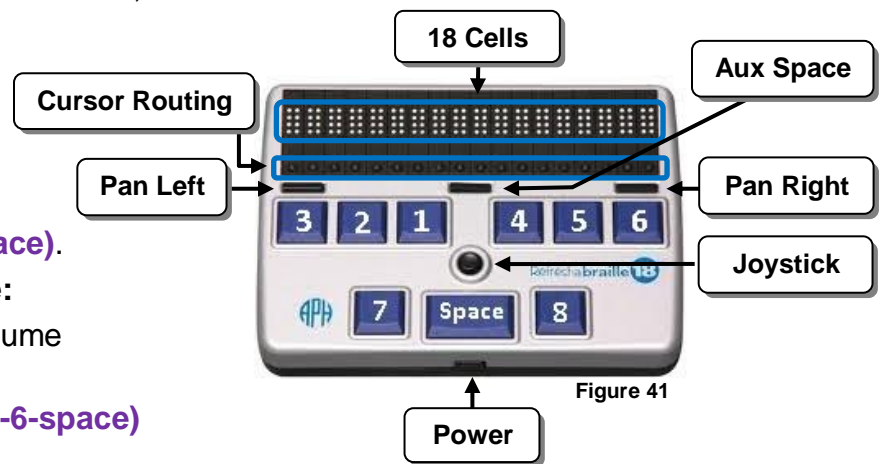   c. Method 3: Press **(Dots 3-6-space)**.

Figure labels: 18 Cells, Aux Space, Cursor Routing, Pan Left, Pan Right, Joystick, Power — **Figure 41**

SIDEBAR NOTE:
- ✓ Move to the "*Status Bar"* and get information on wifi, time, Bluetooth, and the battery level; press **(Dots 2-3-4-space)** [S-space], then **(Dot 4-space)**.
- ✓ To leave the *"Status Bar"* and move to the top of the screen; press **(Dots 1-2-3-space)** [L-space].
- ✓ Access and navigate the *"App/Task Switcher"*; press **(Dots 1-2-5-space)** [H-space] *twice* quickly, then **(Dot 4-space)**.
- ✓ To close the *"App/Task Switcher"*; press **(Dots 1-2-5-space)** [H-space] *twice*.

Section 4.4: Surfing the Internet with Safari

Task 1: Launch "Safari" from the HOME screen

1. Go to *"Home"* screen; press **(Dots 1-2-5-space)** [H-space].
2. Navigate to and open the *"Safari"* app:
   a. Select *"Safari"* app **(Dot 4-space)** or **(Dot 1-space)**.
   b. Activate and open *"Safari"* app; press **(Joystick)** or **(Cursor Routing Button)**.

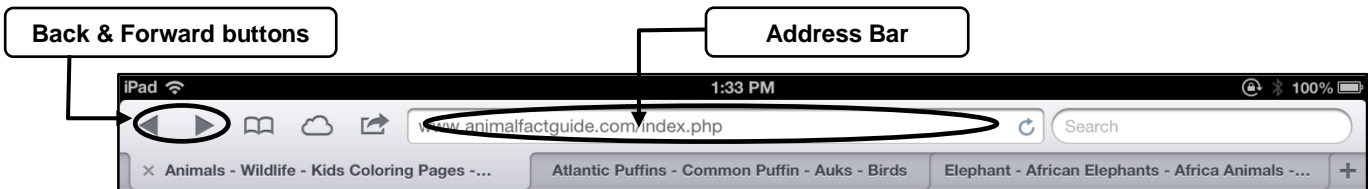### Task 2: Enter web address and launch "www.animalfactguide.com"

Figure 42: Safari Toolbar

> **Commands To Remember** [See Figure 43]:
> - Contracted Braille ON & OFF **(Dots 1-2-4-5-space)** [G-space] toggle.
> - Jump to the top or bottom of the web page **(Dots 1-2-3-space)** [L] or **(Dots 4-5-6-space)**.
> - Navigate to the next or previous item; press **(Dot 4-space)** or **(Dot 1-space)**.
> - Launches website after typing address; press **(Dots 1-5-space)** [E-space].
> - Delete; press **(Dots 1-4-5-space)** [D-space].
> - Back; press **(Dots 1-2-space)** [B-space] or **(Power Button)**.
> - Activate an item **(Dots 3-6-space)** or press **(Joystick)** or (Cursor Routing) button.

1. **Move to the Address Bar** [Figure 42]:

   a. Go to top of web page; press **(Dots 1-2-3-space)** [L-space].
   b. Move to *"Address Bar"*; press **(Dot 4-space)** repeatedly.
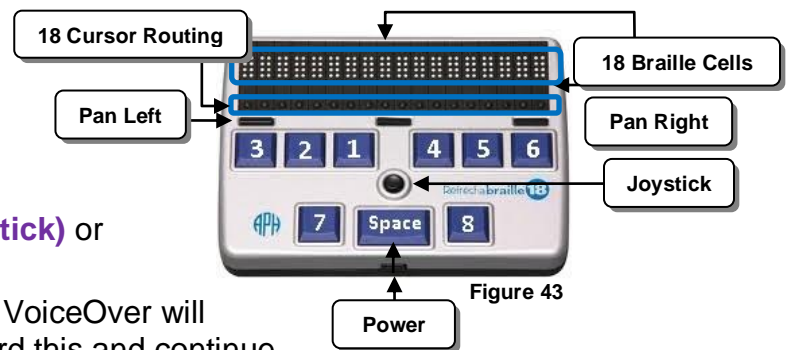   c. Enter the *"Address Bar"*; press **(Joystick)** or **(Cursor Routing Button)**.
   Note: Sometimes after the double tap, VoiceOver will announce the *"Back"* button. Disregard this and continue because you are still focused on the "Address Bar" as well as the "Back" button.
   d. Now, move to *"Clear Text"* button; press **(Dot 4-space)** once or until it announces. Then activate the button; press **(Joystick)** or **(Cursor Routing Button)**.
   Note: This step isn't necessary unless you have inserted text that needs to be cleared.

2. **Type Web Address:**
   a. *Turn OFF Contracted* Braille; **(Dots 1-2-4-5-space)** [G-space] toggle.
   b. Braille the letter *"a"*, then *"b"*, then *"c"*.
   c. Delete the *"b" & "c"*; press **(Dots 1-4-5-space)** [D-space].
   d. Continue brailing the address *"n i m a l f a c t g u i d e.com"*. Use **(Dots 4-6)** to type a period, because we have contracted braille off.

   > **SIDEBAR NOTE:**
   > ✓ Contracted braille can be turned on, but with it off you don't get the auto inserting of contractions.

3. *Launch website*; press the **(Dots 1-5-space)** [E-space].
4. *Turn ON Contracted* Braille; press **(Dots 1-2-4-5-space)** [G-space] toggle.

Task 3: Load web page, "Animal Facts"

1. Move to *"Animal Facts"* link; press **(Dot 4-space)** or rock right on **(Joystick)** repeatedly.
2. Activate the *"Animal Facts"* link; press **(Joystick)** or **(Cursor Routing Button)**.

Task 4: Use the "Rotor" to move by "Headings" – Read (Pause & Resume Speech)

Notes: On web pages there are different types of elements, such as text, links, headings, form controls, etc. Choosing the most efficient elements to navigate by will help you find what you are looking for quicker. The "Rotor" control makes it possible to choose which element to navigate.

> **Commands To Remember**:
> - Change "Rotor" selection; press **(Dots 5-6-space)** or **(Dots 2-3-space)**.
> - Navigate to different "Rotor" items on web page; press **(Dot 6-space)** or **(Dot 3-space)**.
> - Activate the links, form controls, etc; press **(Joystick)**.
> - Navigate to the next or previous item; press **(Dot 4-space)** or **(Dot 1-space)**.
> - Pause & Resume "Speech Reading"; press **(Dots 1-2-3-4-space)** [P-space] toggle.
> - Start Reading from current location; press **(Dots 1-2-3-5-space)** [R-space].

Figure 44
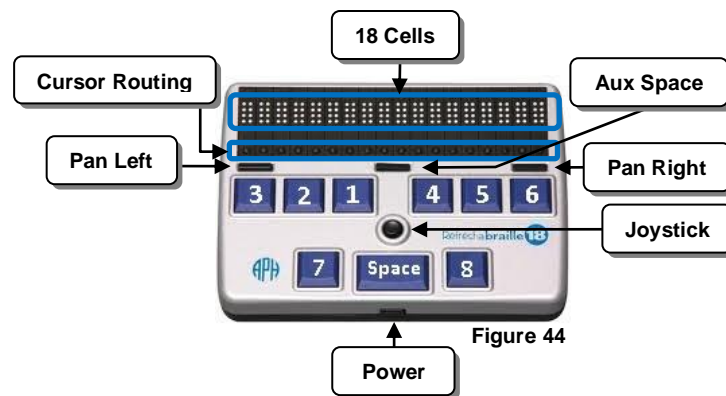
1. **Change the "Rotor" to "Headings":**
   a. Make sure you have completed Tasks 2 and 3.
   b. Listen to the number of "Headings" as you change the *"Rotor"* to *"Headings"*; press **(Dots 5-6-space)** or **(Dots 2-3-space)** repeatedly.

2. **Navigating by "Headings" to find your desired animal information:**
   a. Now move down the page by *"Headings"* to *"Cougar"*; press **(Dot 6-space)** repeatedly. Notice/read the braille display as you move from one item to the next.
   b. Move back up the page by *"Headings"* to *"Atlantic Puffin"* **(Dot 3-space)** repeatedly.
   c. *Activate* Heading/Link and *launch* web page, *"Atlantic Puffin";* press **(Joystick)**.
   d. Move down by *"Headings"* until you get to *"Atlantic Puffin"*; press **(Dot 6-space)**.

3. **Reading the information:**
   a. Now move to Heading's paragraph and read it; press **(Dot 4-space)** three times.
   b. *Pause speech*; press **(Dots 1-2-3-4-space)** [P-space].
   c. *Resume speech*; press **(Dots 1-2-3-4-space)** [P-space].
   d. *Start reading* from your *location*; press **(Dots 1-2-3-5-space)** [R-space].
   e. *Pause speech*; press **(Dots 1-2-3-4-space)** [P-space].

Task 5: Viewing Articles in "Reader"

Note: The *"Reader"* is a feature that allows you to view an article in a new page without the advertisements, links and sidebar information. During this task you will go to the *"Giraffe"* webpage and use the *"Reader"* to view information about the "Giraffe".
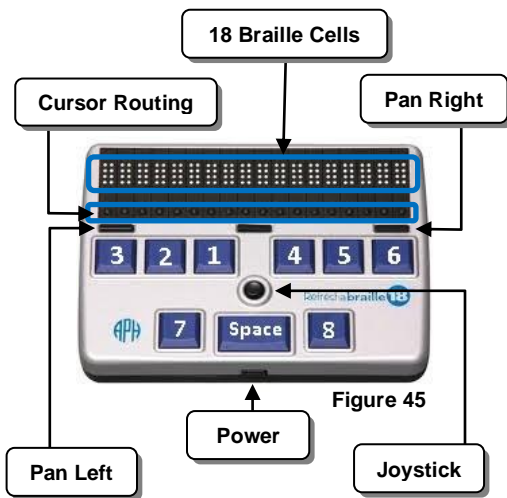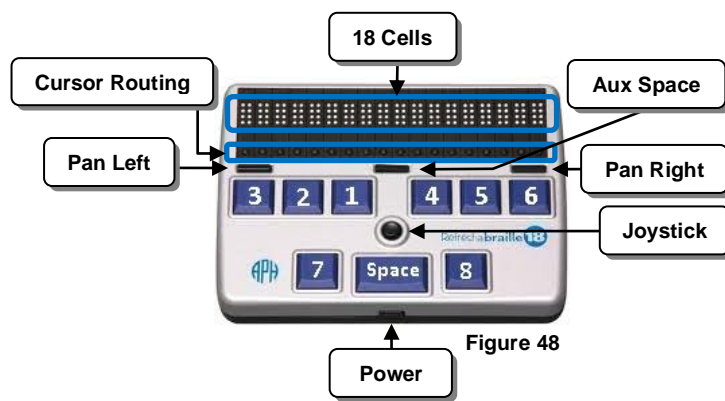

Figure 46: Original webpage

Figure 47: "Reader" page

1. Move *back* to previous webpage with the different animals **(Dots 1-2-space)** [B-space].
2. Move by *"Headings"* to the *"Giraffe"* heading/link **(Dot 6-space)** or **(Dot 3-space)**.
3. *Activate* the *"Giraffe"* heading/link to launch webpage; press down on **(Joystick)**.
4. Jump to the top of the web page **(Dots 1-2-3-space)** [L-space].
5. Move across to the *"Reader"* button **(Dot 4-space)** [See Figure 46].
6. *Activate* the *"Reader"* button; press down on **(Joystick)** [See Figure 46]. This opens the "Reader" page [See Figure 47].
7. Move by *"Headings"* to *"Giraffe"* Heading; press **(Dot 6-space)** or **(Dot 3-space)**.
8. Read the paragraph of this *"Heading"* to see how long a giraffe lives in the wild **(Dot 4-space)**.
9. *Pause* and *Resume* the *speech*; press **(Dots 1-2-3-4-space)** [P-space] repeatedly.
10. *Start reading* from your *location*; press **(Dots 1-2-3-5-space)** [R-space].
11. *Start reading* from your *top of webpage*; press **(Dots 2-4-5-6-space)** [W-space].
12. Close the **"Reader"** page **(Dots 1-2-space)** [B-space] [See Figure 47].

Task 6: Use the "Rotor" to move by "Form Controls"

Note: During this Task you will navigate by *"Form Controls"*. Form controls are elements such as edit boxes, combo/popup boxes, checkboxes, buttons, etc.

1. Change "Rotor" to *"Form Controls"*; **(Dots 5-6-space)** or **(Dots 2-3-space)**.
2. Move down the web page by *"Form Controls"*; **(Dot 6-space)**.
3. Move back up the web page by *"Form Controls"*; **(Dot 3-space)**.

Figure 48

Labels: 18 Cells, Cursor Routing, Aux Space, Pan Left, Pan Right, Joystick, Power

Task 7: Use the braille display instead of speech to read text on web page

1. Set *"Rotor"* to *"Headings"* **(Dots 5-6-space)** and move to *"Giraffe"* Heading **(Dot 3 or dot 6-space)**.
2. Turn *Speech OFF*; press **(Dots 1-3-4-space)** [M-space] toggle.
3. *Pan forward* & read braille; press **(Right Panning Button)** or **(Dot 5-space)**.
4. *Pan Back;* press **(Left Panning Button)** or **(Dot 2-space)**.
5. Turn *Speech ON*; press **(Dots 1-3-4-space)** [M-space] toggle.

Task 8: Start Reading from your location – Start Reading from the top

1. *Start* reading from *your location*; press **(Dots 1-2-3-5-space)** [R-space].
2. *Pause* the *speech*; press **(Dots 1-2-3-4-space)** [P-space].
3. *Start* reading from the *top of page*; press **(Dots 2-4-5-6-space)** [W-space].
4. *Pause* the *speech*; press **(Dots 1-2-3-4-space)** [P-space].

Task 9: Turn the Screen Curtain ON and OFF

1. Move to the *"Home"* screen; press **(Dots 1-2-5-space)** [H-space].
2. *Turn the Screen Curtain ON*; press **(Dots 1-2-3-4-5-6-space)**.
   a. You can now work without anyone seeing what's on the screen.
   b. Try it out! Go to the Safari app on the *"Home"* screen and launch it. Navigate by Headings and then move to the text of the Heading.
3. *Turn the Screen Curtain OFF*; press **(Dots 1-2-3-4-5-6-space)**.

Section 4.5: iBooks (Reading a Book)

Note: During this section you will use the Refreshabralle 18 braille display to navigate a book in the iBooks app. iBooks is a free app that you must download from the Apps Store. You can download books to iBooks using the "Store" button in iBooks. You can read books in *portrait* or *landscape orientation*. In *Landscape* you will get *two pages* on the screen and in *portrait* orientation you only get *one page*. Let's use portrait orientation so we have only one page on the screen.

Task 1: Set the iPad to the Portrait Orientation

1. Go to the *"Home"* screen by pressing the **(Home)** button.
2. Slide the **(Side Switch)** to the left to unlock it.
3. *Tilt* the iPad up on its edge and rotate it so the **(Home)** button is at the bottom.
4. Slide the **(Side Switch)** back down to relock the rotation, then lay the iPad back on the table.

Task 2: Launch "iBooks"

1. Go to the **"Home" screen (Dots 1-2-5-space)** [H-space] or press the **(Home)** button.
2. Move to the next page of the *"Home"* screen **(Dots 1-3-5-space)** [O-space].
3. Select the *iBooks* app:
    a. Jump to top of screen **(Dots 1-2-3-space)** [L-space].
    b. Move to *"iBooks"* app; press **(Dot 4-space)** repeatedly.
    c. Activate the *iBooks* app; press **(Joystick)**.
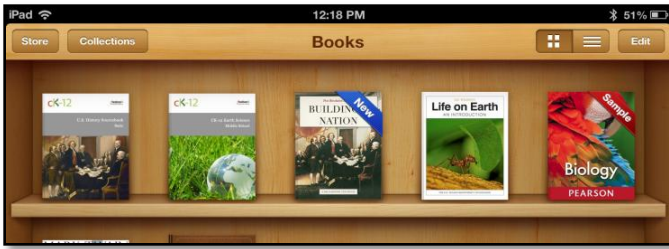
Task 3: Library (Opening Books)
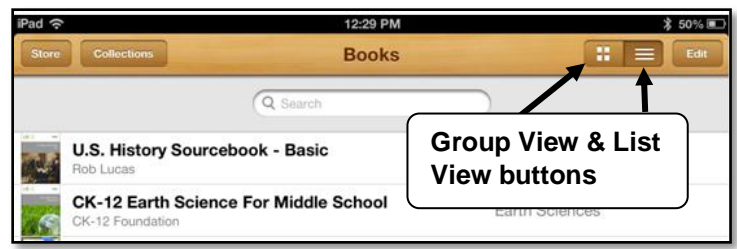

Figure 49: Group view

Figure 50: List View

Note: The iBooks library has two main views, "Group View" (bookshelf look) [See Figure 49] and "List View" [Figure 50]. Both views have five buttons across the top on the toolbar; they are: Store, Collections, Group View, List View and Edit. The **"Store" button** takes you to the Internet to search for books to download. The **"Collections" button** allows you to switch between your collections of books, purchased books, PDF files, etc. The **"Group View"** and **"List View" buttons** will arrange the books. The Group View has the books standing up on shelves, showing their covers. In the List View the books are in one vertical list and you have four additional buttons across the bottom of the screen. They are: Bookshelf, Titles, Authors and Categories. Selecting the **"Edit" button** allows you to move or delete books.
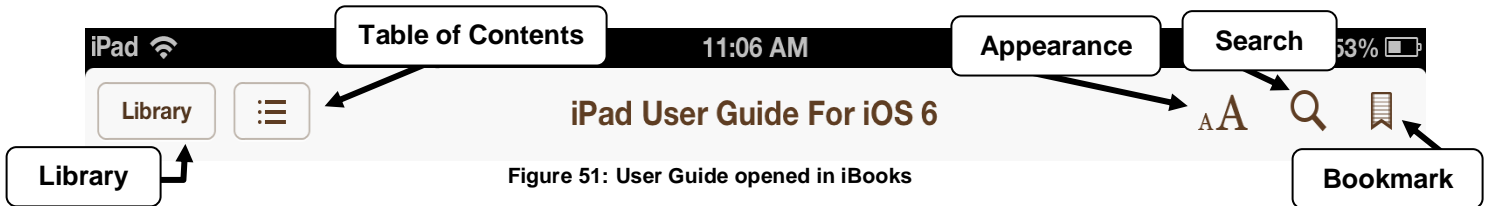

Figure 51: User Guide opened in iBooks

1. **Do the following to open the iBooks "Library":**

   Note: If it *is already* open you will *not see* the **"Library"** button [See Figure 51] and you can move to item 2 in this task.

   a. *Make sure* you have *completed Task 2* before completing this task.

   d. *Activate* the **"Library"** button; press **(Joystick)**. VoiceOver will announce the **"Store"** which is the first button on the toolbar at the top.

2. **Do the following to select & open the book *"iPad User Guide"*:**

   Note: If the Guide isn't in iBooks, select the "Store" button and download the app. It's free!

   a. Move to and select the book **"iPad User Guide"**; press **(Dot 4-space)** repeatedly.

   b. *Activate* the selected book, **"iPad User Guide"** by pressing the **(Joystick)** once or pressing a **(Cursor Routing)** button under a braille cell displaying the book's name [See Figure 52]. The book should now be open.
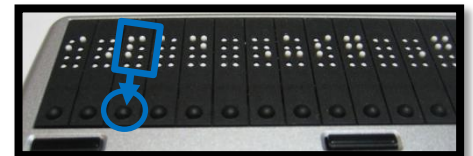

Figure 52: Cursor Routing Button under "P"

Task 4: Navigate the book's "Table of Contents"

1. Move to and *activate* the **"Table of Contents" button**; **(Dot 4-space)**, then press **(Joystick)**.
2. Jump to the end of the **"Table of Contents" button**; press **(Dots 4-5-6-space)**.
3. Move up TOC list to **"Accessibility" (Dot 1-space)** or *rock* left on **(Joystick)**.
4. Activate TOC item **"Accessibility" (Joystick)** or **(Cursor Routing Button)**.
5. *Pause* the *speech*; press **(Dots 1-2-3-4-space)** [P-space].

Task 5: Turning & Reading the pages with SPEECH

1. Turn & Read the Next Page:
   a. Your focus should be on the page of text, not the toolbar. If not move to the text; press **(Dot 1-space or Dot 4-space).**
   b. Now turn *forward* by *pages*; **(Dots 1-3-5-space)** [O-space] three or four times. Listen for a few seconds as VoiceOver reads the page.

   Note: The page turns without announcing the page number and starts reading the page.

   c. *Pause* the *speech*; press **(Dots 1-2-3-4-space)** [P-space].
   d. Turn to the *previous page*; press **(Dots 2-4-6-space)** [OW-space]. Listen for a few seconds as VoiceOver reads the page.
   e. Pause the reading; press **(1-2-3-4-space)** [P-space].

Task 6: Turning Pages using "Page Chooser"

1. *Jump* to the end of the page; press **(Dots 4-5-6-space)**.
2. Move to the *"Page Chooser"*; press **(Dot 1-space)**, repeatedly.
3. Turn the pages *forward* to page *180*; press **(Dot 6-space)**, repeatedly.
4. Turn the pages *backwards* to page *175*; press **(Dot 3-space)**, repeatedly.
5. Move to the text on page and listen; press **(Dot 1-space)**.
6. *Pause* the *speech*; press **(Dots 1-2-3-4-space)** [P-space].

Task 7: Turning & Reading the pages with Braille Display (NO SPEECH)

1. Turn *OFF* Speech; **(Dots 1-3-4-space)** [M-space] toggle.
2. Read the page with the braille display;
   a. Method 1: Panning Buttons
      i. Read forwards: **(Right Panning Button)** repeatedly.
      ii. Read backwards: **(Left Panning Button)** repeatedly.
   b. Method 2: Braille Dot keys
      i. Read forwards: **(Dot 5-space)** repeatedly.
      ii. Read backwards: **(Dot 2-space)** repeatedly.
3. Turn *ON* Speech: **(Dots 1-3-4-space)** [M-space] toggle.

Task 8: Bookmarks

Notes: You don't have to set a bookmark when you close the book; iBooks remembers your page and returns you to it when you open the book again.

1. *Add A Bookmark:*
   a. *Jump to the top*; **(Dots 1-2-3-space)** [L-space].
   b. Move to the *"Add a Bookmark"* button; **(Dot 4-space)**.
   c. Activate the *"Add a Bookmark"* button; press **(Joystick)** or **(Cursor Routing Button)**.
2. *Remove A Bookmark:*
   a. *Jump to the top*; **(Dots 1-2-3-space)** [L-space].
   b. Move to the *"Remove a Bookmark"* button; **(Dot 4-space)**.
   c. Activate *"Remove Bookmark"* button; press **(Joystick)** or **(Cursor Routing Button)**.

Section 4.6: Typing with the "Notes" App

Note: The Notes app allows you to type notes using the on-screen keyboard, an external Bluetooth keyboard, or a *refreshable braille display*. When you work in Notes in *Landscape* orientation you have *two panes*; a narrow pane to the left with a list of previously created notes and a wider pane with the page for your text. In *Portrait* orientation you have to select "Notes" button to access the list of previously created notes; you have *one page* which is your text page.
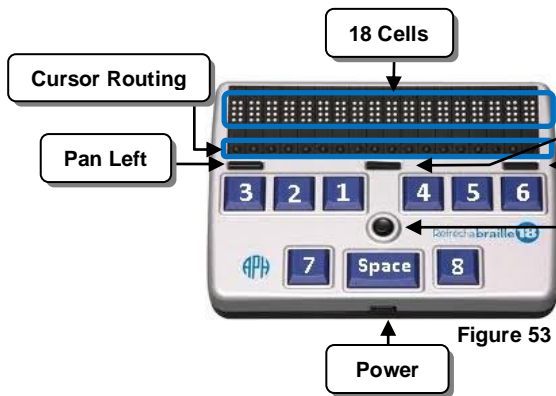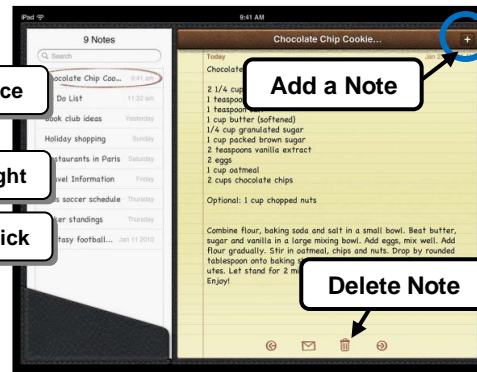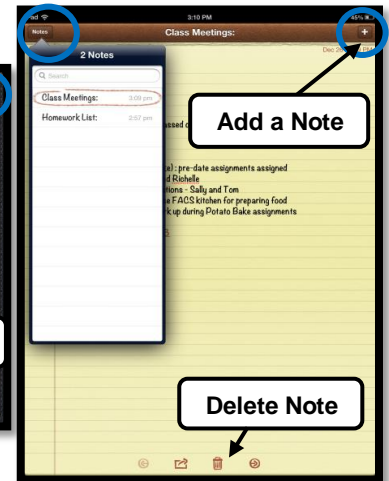

Figure 53

Figure 54: Landscape Orientation

Figure 55: Portrait Orientation

Task 1: Launch "Notes" & Start a New Note

1. Go to the *Home screen*; press **(Home)** button.
2. Select & Activate the *Notes* app.
   a. Move to the *"Notes"* app; press **(Dot 4-space)**.
   b. Activate the *"Notes"* app; press **(Joystick)**.
3. Start a new note:
   a. Move to the *"Add"* button; press **(Dots 4-space)**.
   b. Activate the *"Add"* button; press **(Joystick)**.

> **SIDEBAR NOTE:**
> ✓ The app "Pages" is the word processor for the iDevices
> ✓ VoiceOver and Refreshabraille 18 works with Pages as well.

Task 2: Writing contracted & uncontracted words with the Braille Display

Note: Contracted braille is inserted after a pause or if a space or ending punctuation mark is typed.

1. **Writing words:**

   a. *Set* the braille display to *uncontracted* braille; **(Dots 1-2-4-5-space)** [G-space] toggle.

   b. *Type* the words using uncontracted braille *"the ipad is cool"*

   Note 1: To type capitals include **(Dot 7)** with letter; to type a period **(Dots 4-6)**.
   Note 2: To *delete* to the left press **(Dots 1-4-5-space)** [D-space] or **(Dot 7-space)**.

   c. Move to a *New Line*; press **(Dots 1-5-space)** [E-space].

   d. Now *set* the display to *contracted* braille; press **(Dots 1-2-4-5-space)** [G-space] toggle.

   e. Enter the *"Tab"* command to indent this line of text; press **(Dots 2-3-4-5-space)** [T-space].

   f. *Type* the sentence using contracted braille "*VoiceOver makes the iPad easy to use.*"

   Note: Write contracted braille with a steady flow. If you pause too long after typing the letter "V", the word "Very" will auto-insert. The braille sign for capitals and periods can be used.

2. **Editing your text:**
   a. **Deleting words:**
      i. Delete the last word, *use*, in this sentence; press **(Dots 1-4-5-space)** [D-space] repeatedly.
      ii. Now type, *have fun.*
   b. **Insert text:**
      i. *Route* your cursor to letter *"f"* of *"fun"* by pressing the *cursor routing* button *under* the letter *"f"* of *"fun"* [See Figure 53].
      ii. Now write the words, *a lot of*, and then press **(Space)**. You should have changed your sentence to read, "*VoiceOver makes the iPad easy to have a lot of fun.*"
   c. **Navigating your text:**
      i. To *jump* back and forth between the *beginning* and *end* of your **text**, press the **(Joystick)** down as a button, repeatedly [See Figure 53].
      ii. Now jump to the beginning of your text **(Joystick)** down as a button.
      iii. *Pan forward* by pressing the **(Pan Right)** button repeatedly until you have read to the *end* of your text [See Figure 53].
      iv. Now *pan backwards* by pressing the **(Pan Left)** button repeatedly until you have read to the *beginning* of your text [See Figure 53].

      Note: You can navigate by lines, words, or characters by first setting the "Rotor" to lines, words, or characters **(Dots 5-6-space)** and then navigate using **(Dot 3 or dot 6-space)**.

3. **Delete a note:**
   a. Move to the *"Delete"* icon; press **(Dot 4-space)**. You may first have to move to your note in the "Notes List" and select it before the "Delete" icon is available.
   b. Activate the first *"Delete"* button; press **(Joystick)** down as a button.
   c. Now activate second *"Delete"* Button; press **(Joystick)** down as a button.

Part 5: iPad with VoiceOver and the Focus 40 Blue (Classic)

Before We Get Started

Introduction:

1. **Refreshable Braille Displays:**

   a. Refreshable braille displays are electronic devices used to tactually read text that appears on the screen. They have small pins that form braille cells and that move up and down to show braille from the focused area of the screen. The braille display has anywhere from 12 to 84 cells, depending on the model.

   b. Most braille displays also have controls (buttons and/or switches) that allow you to use the display to drive the device it is connected to, such as a computer or mobile device.

   c. Some braille displays have 9 braille keys that allow you to insert text on the screen using uncontracted and contracted braille.

   d. The refreshable braille displays work because the device they are connected to is running a screen reader, such as JAWS or Window Eyes for computers and VoiceOver for iDevices (iPad, iPhone, and iPod Touch) and Mac computers.

2. **The iPad and Refreshable Braille Displays:**

   a. The iPad (as well as the iPhone and iPod Touch) will connect to most Bluetooth refreshable braille displays.

   b. You must have VoiceOver on before the display will work.

   c. There are general key commands that work on braille displays with the 9 braille dot keys, dots 1-2-3-4-5-6-7-8 and space (See Quick Commands List starting on page 99).

   d. There are additional key commands that are unique to each braille display, such as the Focus 40 Blue Classic (see "Quick Commands List" on page 102).

3. **Entering commands on the Focus 40 Blue:**

   a. As you complete the tasks in Part 5, you will be asked to enter braille key commands on the braille display to drive or control the iPad. When entering a command such as (Dots 1-2-5-space) on the braille display, it means to press and release the braille keys 1, 2, 5 and space together at the same time.

Section 5.1: Physical Controls (iPad & Focus 40 Blue Classic)

Note: All instructions, unless otherwise directed, assume that the iPad is positioned in the landscape orientation with the **(Home)** button to the right and iPad laying on a flat surface. Use the ***Triple-click Home configuration 1*** to turn **only** VoiceOver on (refer to page 14).

Task 1: Physical Controls (iPad)

Now do the following to locate the ***external controls*** [Figure 56] and learn how to ***turn on and off*** the iPad.

1. The iPad has a 7/8" (2 cm) border that is either white or black. This border does not respond to touch.

2. **To turn on the iPad from shutdown:**

   a. Locate, press & hold the **(Sleep/Wake)** button for 5 seconds, then release. It's located on left edge, back corner. Wait until VoiceOver makes an announcement, then select the **(Slide to Unlock)** button.

3. **To shut down the iPad:**

   a. Wake up iPad if asleep; press & release the **(Home)** button.

   b. Press & hold the **(Sleep/Wake)** button until VoiceOver says, **(Slide to Power off)**; then release button.

   c. Activate the selected button **(1-Finger_DOUBLE TAP)** on screen.

4. **Lock the iPad by putting it to sleep:**

   a. Turn on the iPad. Then press & release the **(Sleep/Wake)** button.

5. **Unlock iPad from sleep:**

   a. After a few seconds the iPad goes to sleep. To wake it up press and release the **(Home)** or **(Sleep/Wake)** button.

6. **Locate the following physical controls:**

   a. ***Side Switch*** located on back edge, left corner, the edge that is away from your body.

   b. ***Volume control*** located to the right of the **(Side Switch)** on back edge.

   c. ***Head Phone Jack*** located on left edge, corner closest to your body.

   d. ***FaceTime Camera*** located on left border of screen, opposite the **(Home)** button.

   e. ***iSight Camera*** located on the underneath side, next to the **(Sleep/Wake)** button.

   f. ***Dock Connector*** located on right edge, underneath the **(Home)** button.
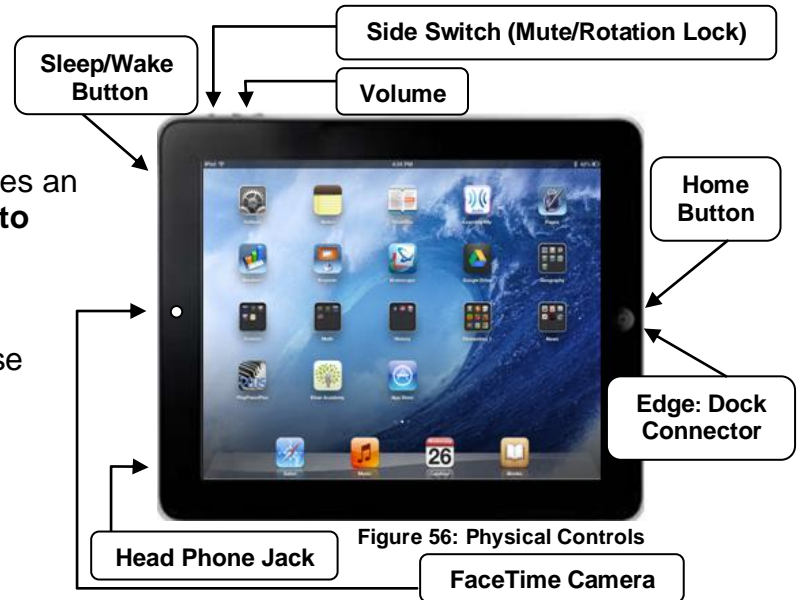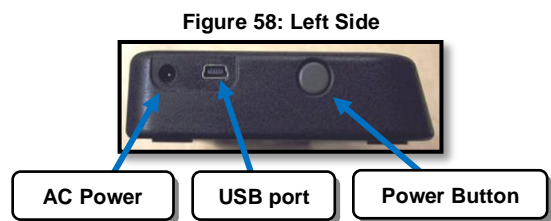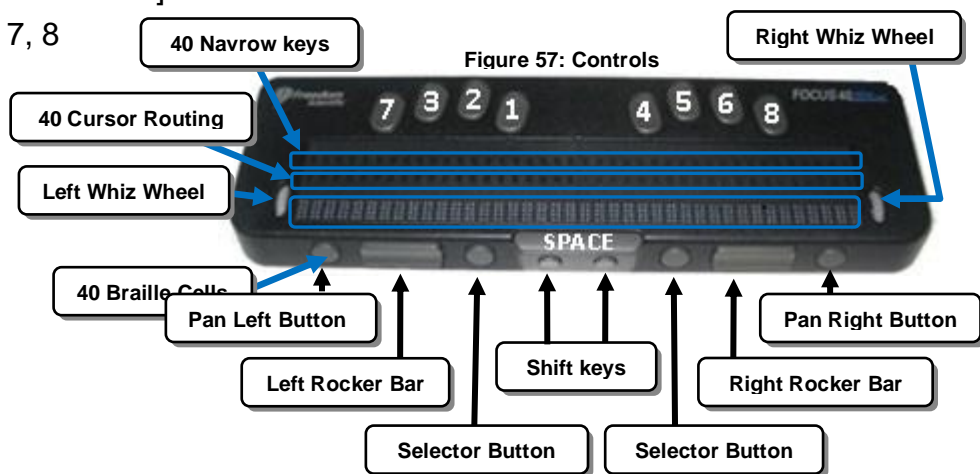

Sleep/Wake Button

Side Switch (Mute/Rotation Lock)

Volume

Home Button

Edge: Dock Connector

Figure 56: Physical Controls

Head Phone Jack

FaceTime Camera

7. **Use the (Side Switch) to lock screen rotation or mute the sound**:
   a. During training or use by students, it is beneficial to have the **(Side Switch)** set to *"Lock Rotation"* in Settings. This locks the screen rotation to prevent unintentional rotation.
   b. You can change the setting of the **(Side Switch)** from *"Lock Rotation"* to *"Mute"* by going to Settings > General > Use Side Switch To, then check one of the two items.
   c. **Locking and unlocking the screen rotation:**
      i. Slide the **(Side Switch)** to the left to unlock the screen rotation [See Figure 36].
      ii. Raise the iPad in the vertical position with its edge on table surface.
      iii. Rotate the iPad so the edge with the **(Home)** button is touching the table surface. You will notice that the screen rotated right-side up.
      iv. Again, rotate the iPad back in the landscape orientation position with the **(Home)** button to the right and use the **(Side Switch)** to lock the screen rotation.

Task 2: Physical Controls (Focus 40 Blue "Classic")

1. Locate the features [See Figures 57 & 58]:
   a. Braille keys 1, 2, 3, 4, 5, 6, 7, 8
   b. 40 braille cells
   c. 40 Cursor Routing buttons
   d. Left/Right Whiz Wheels
   e. Row of 40 Hotkeys
   f. Left/Right Panning buttons
   g. Left/Right Rocker Bars
   h. Left/Right Selector buttons
   i. Space & 2 Shift keys
   j. Power button:
      i. Turn on the Focus 40 Blue, press and hold the **(Power)** button [See Figure 58].
      ii. Turn off the Focus 40 Blue, press and hold the **(Power)** button [See Figure 58].

Figure 57: Controls

40 Navrow keys
40 Cursor Routing
Left Whiz Wheel
40 Braille Cells
Pan Left Button
Left Rocker Bar
Selector Button
Shift keys
Selector Button
Right Rocker Bar
Pan Right Button
Right Whiz Wheel

Figure 58: Left Side

AC Power
USB port
Power Button

Entering Commands on the Focus 40 Blue Classic to drive the iPad

1. During Part 5 you will be asked to enter key commands on the Focus to drive the iPad. For your convenience this booklet includes both the braille dot configuration and the braille letter or contraction. For example the command to go to the "Home" screen is expressed **(Dots 1-2-5-space)** [H-space]. The command to turn to the previous page is expressed **(Dots 2-4-6-space)** [OW-space].

2. When entering a command such as **(Dots 1-2-5-space)** [H-space] on the braille display, press and release the braille keys 1, 2, 5 and space together.

Section 5.2: Making the Connection (VoiceOver and the Braille Display)

Task 1: Making the Initial Bluetooth Connection (Pairing)

1. **Turn on the Focus 40 Blue:**

   a. Locate the **(Power)** button [See Figure 59] on left side of the display.

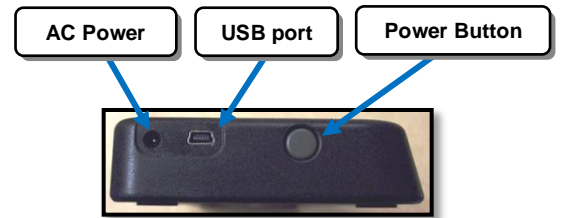   b. Press & Hold the **(Power)** button.

2. **Check Battery Level:**

AC Power USB port Power Button

Figure 59: Left Side

   a. To display the Battery Level when the display is on, but not connected to the iPad; press and release the **(Power)** button.

   b. To check the battery level when the display is *in use*, press and release the **(Power)** button. To return to normal operation; press a *Cursor Router* or *Navrow* button [See Figure 57].

3. **Turn on the iPad:**

   a. When it is shut down; press & hold the **(Sleep/wake)** button [See Figure 56].

   b. When it is asleep/locked; press & release the **(Power)** or **(Sleep/wake)** button [See Figure 56].

4. **Turn on VoiceOver:**

   a. Unlock the screen.

   b. Tap "Settings".

   c. Tap "General".

   d. Tap "Accessibility".

   e. Tap "VoiceOver".

   f. Tap "VoiceOver" ON/OFF button, to turn ON.

5. **Pair the Braille Display to the iPad:**

   a. Make sure you have completed item 4 above before continuing with item 5.

   b. On right pane **(1-Finger_TAP)**.

   c. To view *"Braille"* option **(3-Finger_FLICK UP)**.

   d. Select *"Braille"* option **(1-Finger_DOUBLE TAP)**.

   e. Turn on **Bluetooth** if you get a prompt by moving to and selecting the *"YES"* button **(1-Finger_FLICK RIGHT)** then **(1-Finger_DOUBLE TAP)**.

   f. In the list of **Bluetooth devices**, select your braille display **(1-Finger_ DOUBLE TAP)**.

   g. When the on-screen keyboard appears, enter the pairing code *0 0 0 0*, then select the *"Done"* button on the on-screen keyboard button **(1-Finger_DOUBLE TAP)**.

   Note: You have just a few seconds to enter the code and activate the *"Done"* button.

Task 2: Once paired: Making the Bluetooth Connection

1. **Start** this task with VoiceOver ON and the iPad **locked**, press **(Sleep/Wake)** button.

2. Turn on the Focus 40 Blue.

3. Turn on iPad press **(Sleep/Wake)** button. You should hear the connection sound and see the display refresh itself.

Task 3: "VoiceOver Help"

Note: During this task you will learn how to **Start** and **Stop** the **Keyboard Help**. This feature allows you to press a key command to hear its function without affecting the iPad.
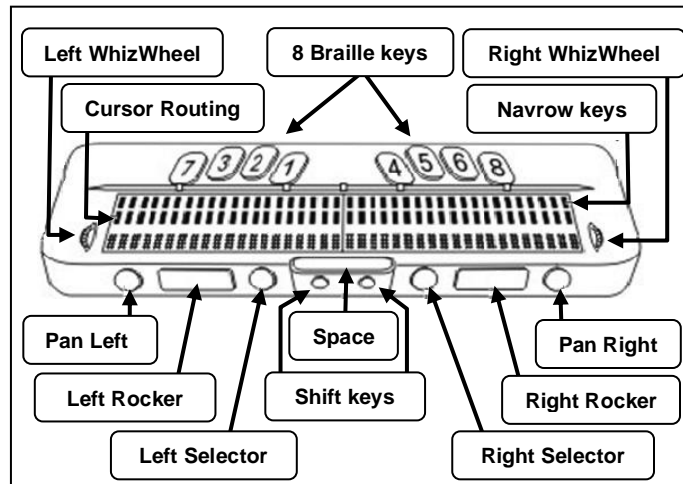

Figure 60: Controls

1. **Turn ON** "**VoiceOver Help**"; press **(Dots 1-3-space)** [K-space].

   a. Enter the following commands and listen to the key command description [See Figure 60].

      i. Press **(Dots 1-2-5-space)** [H-space].

      ii. Press **(Dot 4-space)**.

      iii. Press **(Dot 1-space)**.

      iv. Press **(Dots 1-3-4-space)** [M-space].

      v. Press **(Dots 1-4-5-space)** [D-space] and then press **(Dot 7-space)** [Same Function].

      vi. Press **(Dots 1-5-space)** [E-space] and then press **(Dot 8-space)** [Same Function].

      vii. Press **(Right Selector)**.

      viii. Press **(Left Selector)**.

      ix. Press **down** and then **up (Right Rocker)**.

      x. Press **down** and then **up (Left Rocker)**.

2. **Turn OFF "VoiceOver Help"**;

   a. Method 1: press **(Dots 1-2-space)** [B-space].

   b. Method 2: press **(Left Selector)** button.

   Note: This is the same command that activates the "Back" button or cancels a pop-up in Safari.

Section 5.3: Navigating the "Home" Screen

Task 1: Navigate the "HOME" screen – Adjust Volume & Speech

Note: During this task you will learn how to use braille display commands to move from one app to another on the *"Home" screen*, adjust the *VOLUME*, and turn the *SPEECH OFF* and *ON*.

1. **Adjust the Volume (Volume) button:**
   a. Increase *Volume* **(Dots 3-4-5-space)**.
   b. Decrease *Volume* **(Dots 1-2-6-space)**.
   c. *Speech* ON/OFF **(Dots 1-3-4-space)**.
2. **Using the "Rotor" to set the Volume:**
   Note: With this method you get the volume increase/decrease percentage.
   a. Set the *Rotor* to *Volume* **(Dots 5-6-space)** or **(Dots 2-3-space)**.
      i. Increase *Volume* **(Dot 3-space)**.
      ii. Decrease *Volume* **(Dot 6-space)**.
3. **Speech Rate:**
   a. Set the *"Rotor"* to *"Speech Rate"* **(Dots 5-6-space)** or **(Dots 2-3-space)**.
   b. Increase *Speech Rate* **(Dot 3-space)**.
   c. Decrease *Speech Rate* **(Dot 6-space)**.
4. **Navigate "Home" Screen Pages:**
   a. Go to *"Home"* Screen **(Dots 1-2-5-space)** [H-space].
   b. Move to the *"Search"* Page **(Dots 2-4-6-space)** [OW-space].
   c. Move to *Page 2* of the *"Home"* Screen:
      i. Method 1: **(Dots 1-3-5-space)** [O-space].
      ii. Method 2: *Rock DOWN* on **(Right Rocker)** [See Figure 61].
   d. Move back to *Page 1* of the *"Home"* Screen:
      i. Method 1: **(Dots 2-4-6-space)** [OW-space].
      ii. Method 2: *Rock UP* on **(Right Rocker)** [See Figure 61].
5. **Navigate to the next items (app icons)** [See Figure 61]:
   a. Method 1: **(Dot 4-space)**.
   b. Method 2: *Right* **(WhizWheel)** *roll toward* your body.
   c. Method 3: **(Pan Right Button)**.
6. **Navigate to the previous items (app icons)** [See Figure 61]:
   a. Method 1: **(Dot 1-space)**.
   b. Method 2: *Right* **(WhizWheels)** *roll away* from your body.
   c. Method 3: **(Pan Left Button)**.
7. *Navigate* to the *"Notes"* app icon (use above methods).
8. *Activate* and *open* the *"Notes"* app:
   a. Method 1: **(Cursor Routing Buttons)** to open app.
      Note: When the selected item is on the display you can press any cursor routing button above the letters of its name; works before and after the VoiceOver description message.
   b. Method 2: **(Whiz Wheels)** down like a button.
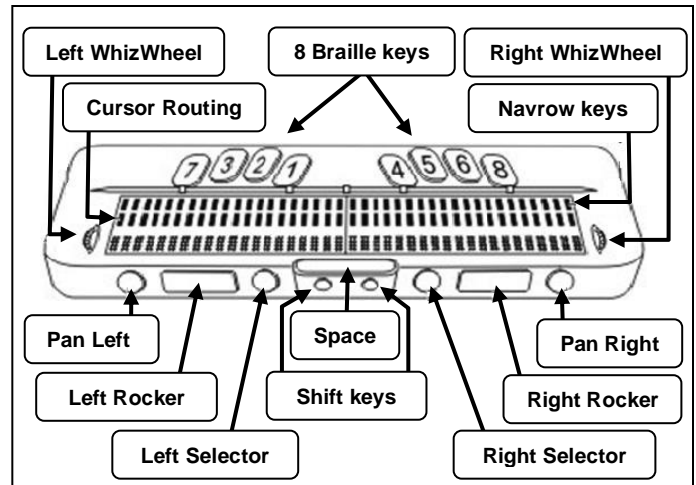   c. Method 3: **(Dots 3-6-space)**.

Figure 61: Controls

SIDEBAR NOTE:
- ✓ Move to the "*Status Bar*" and get information on wifi, time, Bluetooth, and the battery level; press **(Dots 2-3-4-space)** [S-space], then **(Dot 4-space)**.
- ✓ To leave the *"Status Bar"* and move to the top of the screen; press **(Dots 1-2-3-space)** [L-space].
- ✓ Access and navigate the *"App/Task Switcher"*; press **(Dots 1-2-5-space)** [H-space] *twice* quickly, then **(Dot 4-space)**.
- ✓ To close the *"App/Task Switcher"*; press **(Dots 1-2-5-space)** [H-space] *twice*.

Section 5.4: Surfing the Internet with Safari

Task 1: Launch "Safari" from the "HOME" screen

1. Go to *"Home"* screen **(Dots 1-2-5-space)** [H-space].
2. Navigate to and open the *"Safari"* app:
   a. Select *"Safari"* app **(Dot 4-space)** or **(Dot 1-space)**.
   b. Activate and open *"Safari"* app; press down **(Whiz Wheel)** or **(Cursor Routing Button)**.

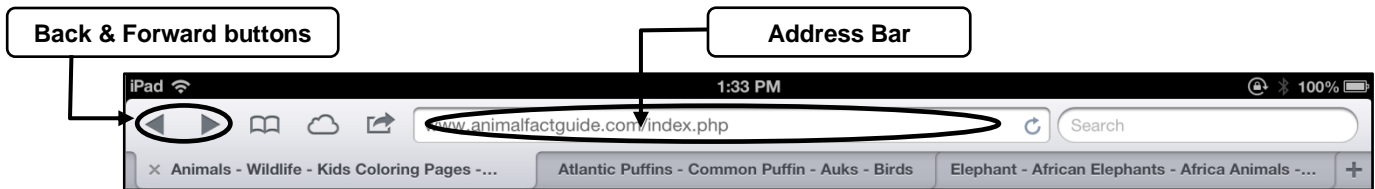### Task 2: Enter web address and launch "www.animalfactguide.com"

Figure 62: Safari Toolbar

Figure 63: Controls

Commands To Remember:

- Contracted Braille ON/OFF **(Dots 1-2-4-5-space)** [G-space].
- Jump to top of web page **(Dots 1-2-3-space)** [L-space].
- Jump to bottom of web page **(Dots 4-5-6-space)**.
- Navigate to the next or previous item; press **(Dot 4-space)** or **(Dot 1-space)**.
- Activate the links, form controls, etc; press **(Cursor Routing)** or **(E-space)** or **(WhizWheel)**.
- Delete; press **(Dots 1-4-5-space)** [D-space].
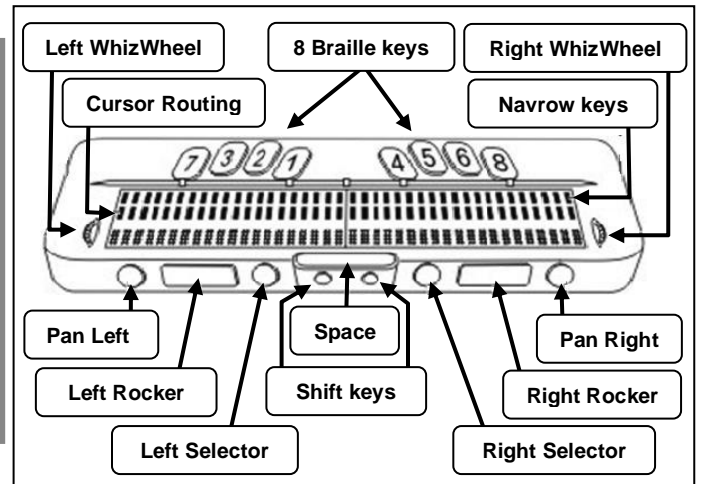- Back; press **(Dots 1-2-space)**. [B-space].

1. **Move to the Address Bar** [See Figure 62]**:**
   a. Go to *top* of web page **(Dots 1-2-3-space)** [L-space].
   b. Move to *"Address Bar"*; press **(Dot 4-space)** repeatedly.
   c. Enter *"Address Bar"*; press **(Cursor Routing)** or press down **(WhizWheels)** as a button.
      Note: Sometimes after the double tap, VoiceOver will announce the *"Back"* button. Disregard this and continue because you are still focused on the "Address Bar" as well as the "Back" button.
   d. Now, move to *"Clear Text"* button; press **(Dot 4-space)** once or until it is announced. Then activate the button; press **(Cursor Routing Button)** or down **(WhizWheels)** as a button.
      Note: This step isn't necessary unless you have inserted text that needs to be cleared.
2. **Type Web Address:**
   a. *Turn OFF Contracted* Braille; press **(Dots 1-2-4-5-space)** [G-space].
   b. Braille the letter *"a"*, then *"b", then "c"*.
   c. Delete the *"b" & "c"*; press **(Dots 1-4-5-space)** [D-space].
   d. Continue brailing the address *"n i m a l f a c t g u i d e.com"*. Use **(Dots 4-6)** to type a period, because we have contracted braille off.
3. **Launch website:** press the **(Dots 1-5-space)** [E-space].

SIDEBAR NOTE:
✓ Contracted braille can be turned on, but with it off you don't get the auto inserting of contractions.

Task 3: Navigate the Elements: Load the web page, "Animal Facts"

1. Move to *"Animal Facts"* link; press **(Dot 4-space)** or rotate **(WhizWheel)** toward your body.

2. Activate *"Animal Facts"* link; press **(Cursor Routing Button)** or press down on **(WhizWheel)**.

Task 4: Use the "Rotor" to move by "Headings" – Read (Pause & Resume Speech)

Notes: On web pages there are different types of elements, such as text, links, headings, form controls, etc. Choosing the most efficient elements to navigate by will help you find what you are looking for quicker. The "Rotor" control makes it possible to choose which element to navigate.

```
Commands To Remember:
 • Change "Rotor" selection; press (Dots 5-6-space) or (Dots 2-3-space).
 • Move to different "Rotor" items on web page; press (Dot 6-space) or (Dot 3-space).
 • Activate links, form controls, etc; press (Cursor Routing) down on (WhizWheel).
 • Move to the next or previous item; press (Dot 4-space) or (Dot 1-space).
 • Pause & Resume "Speech Reading"; press (Dots 1-2-3-4-space) [P-space] toggle.
 • Start Reading from top op web page; press (Dots 2-4-5-6-space) [W-space].
 • Start Reading from current location; press (Dots 1-2-3-5-space) [R-space].
 • Jump to bottom of web page; press (Dots 4-5-6-space).
 • Jump to the top of the web page; press (Dots 1-2-3-space) [L-space].
```

1. **Change the "Rotor" to "Headings":**

   a. Make sure to complete Tasks 2 & 3.

   b. Listen to the number of "Headings" as you change the *"Rotor"* to *"Headings"*; press **(Dots 5-6-space)** or **(Dots 2-3-space)** repeatedly.

2. **Navigating by "Headings" to find a desired animal:**

   a. Move down the page by *"Headings"* to *"Cougar"*; press **(Dot 6-space)**.

   b. Now move back up the page by *"Headings"* to *"Bonobo"*; press **(Dot 3-space)**.

   c. *Activate* the Heading/Link and load the web page **"Bonobo"**; press down **(Whiz Wheel)**.

   d. Move down by "Headings" until you get to *"Bonobo"*; **(Dot 6-space)**.

3. **Reading the information:**

   a. Move to and listen to the "Heading's" paragraph; press **(Dot 4-space)** two or three times.

   b. *Pause speech*; press **(Dots 1-2-3-4-space)** [P-space].

   c. *Resume* reading; press **(Dots 1-2-3-4-space)** [P-space].

   d. *Pause speech*; press **(Dots 1-2-3-4-space)** [P-space].

   e. *Start reading* from your current position; press **(Dots 1-2-3-5-space)** [R-space].

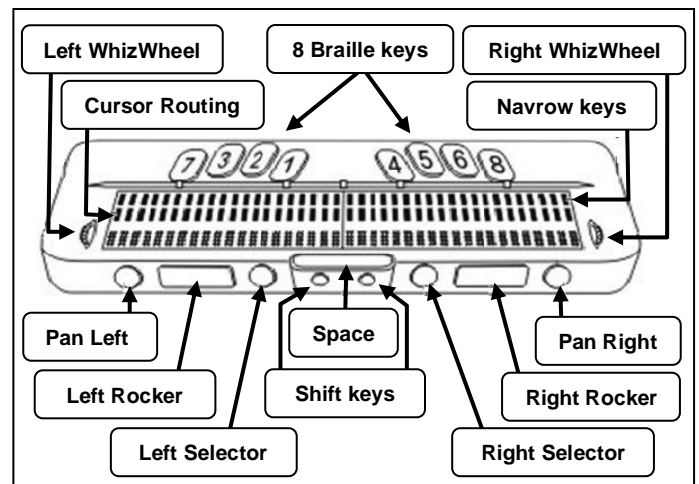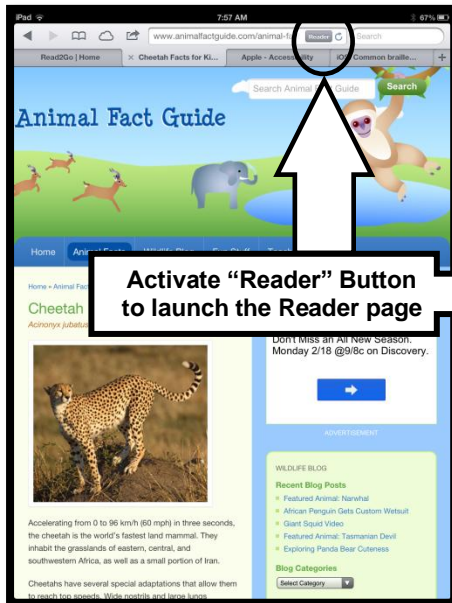   f. *Pause speech*; press **(Dots 1-2-3-4-space)** [P-space].

Figure 64: Controls

Task 5: Viewing Articles in "Reader"

Note: The *"Reader"* is a feature that allows you to view an article in a new page without the advertisements, links and sidebar information. During this task you will go to the *"Cheetah"* webpage and use the *"Reader"* to view information about the "Cheetah".

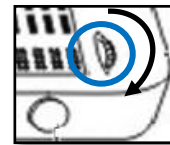Figure 65: Original webpage
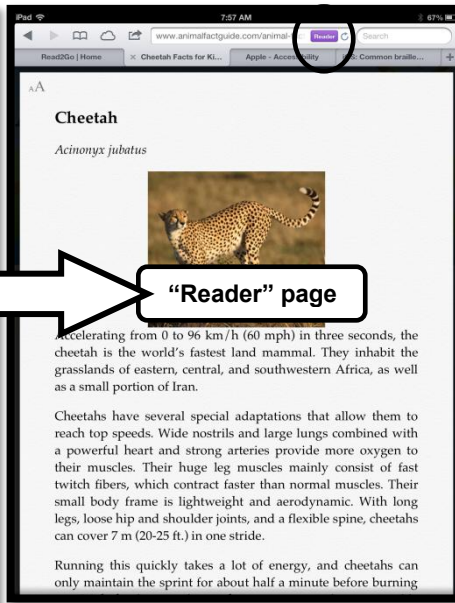
Figure 66: "Reader" page

Figure 67: Rotate RIGHT WhizWheel toward body

Figure 68: Press one of the WhizWheels as a button.
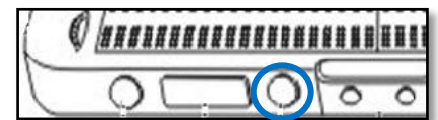
Figure 69: Left Select Button

1. If needed, refer to Figure 64 to locate the controls on the Focus 40 Blue display.

2. Move **back** to previous webpage with the different animals **(Dots 1-2-space)** [B-space] or **(Left Select Button)** [See Figure 69].

3. Move by *"Headings"* to the *"Cheetah"* heading/link **(Dot 6-space)** or **(Dot 3-space)**.

4. *Activate* the "Cheetah" heading/link to launch webpage; press down on **(Whiz Wheel)**.

5. Jump to the top of the web page **(Dots 1-2-3-space)** [L-space].

6. Move across to the *"Reader"* button; rotate **right (Whiz Wheel)** toward body [See Figure 67].

7. *Activate* the *"Reader"* button; press down on one **(Whiz Wheel)** [See Figure 68].

8. Set the *"Rotor"* to "Headings" and move by *"Headings"* to *"Cheetah"* **(Dots 5-6-space)** then **(Dot 6-space)** or **(Dot 3-space)**.

9. *Move* to and listen to the paragraph of this *"Heading"* to see how fast the Cheetah runs **(Dot 4-space)**.

10. *Pause* and *Resume* the *speech*; press **(Dots 1-2-3-4-space)** [P-space] repeatedly.

11. Start *reading* from your *location* **(Dots 1-2-3-5-space)** [R-space].

12. Start *reading* from your *top of webpage* **(Dots 2-4-5-6-space)** [W-space].

13. *Pause* the *speech* **(Dots 1-2-3-4-space)** [P-space].

14. *Close* the *"Reader"* page **(Dots 1-2-space)** [B-space] or press **(Left Selector)** button [See Figure 69].

Task 6: Use the "Rotor" to move by "Form Controls":

Note: During this Task you will navigate just by **"Form Controls"**. Form controls are elements such as edit boxes, combo/popup boxes, checkboxes, buttons, etc.

1. Change "Rotor" to **"Form Controls"**; **(Dots 5-6-space)** or **(Dots 2-3-space)**.
2. Move down the web page by **"Form Controls"**; **(Dot 6-space)**.
3. Move back up the web page by **"Form Controls"**; **(Dot 3-space)**.

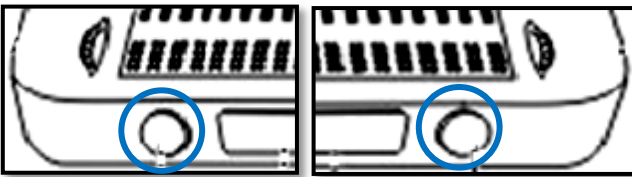## Task 7: Use the braille display instead of speech to read text on web page

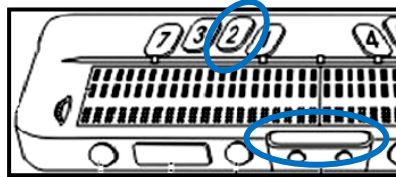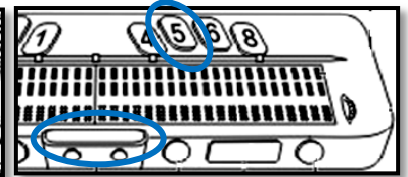**Figure 70: Pan Left button**   **Figure 71: Pan Right button**   **Figure 72: Pan Back (Dots 2-space)**   **Figure 73: Pan forward (Dots 5-space)**

1. Set **"Rotor"** to **"Headings" (Dots 5-6-space)** and move to **"Cheetah"** Heading **(Dot 3 or dot 6-space)**.
2. Turn **Speech OFF**; press **(Dots 1-3-4-space)** [M-space] toggle.
3. **Pan forward** & read braille; press **(Pan Right Button)** repeatedly [See Figure 71] or **(Dot 5-space)** repeatedly [See Figure 73].
4. **Pan Back**; press **(Pan Left Button)** [See Figure 70] or **(2-space)** [See Figure 72].

   Note: Panning right or panning left allows you to read what's on the screen, 40 cells at a time.
5. Turn **Speech ON**; press **(Dots 1-3-4-space)** [M-space] toggle.

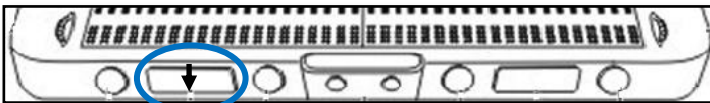## Task 8: Scrolling the Viewing Pages of the Webpage

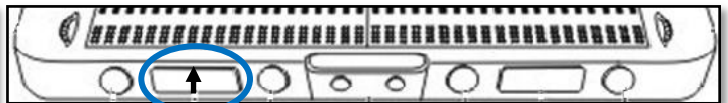**Figure 74: Rock Down on the Left Rocker Bar**   **Figure 75: Rock Up on the Left Rocker Bar**

1. **Scroll** down to the **next** viewing pages; **rock down** on **(Left Rocker Bar)** repeatedly [See Figure 74].
2. **Scroll** up to the **previously** viewed pages; **rock up** on **(Left Rocker Bar)** repeatedly [See Figure 75].

Task 9: Close the Curtain

1. Move to the "Home Screen"; press **(Dots 1-2-5-space)** [H-space]
2. **Turn Screen Curtain ON**; press **(Dots 1-2-3-4-5-6-space)**.
   a. You can now work without anyone seeing what's on the screen.
   b. Try it out! Go to the Safari app on the **"Home Screen"** and launch it. Navigate by Headings and then move to the text of the Heading.
3. **Turn Screen Curtain OFF**; press **(Dots 1-2-3-4-5-6-space)**.

Section 5.5: iBooks (reading a book)

Note: During this section you will use the Focus 40 Blue Classic braille display to navigate a book in the iBooks app. iBooks is a free app you must download from the Apps Store. You can download books to iBooks using the "Store" button in iBooks. You can read books in *portrait* or *landscape orientation*. In *Landscape two* pages are displayed on the screen and in *portrait* orientation you only have *one page* displayed. Let's *use portrait* orientation so only one page is displayed.

Task 1: Set the iPad to the Portrait Orientation

1. Go to the *"Home"* screen by pressing the **(Home)** button.
2. Slide the **(Side Switch)** to the left to unlock it.
3. *Tilt* the iPad up on its edge and rotate it so the **(Home)** button is at the bottom.
4. Slide the **(Side Switch)** back down to relock the rotation, then lay the iPad back on the table.
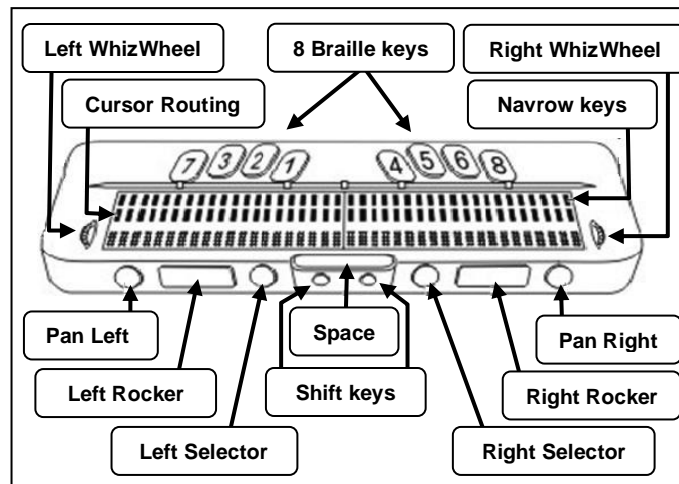
Task 2: Launch "iBooks"

Figure 76: Controls

1. Go to the **"*Home" screen** **(Dots 1-2-5-space)** [H-space] or press the **(Home)** button on iPad.
2. Select the *"Home"* screen *page* with the *iBooks icon*.
   a. To move to the next *"Home"* screen *page*, press **(Dots 1-3-5-space)** [O-space]. To move to the previous *"Home"* screen page, press **(Dots 2-4-6-space)** [OW-space].
   Note: You can also *rock up* or *down* on the **(Right Rocker)** to change *"Home"* screen pages [See Figure 76].
3. Select and Activate the *iBooks* app:
   a. Jump to top of screen **(Dots 1-2-3-space)** [L-space].
   b. Move to *"iBooks"* app [See Figure 76]:
      i. Method 1: press **(Dot 4-space)** or **(Dot 1-space)** repeatedly.
      ii. Method 2: *Right* **(WhizWheel)** *roll toward* or *away from* your body.
      iii. Method 3: press **(Pan Right Button)** or **(Pan Left Button)**.
   c. Activate the *iBooks* app; press **(Cursor Routing Button)** or press **(WhizWheel)**.
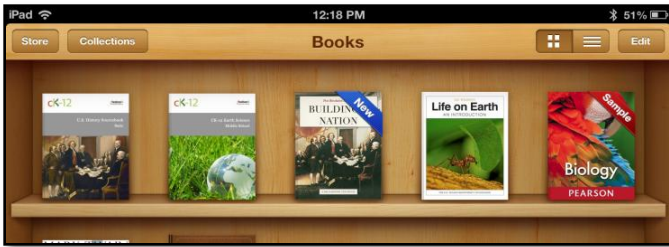
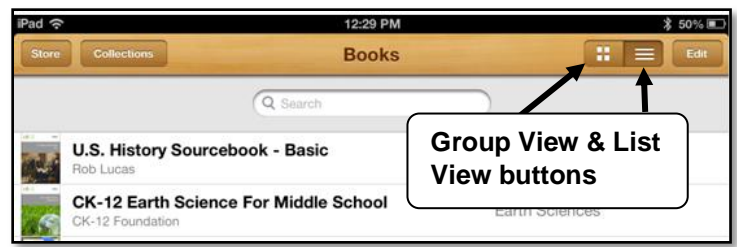Figure 77: iBooks opened to the Library (Group view)

Figure 78: iBooks opened to the Library (List View)

Note: The iBooks library has two main views, "Group View" (bookshelf look) [See Figure 77] and "List View" [Figure 78]. Both views have five buttons across the top on the toolbar. They are: Store, Collections, Group View, List View and Edit. The **"Store" button** takes you to the Internet to search for books to download. The **"Collections" button** allows you to switch between your collections of books, purchased books, PDF files, etc. The **"Group View"** and **"List View" buttons** arrange the books. The Group View has the books standing up on shelves, showing their covers. In the List View the books are in one vertical list and you have four additional buttons across the bottom of the screen. They are: Bookshelf, Titles, Authors and Categories. Selecting the **"Edit" button** allows you to move or delete books.

Figure 79: User Guide opened in iBooks

1. **Open the iBooks *"Library"*:**

   Note: If it *is already* open you will *not see* the *"Library"* button [See Figure 79] and you can move to item 2 in this task.

   a. *Make sure* you have *completed Task 2* before completing this task.

   b. *Activate* the *"Library"* button; press **(Cursor Routing Button)** or press **(WhizWheel)**. VoiceOver will announce the *"Store"* button; it's the first button on the toolbar at the top.

2. **Do the following to select & open the book *"iPad User Guide"*:**

   Note: If the Guide isn't in iBooks, select the "Store" button and download the app. It's free!

   a. Move to and select the book *"iPad User Guide"*; press **(Dot 4-space)** repeatedly.

   b. *Activate* the selected book, *"iPad User Guide"* by pressing the **(WhizWheel)** once or pressing a **(Cursor Routing)** button above a braille cell displaying the book's name [See Figure 80]. The book should now be open.

Figure 80: Cursor Routing Button above "P"

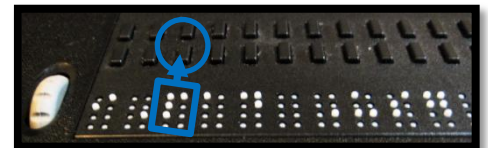## Task 4: Navigate the book's "Table of Contents"

1. Move to *"Table of Contents"* button; *rotate* the *right* **(WhizWheel)** *away* or *toward* your body.
2. *Activate* the *"Table of Contents"* button; press down on the same *right* **(WhizWheel)**.
3. Jump to the end of the *"Table of Contents"* button; press **(Dots 4-5-6-space)**.
4. Move up TOC list to *"Accessibility"*; rotate the *right* **(WhizWheel)** away from your body.
5. Activate TOC item *"Accessibility"*; press the *right* **(WhizWheel)**.
6. *Pause* the *speech*; press **(Dots 1-2-3-4-space)** [P-space].

Task 5: Turning & Reading the pages with SPEECH

1. Turn & Read the Next Page:
   a. Your focus should be on the page of text, if not, move your focus to the text; press **(Dot 1-space)** or **(Dot 4-space)**, then pause the speech; press **(Dots 1-2-3-4-space)** [P-space].
   b. Now turn *forward* by *pages*; press **(Dots 1-3-5-space)** [O-space] or **(Right Rocker Down)** repeatedly. Listen for a few seconds as VoiceOver reads the page.
      Note: The page turns without announcing the page number and starts reading the page.
   c. *Pause* the *speech*; press **(Dots 1-2-3-4-space)** [P-space].
   d. Turn to the *previous page*; press **(Dots 2-4-6-space)** [OW-space] or **(Right Rocker Up)**. Listen for a few seconds as VoiceOver reads the page.
   e. *Pause* the *speech*; press **(1-2-3-4-space)** [P-space].

Task 6: Turning Pages using "Page Chooser"

1. *Jump* to the end of the page; press **(Dots 4-5-6-space)**.
2. Move to the *"Page Chooser"*; press **(Dot 1-space)**, repeatedly.
3. Turn the pages *forward* to page *180*; press **(Dot 6-space)**, repeatedly.
4. Turn the pages *backwards* to page *175*; press **(Dot 3-space)**, repeatedly.
   Note: As you turn the pages, VoiceOver announces the page numbers.
5. Move to the text on page and listen; press **(Dot 1-space)**.
6. *Pause* the *speech*; press **(Dots 1-2-3-4-space)** [P-space].

Task 7: Turning & Reading the pages with Braille Display (NO SPEECH)

1. Turn *OFF* Speech; press **(Dots 1-3-4-space)** [M-space].
2. **Read the page with the braille display:**
   a. Method 1; Panning Buttons
      i. Read forwards; press **(Pan Right Button)** repeatedly.
      ii. Read backwards; press **(Pan Left Button)** repeatedly.
   b. Method 2: Braille Dot keys
      i. Read forwards; press **(Dot 5-space)** repeatedly.
      ii. Read backwards; press **(Dot 2-space)** repeatedly.
3. Turn *ON* Speech; press **(Dots 1-3-4-space)** [M-space].

Task 8: Bookmarks

Notes: You don't have to set a bookmark when you close the book; iBook remembers your page and returns you to it when you open the book again.

1. **Add A Bookmark:**
    a. *Jump to the top*; press **(Dots 1-2-3-space)** [L-space].
    b. Move to the *"Add a Bookmark"* button; press **(Dot 4-space)**.
    c. Activate the *"Add a Bookmark"* button; press **(WhizWheel)** or **(Cursor Routing Button)**.

2. **Remove A Bookmark:**
    a. *Jump to the top*; press **(Dots 1-2-3-space)** [L-space].
    b. Move to the *"Remove a Bookmark"* button; press **(Dot 4-space)**.
    c. Activate *"Remove Bookmark"* button; press **(WhizWheel)** or **(Cursor Routing Button)**.

Section 5.6: Typing with the "Notes" App

Note: The Notes app allows you to type notes using the on-screen keyboard, an external Bluetooth keyboard, or a *refreshable braille display*. When you work in Notes in *Landscape* orientation you have *two panes*; a narrow pane to the left with a list of previously created notes and a wider pane with the page for your text. In *Portrait* orientation you have to select "Notes" button to access the list of previously created notes; you have *one page* which is your text page.
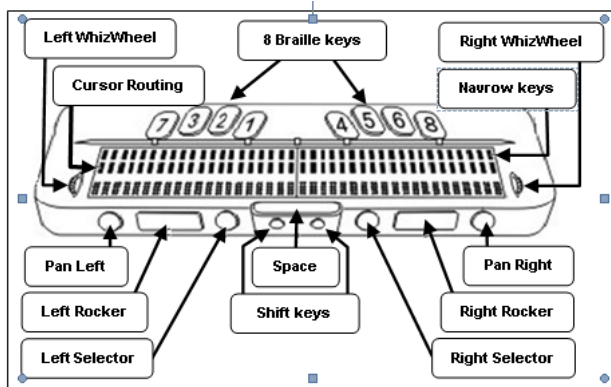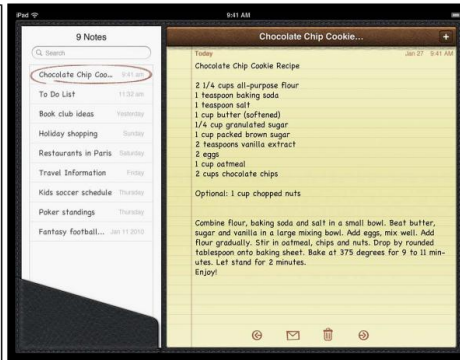

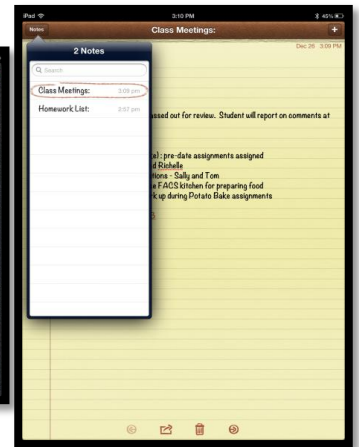
Figure 81: Controls

Figure 82: Landscape Orientation

Figure 83: Portrait Orientation

Task 1: Launch "Notes" & Start a New Note

1. Select & Activate the *Notes* app [See Figures 81, 82, and 83]:
   a. Go to the *Home screen*; press **(Home)** button.
   b. Move to the **"Home"** screen *page* with *"Notes"*; press **(Right Rocker)** down or up.
   c. Move to the *"Notes"* app; *rotate* **(WhizWheel)** down or up.
   d. Activate the *"Notes"* app; *press down* **(WhizWheel)**.
2. Start a new note [See Figures 81, 82, and 83]:
   a. Move to and activate the *"Add"* button; press **(Dot 4-space)**, then press **(Dots 3-6-space)**.

> **SIDEBAR NOTE:**
> ✓ The app "Pages" is a word processor for iDevices.

Task 2: Writing contracted & uncontracted words with the Braille Display

Note: Contracted braille is inserted after a pause or if a space or ending punctuation mark is typed.

1. Writing words [See Figure 81]:
   a. *Set* the braille display to *uncontracted* braille; **(Dots 1-2-4-5-space)** [G-space] toggle.
   b. *Type* the words using uncontracted braille *"The ipad is cool."*
      Note 1: To type capitals include **(Dot 7)** or **(Space)** with letter; to type a period **(Dots 4-6)**.
      Note 2: To *delete* to the left press **(Dots 1-4-5-space)** [D-space] or **(Dot 7-space)**.
   c. Move to a *New Line*; press **(Dots 1-5-space)** [E-space].
   d. Now *set* the display to *contracted* braille; press **(Dots 1-2-4-5-space)** (G-space] toggle.
   e. *Type* the sentence using contracted braille "*VoiceOver makes the iPad easy to use.*"
      Note: Write contracted braille with a steady flow. If you pause too long after typing the letter "V", the word "Very" will auto-insert. The braille sign for capitals and periods can be used.

2. **Editing your text:**

   a. **Deleting words:**

      i. Delete the last word, *use*, in this sentence; press **(Dots 1-4-5-space)** [D-space] repeatedly.

      ii. Now type, ***have fun.***

   b. **Insert text:**

      i. ***Route*** your cursor to letter *"f"* of *"fun"* by pressing the ***cursor routing*** button ***under*** the letter *"f"* of *"fun"* [See Figure 53].

      ii. Now write the words, *a lot of*, and then press **(Space)**. You should have changed your sentence to read, "*VoiceOver makes the iPad easy to have a lot of fun.*"

   c. **Navigating your text:**

      i. To ***jump*** back and forth between the ***beginning*** and ***end*** of your **text**, press **(Dots 3-6-space)**, repeatedly [See Figure 81].

      ii. Now jump to the beginning of your text; press **(Dots 3-6-space)**.

      iii. ***Pan forward*** by pressing the **(Pan Right)** button repeatedly until you have read to the ***end*** of your text [See Figure 81].

      iv. Now ***pan backwards*** by pressing the **(Pan Left)** button repeatedly until you have read to the ***beginning*** of your text [See Figure 81].

      Note: You can navigate by lines, words, or characters by first setting the "Rotor" to lines, words, or characters **(Dots 5-6-space)** and then navigate using **(Dot 3 or dot 6-space)**.

3. **Delete your Note:**

   a. ***Move*** to the *"Delete"* button; press **(Dot 4-space** or **Dot 1-space)**.

   b. Press **(Dots 3-6-space)** slowly*, twice,* to delete the *"Delete"* and *"Delete Note"* buttons.

      Note: If the *"Delete"* button isn't available, use the above commands and move to and activate the *"Note"* button. Then select your note from list and repeat the steps.

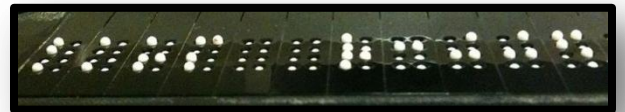# Part 6: iPad with VoiceOver and Apex as a Braille Display

Before We Get Started

Introduction:

1. **Refreshable Braille Displays:**
   a. Refreshable braille displays are electronic devices used to tactually read text that appears on the screen. They have small pins that form braille cells and that move up and down to show braille from the focused area of the screen. The braille display has anywhere from 12 to 84 cells depending on the model.

   b. Most braille displays also have controls (buttons and/or switches) that allow you to use the display to drive the device it is connected to, such as a computer or mobile device.
   c. Some braille displays have 9 braille keys that allow you to insert text on the screen using uncontracted and contracted braille.
   d. The refreshable braille displays work because the device they are connected to is running a screen reader, such as JAWS or Window Eyes for computers and VoiceOver for iDevices (iPad, iPhone, and iPod Touch) and Mac computers.

2. **The iPad and Refreshable Braille Displays:**
   a. The iPad (as well as the iPhone and iPod Touch) will connect to most Bluetooth refreshable braille displays.
   b. You must have VoiceOver on before the display will work.
   c. There are general key commands that will work on braille displays with the 9 braille keys, dots 1-2-3-4-5-6-7-8 and space (See Quick Commands List starting on page 99).
   d. There are additional key commands that are unique to each braille display, as there are with the Apex as a Braille Display (see page 103 in the Quick Commands List).

3. **Entering commands when the Apex is used as Braille Display:**
   a. As you complete the tasks in Part 6, you will be asked to enter braille key commands on the braille display to drive or control the iPad. When asked to press (Dots 1-3-4-space) on the braille display, you will press the braille keys 1, 3, 4 and the space key, at the same time and release them.

Section 6.1: Physical Controls (Apex as a Braille Display)

Note: All instructions, unless otherwise directed, assume that the iPad is positioned in the landscape orientation with the **(Home)** button to the right and iPad laying on a flat surface. Use the ***Triple-click Home configuration 1*** to turn ***only*** VoiceOver on (refer to page 14).

Task 1: Physical Controls (iPad)

Now do the following to locate the ***external controls*** [Figure 84] and learn how to ***turn on and off*** the iPad.

1. The iPad has a 7/8" (2 cm) border that is either white or black. This border does not respond to touch.

2. **To turn on the iPad from shutdown:**

   a. Locate, press & hold the **(Sleep/Wake)** button for 5 seconds, then release. It's located on left edge, back corner. Wait until VoiceOver makes an announcement, then select the **(Slide to Unlock)** button.

3. **To shut down the iPad:**

   a. Wake up iPad if asleep; press & release the **(Home)** button.

   b. Press & hold the **(Sleep/Wake)** button until VoiceOver says, **(Slide to Power off)**; then release button.

   c. Activate the selected button **(1-Finger_DOUBLE TAP)** on screen.

4. **Lock the iPad by putting it to sleep:**

   a. Turn on the iPad. Then press & release the **(Sleep/Wake)** button.

5. **Unlock iPad from sleep:**

   a. After a few seconds the iPad goes to sleep. To wake it up press and release the **(Home)** or **(Sleep/Wake)** button.

6. **Locate the following physical controls:**

   a. ***Side Switch*** located on back edge, left corner, the edge that is away from your body.

   b. ***Volume control*** located to the right of the **(Side Switch)** on back edge.

   c. ***Head Phone Jack*** located on left edge, corner closest to your body.

   d. ***FaceTime Camera*** located on left border of screen, opposite the **(Home)** button.

   e. ***iSight Camera*** located on the underneath side, next to the **(Sleep/Wake)** button.

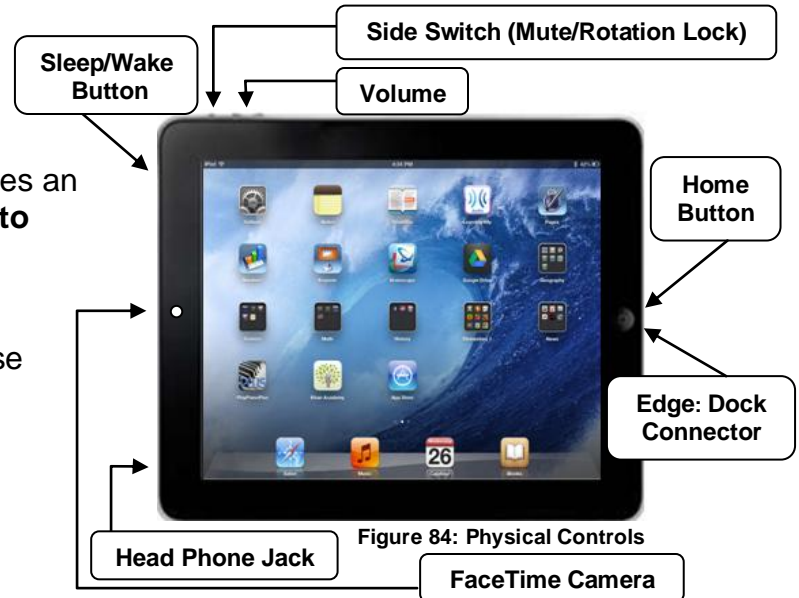   f. ***Dock Connector*** located on right edge, underneath the **(Home)** button.

Figure 84: Physical Controls

(Labels: Sleep/Wake Button, Side Switch (Mute/Rotation Lock), Volume, Home Button, Edge: Dock Connector, Head Phone Jack, FaceTime Camera)

7. **Use the (Side Switch) to lock screen rotation or mute the sound**:
   a. During training or use by students, it is beneficial to have the **(Side Switch)** set to *"Lock Rotation"* in Settings. This locks the screen rotation to prevent unintentional rotation.
   b. You can change the setting of the **(Side Switch)** from *"Lock Rotation"* to *"Mute"* by going to Settings > General > Use Side Switch To, then check one of the two items.
   c. **Locking and unlocking the screen rotation:**
      i. Slide the **(Side Switch)** to the left to unlock the screen rotation [See Figure 84].
      ii. Raise the iPad in the vertical position with its edge on table surface.
      iii. Rotate the iPad so the edge with the **(Home)** button is touching the table surface. You will notice that the screen rotated right-side up.
      iv. Again, rotate the iPad back in the landscape orientation position with the **(Home)** button to the right and use the **(Side Switch)** to lock the screen rotation.

Task 2: Physical Controls (Apex As A Braille Display)

Note: The Braille Note Apex is a powerful PDA/note-taker with many features such as a word processor, web browser, and book reader. To learn more about these and the many other features go to www.humanware.com. This booklet will address only the use of the Apex as a refreshable braille display with the iPad (iDevices).

1. **Locate the features** [See Figure 85]:
   a. Braille Dot Keys 1-6
   b. Dot 7 (Backspace function)
   c. Dot 8 (Enter function)
   d. Space
   e. 18/32Cursor Routing Buttons
   f. 18/32 Braille Cells
   g. Thumb keys 1-4
   h. ON / OFF button
   i. Scroll Wheel
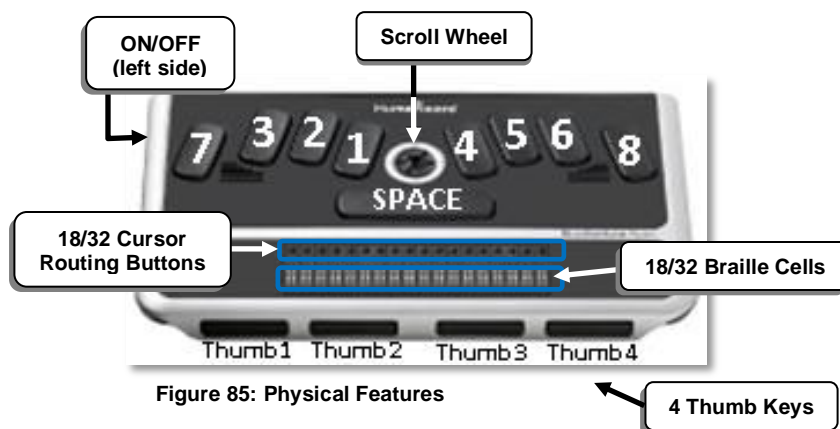
Figure 85: Physical Features

Note: Entering Commands on the Apex to drive the iPad

1. During Part 6 you will be asked to enter key commands on the Apex to drive the iPad. For your convenience this booklet includes both the braille dot configuration and the braille letter or contraction. For example the command to go to the *"Home"* screen is expressed **(Dots 1-2-5-space)** [H-space]. The command to turn to the previous page is expressed **(Dots 2-4-6-space)** [OW-space].

2. When entering a command such as **(Dots 1-2-5-space)** [H-space] on the braille display, press and release the braille keys 1, 2, 5 and space together.

Section 6.2: Making the Connection (VoiceOver – Apex As A Braille Display)

Task 1: Making the Initial Bluetooth Connection (Pairing)

1. **Turn on the Braille Note Apex and check the Battery Level:**
   a. On the Apex, go to *"Options"*; press **(Dots 1-3-5-space)** [O-space].
   b. Write the letter *"P"*; press **(Dots 1-2-3-4)** and listen.

2. **On the Apex, turn on Bluetooth and place in "Braille Terminal" mode:**
   a. Go to *"Options"*; press **(Dots 1-3-5-space)** [O-space].
   b. Go to the *"Connectivity"* menu; write the letter *"C"*; press **(Dots 1-4)**.
   c. Then select *"Bluetooth"*; write the letter *"B"*; press **(Dots 1-2)**, then write the letter *"Y"*; **(Dots 1-3-4-5-6)** for yes.
   d. Next, go back to the *"Main Menu"*; press **(Dots 1-2-3-4-5-6-space)**. Don't search for Blue Tooth devices, if asked.
   e. Turn on *"Braille Terminal"* mode; write the letter *"T"*; press **(Dots 2-3-4-5)**.
   f. Set the **"Braille Terminal" port** to Bluetooth; write the letter *"B"* **(Dots 1-2)** and then press **(Dot 8)** for the **(Enter)** function.

3. **Turn on the iPad:**
   a. When it is shut down; press & hold the **(Sleep/wake)** button [See Figure 84].
   b. When it is asleep/locked; press & release the **(Power)** or **(Sleep/wake)** button [See Figure 84].

4. **Turn on VoiceOver:**
   a. Unlock the screen.
   b. Tap *"Settings"*.
   c. Tap *"General"*.
   d. Tap *"Accessibility"*.
   e. Tap *"VoiceOver"*.
   f. Tap "VoiceOver" *ON/OFF button*, to turn ON.

5. **Pair the Braille Display to the iPad:**
   a. Make sure you have completed item 4 above before continuing with item 5.
   b. On right pane **(1-Finger_TAP)**.
   c. To view *"Braille"* option **(3-Finger_FLICK UP)**.
   d. Select *"Braille"* option **(1-Finger_DOUBLE TAP)**.
   e. If you get a prompt to turn on *Bluetooth*, turn it on by moving to and selecting the *"YES"* button **(1-Finger_FLICK RIGHT)** then **(1-Finger_DOUBLE TAP)**.
   f. In the list of *Bluetooth devices*, select your braille display **(1-Finger_ DOUBLE TAP)**.
   g. When the on-screen keyboard appears, enter the pairing code *0 0 0 0,* then select the *"Done"* button on the on-screen keyboard button **(1-Finger_DOUBLE TAP)**.

   Note: You have just a few seconds to enter the code and activate the *"Done"* button.

Task 2: Once paired: Making the Bluetooth Connection

1. *Start* this task with VoiceOver *ON* and the iPad *locked*, press **(Sleep/Wake)** button.
2. Turn on the Apex and make sure its Bluetooth is turned on.
3. Place the Apex in the *"Braille Terminal"* mode:
   a. Go to the Main Menu; **(Dots 1-2-3-4-5-6-space)**.
   b. Turn on Braille Terminal Mode; **(Dots 2-3-4-5)** [T] then **(Enter)**.
4. Turn on iPad press **(Sleep/Wake)** button. You should hear the connection sound and see the display refresh itself.

Task 3: "VoiceOver Help"

Note: During this task you will learn how to *Start* and *Stop* the *Keyboard Help*. This feature allows you to press a key command to hear its function without affecting the iPad.

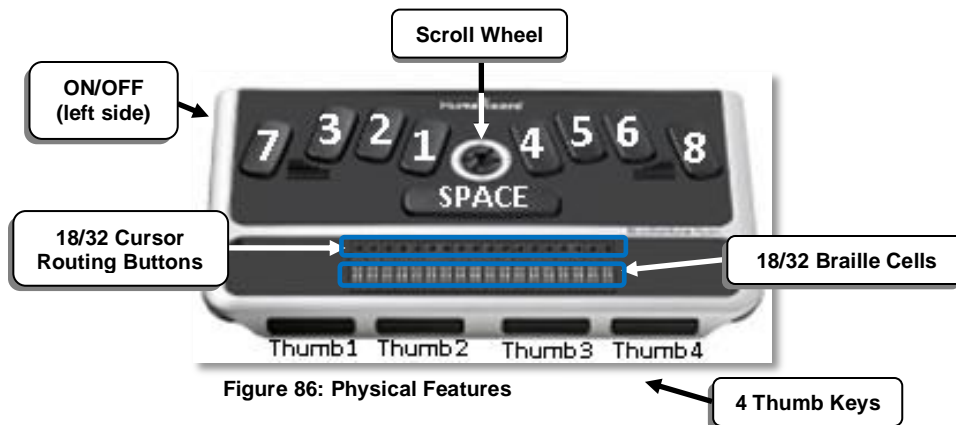**Figure 86: Physical Features**

1. *Turn ON* "*VoiceOver Help*"; press **(Dots 1-3-space)** [K-space].

   Important Note: There are four braille commands that require you to first use the bypass command **(Dots 4-5-6-8-space)** before entering them. Practice using the following command that requires the bypass command:
   a. To use the *Enter function*; first press the bypass **(Dots 4-5-6-8-space)** command then **(Dots 1-5-space)** [E-space].
2. Enter the following commands and listen to the key command description [See Figure 86]:
   a. Press **(Dots 4-5-6-8-space)** then try **(Dots 1-2-5-space)** [H-space].
   b. Press **(Dots 1-2-3-space)** [L-space] then try **(Dots 4-5-6-space)**.
   c. Press **(Dot 4-space)** then try **(Dot 1-space)**.
   d. Press **(Dot 1-4-5-space)** [D-space].
   e. Press **(Dots 1-3-4-space)** [M-space].
   f. Press **(Dots 3-6-space)**.
   g. Press Down on a **(Cursor Router button)**.
   h. Press **(Thumb key 1)**; then try **(Thumb key 4)**.
   i. Press together **(Thumb keys 2-3)**; then try **(Thumb keys 1-4)**.
   j. Press together **(Thumb keys 1-2)**; then try **(Thumb keys 3-4)**.
3. *Turn OFF "VoiceOver Help"*; press **(Dots 1-2-space)** [B-space].

Section 6.3: Navigating the "Home" Screen

Task 1: Navigate the "HOME" screen – Adjust Volume & Speech

Note: During this task you will learn how to use braille display commands to move from one app to another on the *"Home" screen*, adjust the *VOLUME*, and turn the *SPEECH OFF* and *ON*.

1. **Volume:**
   a. *Increase* Volume; **(Dots 3-4-5-space)** [AR-space].
   b. *Decrease* Volume; **(Dots 1-2-6-space)** [GH-space].
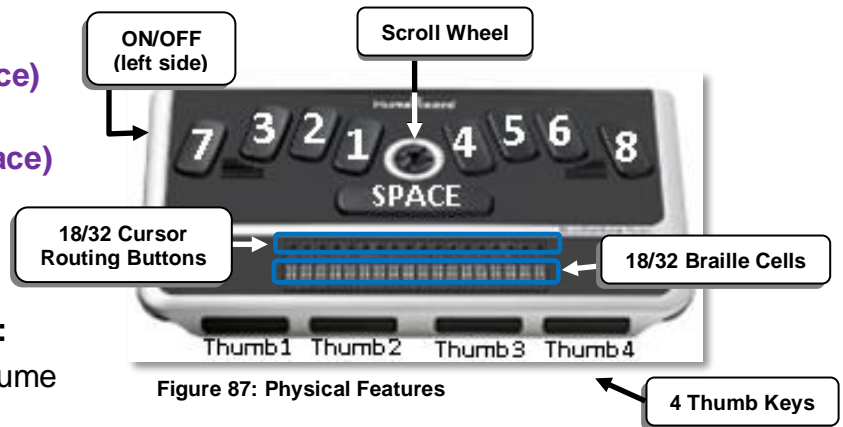   c. *Speech* ON/OFF; press **(Dots 1-3 4-space)** toggle [M-space].

2. **Using the "Rotor" to set the Volume:**
   Note: With this method you get the volume increase/decrease percentage.
   a. Set the *Rotor* to *Volume* **(Dots 5-6-space)** or **(Dots 2-3-space)**.
      i. Increase *Volume* **(Dot 3-space)**.
      ii. Decrease *Volume* **(Dot 6-space)**.

3. **Speech Rate:**
   a. Set the *"Rotor"* to *"Speech Rate"*; **(Dots 5-6-space)** or **(Dots 2-3-space).**
   b. Increase Speech Rate; **(Dot 3-space).**
   c. Decrease Speech Rate; **(Dot 6-space).**

4. **Navigate "Home" Screen Pages:**
   a. Go to *"Home"* Screen; by-pass **(Dots 4-5-6-8-space)** then **(Dots 1-2-5-Space)** [H-space] or **(Thumb keys 2-3)**.
   b. Move to the **"Search"** page; **(Dots 2-4-6-space)** [OW-space].
   c. Move to *Pages 1 & 2* on Home screen; by-pass **(Dots 4-5-6-8-space)** then **(Dots 1-3-5-space)** [O-space].
   d. Move back to *Page 1* of "Home" screen; **(Dots 2-4-6-space)** [OW-space].

5. **Navigate App Icons Forwards**:
   a. Method 1: **(Dot 4-space)**.
   b. Method 2: **(Thumb 3)**.

6. **Navigate App Icons Backwards**:
   a. Method 1: **(Dot 1-space)**.
   b. Method 2: **(Thumb 2)**.

7. Move to the *"Notes"* app icon.

8. *Activate* the *"Notes"* app:
   a. Method 1: Press **(Cursor Routing Button)** to open app.
   b. Method 2: Press **(Dots 3-6-space)** to open app.

ON/OFF (left side)

Scroll Wheel

18/32 Cursor Routing Buttons

18/32 Braille Cells

SPACE

Figure 87: Physical Features

Thumb1 Thumb2 Thumb3 Thumb4

4 Thumb Keys

SIDEBAR NOTE:
- Move to the *"Status Bar"* and get information on wifi, time, Bluetooth, and the battery level; press **(Dots 2-3-4-space)** [S-space] then **(Dot 4-space)**.
- To leave the *"Status Bar"* and move to the top of the screen; press **(Dots 1-2-3-space)** [L-space].
- Access and navigate the *"App/Task Switcher"*; press **(Thumb keys 2-3)** *twice* quickly, then **(Dot 4-space)**.
- To close the *"App/Task Switcher"*; press **(Thumb keys 2-3)** *once*.

Section 6.4: Surfing the Internet with Safari

Task 1: Launch "Safari" from the HOME screen

1. Go to *"Home"* screen; **(Thumb keys 2-3)** or press bypass **(Dots 4-5-6-8-space)** then **(Dots 1-2-5-Space)** [H-space].
2. Navigate to and open the *"Safari"* app:
   a. Select *"Safari"* app; **(Dot 4-space)** or **(Dot 1-space)**.
   b. Activate and open *"Safari"* app; press **(Dots 3-6-space)** or **(Cursor Routing Button)**.

Task 2: Enter web address and launch "www.animalfactguide.com"
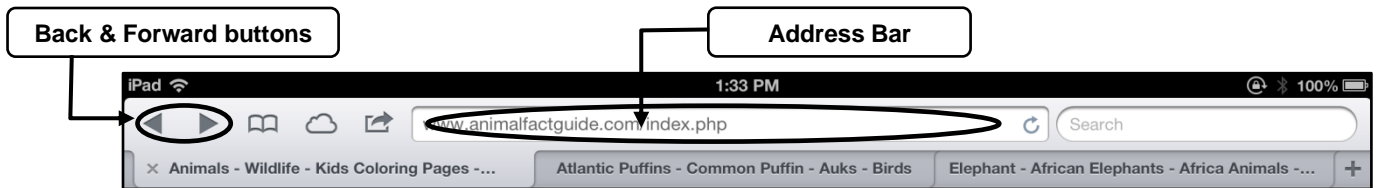
Back & Forward buttons

Address Bar

Figure 88: Safari Toolbar

Commands To Remember:

- Bypass **(Dots 4-5-6-8-space)**.
- Contracted Braille ON & OFF **(Dots 1-2-4-5-space)** [G-space].
- Top of page **(Dots 1-2-3-space)** [L-space].
- Bottom of page **(Dots 4-5-6-space)**.
- Navigate to next or previous item; **(Dot 4-space)** or **(Dot 1-space)**.
- Activate the links, form controls, etc; press **(Dots 3-6-space)** or **(Cursor Routing)**.
- Enter; **(Dots 4-5-6-8-space)** then [E-space].
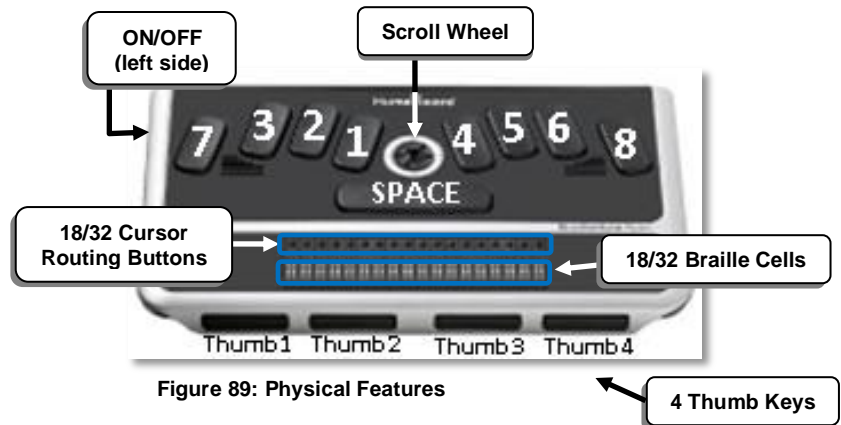- Delete; press **(Dots 1-4-5-space)** [D-space].

ON/OFF
(left side)

Scroll Wheel

18/32 Cursor Routing Buttons

18/32 Braille Cells

Figure 89: Physical Features

4 Thumb Keys

SIDE BAR NOTE:
✓ Contracted braille can be turned on, but with it off you don't get the auto inserting of contractions.

1. **Move to the Address Bar** [See Figure 88]:
   a. Go to *top* of web page; press **(Dots 1-2-3-space)** [L-space].
   b. Move to *"Address Bar"*; press **(Dot 4-space)** repeatedly.
   c. Enter the *"Address Bar"*; press **(Dots 3-6-space)** or **(Cursor Routing Button)**.
   Note: Sometimes after the double tap, VoiceOver will announce the *"Back"* button. Disregard this and continue to the next item.
   d. In the *"Address Bar"* move to *"Clear Text"* button; press **(Dot 4-space)** once; then press **(Dots 3-6-space)** or **(Cursor Routing Button)** to activate.
   Note: This step isn't necessary unless you have inserted text that needs to be cleared.

2. **Type Web Address:**
   a. *Turn OFF Contracted* Braille; press **(Dots 1-2-4-5-space)** [G-space] toggle.
   b. Braille the letter *"a"*, then *"b", then "c"*.
   c. Delete the *"b" & "c"*; press **(Dots 1-4-5-space)** [D-space] twice.
   d. Continue brailing the address *"n i m a l f a c t g u i d e.com"*. Use **(Dots 4-6)** to type a period, because we have contracted braille off.

3. **Launch website:**
   a. Press **(Dots 4-5-6-8-space)** then **(Dots 1-5-space)** [E-space] to *launch* website.

Task 3: Navigate the Elements: Load the web page, "Animal Facts"

1. Move to *"Animal Facts"* link; **(Dot 4-space)** or press **(Thumb 4)**.
2. Activate the *"Animal Facts"* link; press **(Dots 3-6-space)** or **(Cursor Routing Button)**.

Task 4: Use the "Rotor" to move by "Headings" – Read (Pause & Resume Speech)

Notes: On web pages there are different types of elements, such as text, links, headings, form controls, etc. Choosing the most efficient elements to navigate by will help you find what you are looking for quicker. The "Rotor" control makes it possible to choose which element to navigate.

Commands To Remember:
- Change "Rotor" selection; press **(Dots 5-6-space or Dots 2-3-space)**.
- Move to different "Rotor" items on web page; press **(Dot 6-space or Dot 3-space)**.
- Activate an item; press **(Dots 3-6-space)** or **(Cursor Routing Button)**.
- Move to the next or previous item; press **(Dot 4-space or Dot 1-space)** or **(Thumb key 4 or Thumb key 1)**.
- Pause & Resume "Speech Reading"; press **(Dots 1-2-3-4-space)** [P-space] toggle.
- Start Reading from top of web page; press **(Dots 2-4-5-6-space)** [W-space].
- Start Reading from current location; press **(Dots 1-2-3-5-space)** [R-space].
- Jump to bottom of web page; press **(Dots 4-5-6-space)**.
- Jump to the top of the web page; press **(Dots 1-2-3-space)** [L-space].
- Pan braille forward; press **(Thumb 3)** or **(Dot 5-space)**.
- Pan braille back; press **(Thumb 2)** or **(Dot 2-space)**.
- Activate the *"Home"* button; press **(Thumb keys 2-3)** or press **(Dots 4-5-6-8-space)** then **(Dots 1-2-5-space)** [H-space].

---

1. **Change the "Rotor" to "Headings":**
   a. Make sure to complete Tasks 2 and 3.
   b. Listen to the number of "Headings" as you change the *"Rotor"* to *"Headings"*; press **(Dots 5-6-space)** or **(Dots 2-3-space)** repeatedly.

2. **Navigating by "Headings" to find a desired animal:**

Figure 90: Physical Features

   a. Move down the page by *"Headings"* to *"Cougar"*; press **(Dot 6-space)** repeatedly.
   b. Now move back up the page by *"Headings"* to *"Bald Eagle"*; **(Dot 3-space)** repeatedly.
   c. *Activate* the Heading/Link and load the web page **"Bald Eagle"**; press **(Dots 3-6-space)**.
   d. Move down the page by *"Headings"* until you get to *"Bald Eagle"*; press **(Dot 6-space)**.

3. **Reading the information:**
   a. Move to and listen to the "Heading's" paragraph; press **(Dot 4-space)** two or three times.
   b. *Pause speech*; press **(Dots 1-2-3-4-space)** [P-space].
   c. *Resume* reading; press **(Dots 1-2-3-4-space)** [P-space].
   d. *Pause speech*; press **(Dots 1-2-3-4-space)** [P-space].
   e. *Start reading* from your *current* position; press **(Dots 1-2-3-5-space)** [R-space].
   f. *Jump* to top of web page and start speech reading; press **(Dots 2-4-5-6-space)** [W-space].
   g. *Pause speech*; press **(Dots 1-2-3-4-space)** [P-space].
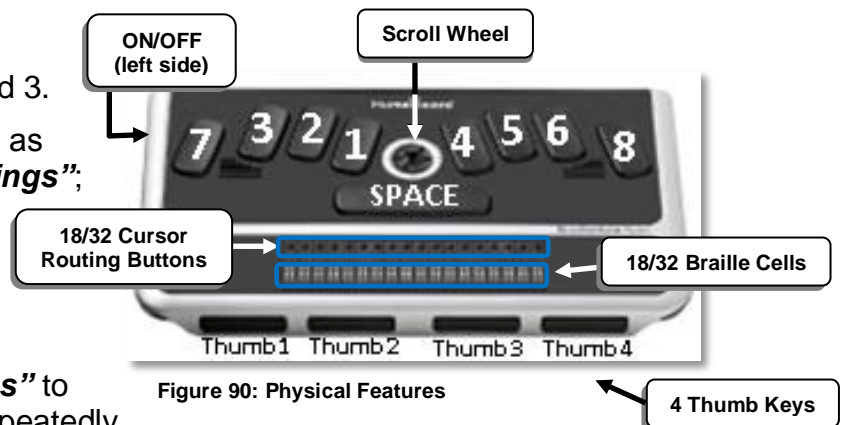
Task 5: Viewing Articles in "Reader"

Note: The *"Reader"* is a feature that allows you to view an article in a new page without the advertisements, links and sidebar information. During this task you will go to the *"Cheetah"* webpage and use the *"Reader"* to view information about the "Cheetah".
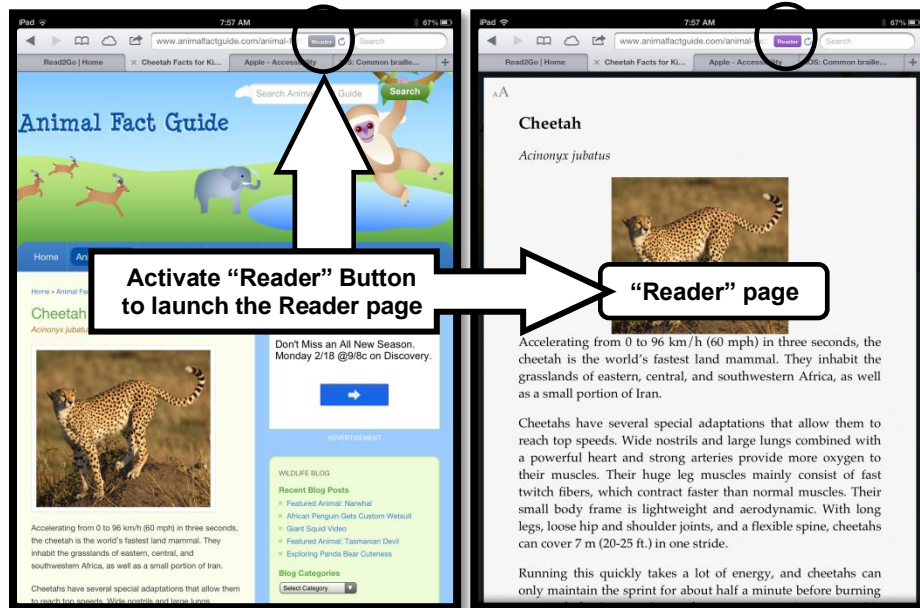

| Figure 91: Original webpage | Figure 92: "Reader" page |

1. If needed, refer to Figure 90 to locate the controls on the Apex.

2. Move ***back*** to previous webpage with the different animals; press **(Dots 1-2-space)** [B-space] [See Figure 91].

3. Move by *"Headings"* to the *"Cheetah"* heading/link; **(Dots 6-space)** or **(Dots 3-space)**.

4. ***Activate*** the "Cheetah" heading/link; press **(Dots 3-6-space)** or **(Cursor Routing)**.

5. Jump to the top of the web page; press **(Dots 1-2-3-space)** [L-space].

6. Move across to the *"Reader"* button; **(Dot 4-space)** or **(Thumb 4)** repeatedly [See Figure 91]

7. ***Activate*** the *"Reader"* button; press **(Dots 3-6-space)** or **(Cursor Routing)**. This opens the "Reader" page with the ***main article*** [See Figure 92].

8. Set the *"Rotor"* to "Headings" and move by *"Headings"* to *"Conservation Status"*; press **(Dots 5-6-space)** then **(Dots 6-space)** or **(Dots 3-space)**.

9. ***Move*** to and listen to the paragraph of this *"Heading"* to see how many cheetahs live in the wild today; press **(Dot 4-space)**.

10. ***Close*** the "Reader" format; press **(Dots 1-2-space)** [B-space].

Task 6: Use the "Rotor" to move by "Form Controls":

Note: During this Task you will navigate by *"Form Controls"*. Form controls are elements such as edit boxes, combo/popup boxes, checkboxes, buttons, etc.

1. Change "Rotor" to *"Form Controls"*; press **(Dots 5-6-space)** or **(Dots 2-3-space)**.

2. Move down the web page by *"Form Controls"*; press **(Dot 6-space)**.

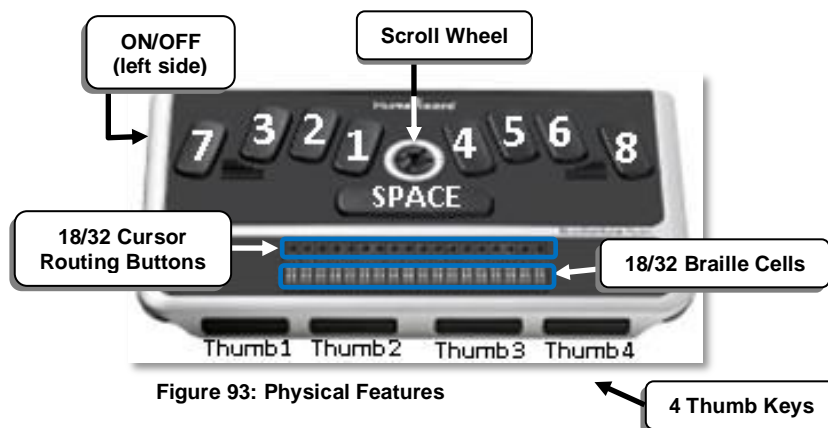3. Move back up the web page by *"Form Controls"*; press **(Dot 3-space)**.

Figure 93: Physical Features

Task 7: Use the braille display instead of speech to read text on web page

1. Set *"Rotor"* to *"Headings"* **(Dots 5-6-space)** and move to *"Bald Eagle"* Heading **(Dot 3 or dot 6-space)**.
2. Turn *Speech OFF*; press **(Dots 1-3-4-space)** [M-space].
3. *Pan forward* & read braille; press **(Thumb 3)** or **(Dot 5-space)** repeatedly.
4. *Pan Back*; press **(Thumb 2)** or **(2-space)** repeatedly.
5. Turn *Speech ON*; press **(Dots 1-3-4-space)** [M-space].

Task 8: Turn ON and OFF the Curtain

1. *Turn ON Curtain*; press by-pass **(Dots 4-5-6-8-space)** then **(Dots 1-2-3-4-5-6-space)** toggle.
   a. You can now work without anyone seeing what's on the screen.
2. *Turn OFF Curtain*; press **(Dots 4-5-6-8-space)** then **(Dots 1-2-3-4-5-6-space)** toggle.

Section 6.5: iBooks (reading a book)

Note: During this section you will use the Braille Note Apex as a braille display to navigate a book in the iBooks app. iBooks is a free app you must download from the Apps Store. You can download books to iBooks using the "Store" button in iBooks. You can read books in *portrait* or *landscape orientation*. In *Landscape two* pages are displayed on the screen and in *portrait* orientation you only have *one page* displayed. Let's use portrait orientation so we have only one page on the screen.

Task 1: Set the iPad to the Portrait Orientation

1. Go to the *"Home"* screen by pressing the **(Home)** button.
2. Slide the **(Side Switch)** to the left to unlock it.
3. *Tilt* the iPad up on its edge and rotate it so the **(Home)** button is at the bottom.
4. Slide the **(Side Switch)** back down to relock the rotation, then lay the iPad back on the table.
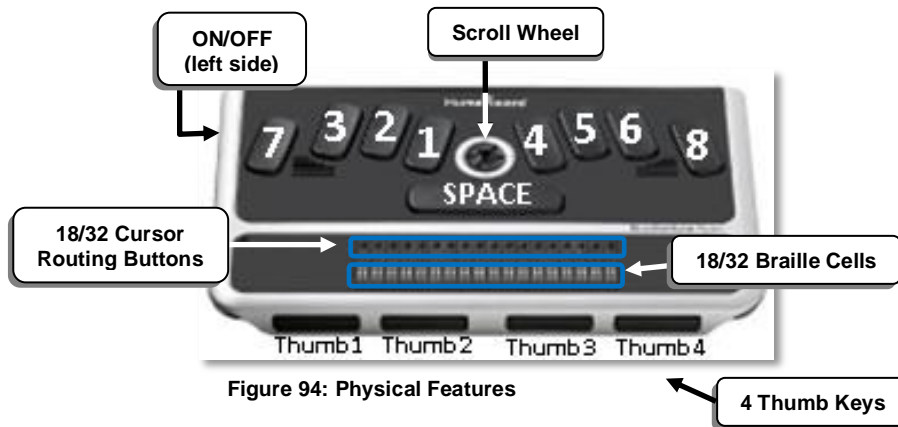
Task 2: Launch "iBooks"

Figure 94: Physical Features

1. Go to the *Home screen*:
   a. Method 1: Press **(Thumb keys 2-3)**.
   b. Method 2: Press by-pass **(Dots 4-5-6-8-space)** then **(Dots 1-2-5-space)** [H-space].
   c. Press the **(Home)** button on the iPad.
2. Select the *"Home"* screen *page* with the *iBooks icon*.
   a. To move to the next *"Home"* screen *page*, press bypass **(Dots 4-5-6-8-space)** then **(Dots 1-3-5-space)** [O-space]. To move to the previous *"Home"* screen *page*, press **(Dots 2-4-6-space)** [OW-space].
3. Select and Activate the *iBooks* app:
   a. Now, jump to top of "Home" screen page; press **(Dots 1-2-3-space)** [L-space].
   b. Move to the *"iBooks"* app; **(Dot 4-space)** repeatedly.
   c. Activate the *iBooks* app; press **(Dots 3-6-space)** or **(Cursor Routing Button)**.
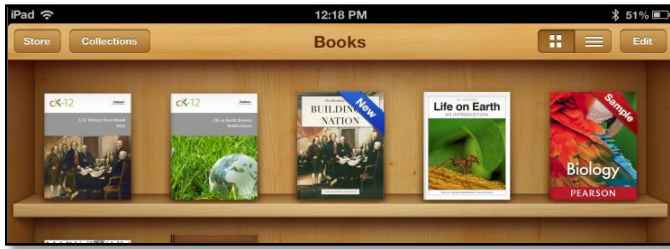
Task 3: Library (Opening Books)

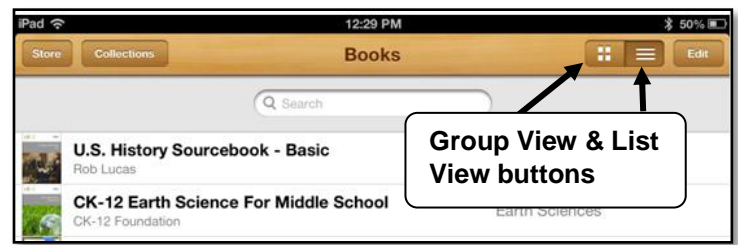**Figure 95: iBooks opened to the Library (Group view)**

Figure 96: iBooks opened to the Library (List View)

Note: The iBooks library has two main views, "Group View" (bookshelf look) [See Figure 95] and "List View" [Figure 96]. Both views have five buttons across the top on the toolbar. They are: Store, Collections, Group View, List View and Edit. The **"Store" button** takes you to the Internet to search for books to download. The **"Collections" button** allows you to switch between your collections of books, purchased books, PDF files, etc. The **"Group View"** and **"List View" buttons** arrange the books. The Group View has the books standing up on shelves, showing their covers. In the List View the books are in one vertical list and you have four additional buttons across the bottom of the screen. They are: Bookshelf, Titles, Authors and Categories. Selecting the **"Edit" button** allows you to move or delete books.
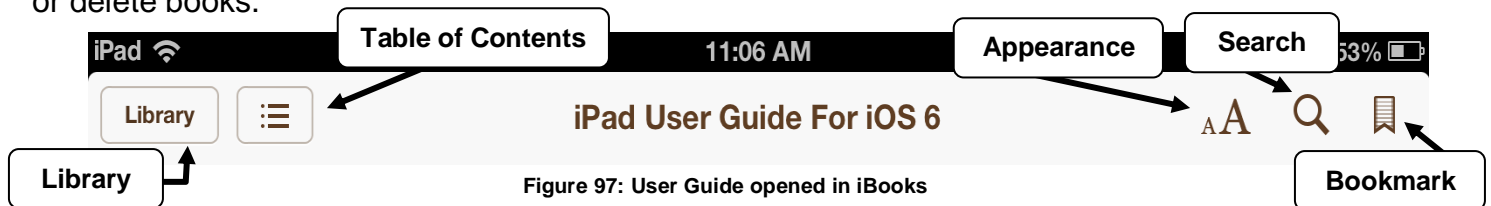

Figure 97: User Guide opened in iBooks

1. **Open the iBooks *"Library"*:**

   Note: If it *is already* open you will *not see* the *"Library"* button [See Figure 97] and you can move to item 2 in this task.

   a. *Make sure* you have *completed Task 2* before completing this task.

   b. *Activate* the *"Library"* button; press **(Cursor Routing Button)** or press **(Dots 3-6-space)**. VoiceOver will announce the *"Store"* button; it's the first button on the toolbar at the top.

2. **Do the following to select & open the book *"iPad User Guide"*:**

   Note: If the Guide isn't in iBooks, select the "Store" button and download the app. It's free!

   Figure 98: Cursor Routing Button above "P"

   a. Move to and select the book *"iPad User Guide"*; press **(Dot 4-space)** repeatedly.

   b. *Activate* the selected book, *"iPad User Guide"* by pressing the **(Dots 3-6-space)** once or pressing a **(Cursor Routing)** button above a braille cell displaying the book's name [See Figure 98]. The book should now be open.

Task 4: Navigate the book's "Table of Contents"

1. Move to *"Table of Contents"* button; press **(Dot 4-space)** or **(Dot 1-space)**.
2. *Activate* the *"Table of Contents"* button; **(Dots 3-6-space)**.
3. Jump to the end of the *"Table of Contents"* button; press **(Dots 4-5-6-space)**.
4. Move up TOC list to *"Accessibility"*; press **(Dot 1-space)**.
5. Activate TOC item *"Accessibility"*; press **(Dots 3-6-space)**.
6. *Pause* the *speech*; press **(Dots 1-2-3-4-space)** [P-space].

Task 5: Turning & Reading the pages with SPEECH

1. *Turn & Read the Next Page:*
   a. Your focus should be on the page of text, if not, move your focus to the text; press **(Dot 1-space)** or **(Dot 4-space)**, then pause the speech; press **(Dots 1-2-3-4-space)** [P-space].
   b. Now turn *forward* by *pages*; first the bypass command **(Dots 4-5-6-8-space)** then **(Dots 1-3-5-space)** [O-space] three or four times. Listen for a few seconds as VoiceOver reads the page. You must use the bypass command before entering [O-space] each time.
      Note: The page turns without announcing the page number and starts reading the page.
   c. *Pause* the *speech*; press **(Dots 1-2-3-4-space)** [P-space].
   d. Turn to the *previous page*; press **(Dots 2-4-6-space)** [OW-space]. Listen for a few seconds as VoiceOver reads the page.
   e. *Pause* the *speech*; press **(1-2-3-4-space)** [P-space].

Task 6: Turning Pages using "Page Chooser"

1. *Jump* to the end of the page; press **(Dots 4-5-6-space)**.
2. Move to the *"Page Chooser"*; press **(Dot 1-space)**, repeatedly.
3. Turn the pages *forward* to page *180*; press **(Dot 6-space)**, repeatedly.
4. Turn the pages *backwards* to page *175*; press **(Dot 3-space)**, repeatedly.
   Note: As you turn the pages, VoiceOver announces the page numbers.
5. Move to the text on page and listen; press **(Dot 1-space)**.
6. *Pause* the *speech*; press **(Dots 1-2-3-4-space)** [P-space].

Task 7: Turning & Reading the pages with Braille Display (NO SPEECH)

1. Turn *OFF* Speech; press **(Dots 1-3-4-space)** [M-space].
2. **Read the page with the braille display:**
   a. Method 1: Panning Buttons
      i. Read forwards; press **(Pan Right Button)** repeatedly.
      ii. Read backwards; press **(Pan Left Button)** repeatedly.
   b. Method 2: Braille Dot keys
      i. Read forwards; press **(Dot 5-space)** repeatedly.
      ii. Read backwards; press **(Dot 2-space)** repeatedly.
3. Turn *ON* Speech; press **(Dots 1-3-4-space)** [M-space].

Task 8: Bookmarks

Notes: You don't have to set a bookmark when you close the book; iBooks remembers your page and returns you to it when you open the book again.

1. *Add A Bookmark:*
   a. *Jump to the top*; press **(Dots 1-2-3-space)** [L-space].
   b. Move to the *"Add a Bookmark"* button; press **(Dot 4-space)**.
   c. Activate the *"Add a Bookmark"* button; press **(Dots 3-6-space)**.
2. *Remove A Bookmark:*
   a. *Jump to the top*; press **(Dots 1-2-3-space)** [L-space].
   b. Move to the *"Remove a Bookmark"* button; press **(Dot 4-space)**.
   c. Activate *"Remove Bookmark"* button; press **(Dots 3-6-space)**.

Section 6.6: Typing with the "Notes" App

Note: The Notes app allows you to type notes using the on-screen keyboard, an external Bluetooth keyboard, or a *refreshable braille display*. When you work in Notes in *Landscape* orientation you have *two panes*; a narrow pane to the left with a list of previously created notes and a wider pane with the page for your text. In *Portrait* orientation you have to select "Notes" button to access the list of previously created notes; you have *one page* which is your text page.
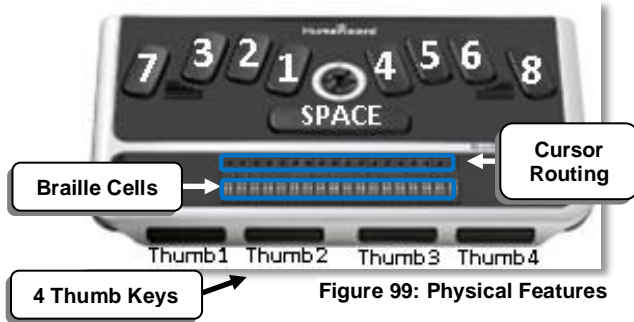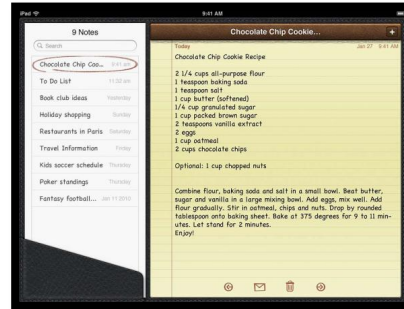

Figure 99: Physical Features
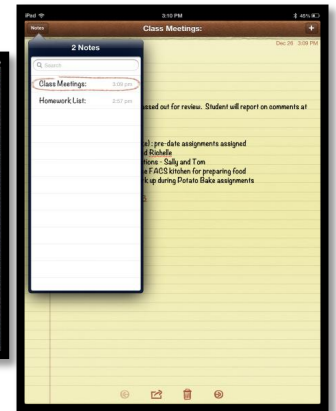

Figure 100: Landscape Orientation

Figure 101: Portrait Orientation

Task 1: Launch "Notes" & Start a New Note

1. Select & Activate the *Notes* app [See Figure 99]:

   a. Go to the *"Home"* screen; press **(Home)** button or **(Thumb keys 2-3)**.

   b. Move to the *"Home"* screen *page* with the *"Notes"* icon; to move to the *next page*, first press the bypass **(Dots 4-5-6-8-space)** then **(Dots 1-3-5-space)** [O-space]. To move to *previous page*, press **(Dots 2-4-6-space)** [OW-space].

   c. Move to *"Notes"* app; **(Dot 4-space** or **Dot 1-space)** or **(Thumb key 4 or Thumb key 1)**.

   d. Activate the *"Notes"* app; **(Dots 3-6-space)** or **(Cursor Routing Button)**.

2. Start a new note:

   a. Move to and activate the *"Add"* button; **(Dot 4-space)** or **(Dot 1-space)**, then **(Dots 3-6-space)** to activate.

Task 2: Writing contracted & uncontracted words with the Braille Display

Note: Contracted braille is inserted after a pause or if a space or ending punctuation mark is typed.

1. Writing words [See Figure 99]:

   a. *Set* the braille display to uncontracted braille; **(Dots 1-2-4-5-space)** [G-space] toggle.

   b. *Type* the sentence using uncontracted braille, *"The iPad is great."*
   Note 1: To type capitals include **(Dot 7)** with letter; to type a period **(Dots 4-6)**.
   Note 2: To *delete* to the left press **(Dots 1-4-5-space)** [D-space] or **(Dot 7-space)**.

   c. Move to a *New Line*; press **(Dots 4-5-6-8-space)** then **(Dots 1-5-space)** [E-space].

   d. Now, *set* the display to *contracted* braille; **(Dots 1-2-4-5-space)** [G-space] toggle.

   e. *Type* the sentence using contracted braille "*Voiceover makes the iPad easy to use.*"
   Note: Write contracted braille with a steady flow. If you pause too long after typing the letter "V", the word "Very" will auto-insert. The braille sign for capitals and periods can be used.

2. **Editing your text:**

   a. **Deleting words:**

      i. Delete the last word, *use*, in this sentence; press **(Dots 1-4-5-space)** [D-space] repeatedly.

      ii. Now type, *have fun.*

   b. **Insert text:**

      i. *Route* your cursor to letter *"f"* of *"fun"* by pressing the *cursor routing* button *under* the letter *"f"* of *"fun"* [See Figure 99].

      ii. Now write the words, *a lot of*, and then press **(Space)**. You should have changed your sentence to read, "*VoiceOver makes the iPad easy to have a lot of fun.*"

   c. **Navigating your text:**

      i. To *jump* back and forth between the *beginning* and *end* of your **text**, press **(Dots 3-6-space)**, repeatedly [See Figure 99].

      ii. Now jump to the beginning of your text; press **(Dots 3-6-space)**.

      iii. *Pan forward* by pressing the **(Thumb key 3)** repeatedly until you have read to the *end* of your text [See Figure 99].

      iv. Now *pan backwards* by pressing the **(Thumb key 2)** repeatedly until you have read to the *beginning* of your text [See Figure 99].

      Note: You can navigate by lines, words, or characters by first setting the "Rotor" to lines, words, or characters **(Dots 5-6-space)** and then navigate using **(Dot 3 or dot 6-space)**.

3. **Delete your note:**

   a. *Move* to the *"Delete"* button; press **(Dot 4-space** or **Dot 1-space)**.

   b. Press **(Dots 3-6-space)** slowly*, twice,* to delete the *"Delete"* and *"Delete Note"* buttons.

   Note: If the *"Delete"* button isn't available, use the above commands and move to and activate the *"Note"* button. Then select your note from list and repeat the steps.

Part 7: Other Accessibility Features (Large Text – Inverted Colors – Guided Access)

Note: The iPad Accessibility Booklet assumes you have completed one or more of the previous Parts 1-6 to acquire the basic skills necessary to navigate the Settings app and to launch iBooks, Safari and Notes. If you need help with these skills, refer to the previous Parts.

Section 7.1: Accessibility Feature "Large Text"

Note: the "Large Text" feature will allow you to increase the font size up to 56-point text in alerts, Calendar, Contacts, Mail, Messages, and Notes.

Task 1: Turning on the "Large Text" feature

1. Go to *Settings*.
2. Go to *General*.
3. Go to *Accessibility*.
4. Select the *Large Text* option to open its menu and *select* a desired text size.

Task 2: Using "Large Text" with Notes

1. Go to the *"Home"* screen and launch *Notes*.
2. *Select* a *New Note* and *type* a few sentences to experience the "Large Text" feature.
3. *Go* back to Settings, General, Accessibility to *turn OFF* the "Large Text" feature.

Section 7.2: Accessibility Feature: "Inverted Colors"

Note: The "Inverted Colors" feature allows the user to switch the colors on the screen to a high contrast or negative image appearance. Many (low vision) users like this feature.

Task 1: Turning ON the "Inverted Colors" feature

1. Go to *Settings*.
2. Go to *General*.
3. Go to *Accessibility*.
4. Select the "Inverted Colors" button to turn *ON* "Inverted Colors".

Task 2: Using "Inverted Colors" with iBooks & Safari

1. Go to the *"Home"* screen and launch *iBooks*.
2. *Open a book* to experience the "Inverted Colors" feature.
3. Go to the *"Home"* screen and launch *Safari*.
4. Go to a *desired website* to experience the "Inverted Colors" feature.

Task 3: Turning OFF the "Inverted Colors" feature

1. Go to *Settings*.
2. Go to *General*.
3. Go to *Accessibility*.
4. Select the "Inverted Colors" on/off button to turn *OFF* "Inverted Colors".

Section 7.3: Accessibility Feature: "Guided Access"

Note: Guided Access helps the user to stay on task when using an app. The feature allows you to keep the user from leaving a desired app and limits access to controls within the app. During the following tasks you are going to set up the iPad with Guided Access to help the user from accidentally closing the book she is reading.

Task 1: Turning ON the "Guided Access" feature

1. Go to *Settings*.
2. Go to *General*.
3. Go to *Accessibility*.
4. Select the *"Guided Access"* option to open its menu.
5. Select the *"Off/On"* button to expand the menu.
6. Select the *"Set Passcode"* button and *enter* the code, *1 2 3 4*, twice.
   a. Note: Now you are ready to select your app.
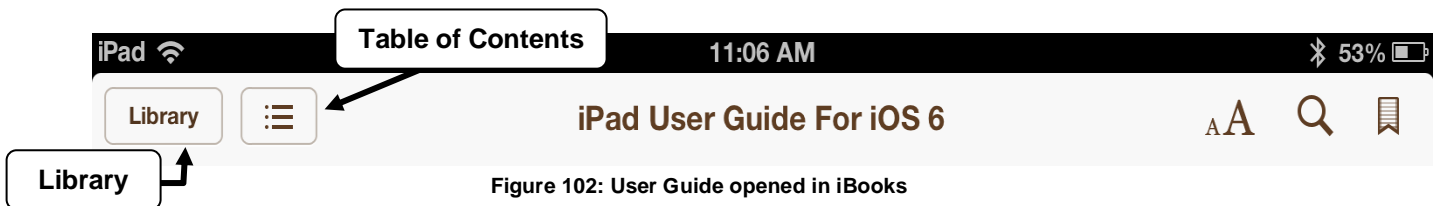
Task 2: Applying Guided Access to a book in iBooks

Table of Contents

Library

iPad User Guide For iOS 6

Library

Figure 102: User Guide opened in iBooks

1. Go to the *"Home"* screen and launch *iBooks*.
2. In iBooks, *open* the book *"iPad User Guide For iOS 6"*.
3. Select and open the *"Table of Contents"* button (See Figure 102) and *scroll down* the menu to select the *"Accessibility"* chapter.
4. Triple-click the **(Home)** button and select *"Guided Access"* from the pop-up menu.
5. *Draw* a box around area to be restricted [See Figure 103]. Once you lift your finger off the screen a shaded box is displayed [See Figure 104].
6. *Select* the *"Start"* button to start Guided Access [See Figure 104].
7. *Touch* the *shaded* areas and notice you don't have access to these areas.
8. Turn the pages **(1-Finger_SLIDE LEFT/RIGHT)**.
9. Turn *OFF* Guided Access by pressing the **(Home)** button 3 times quickly, then enter the passcode, *1 2 3 4*.
   a. **Note:** At this point you can select the circled "x" to delete the shaded areas or press the (End) button to end the session at this time [See Figure 104].
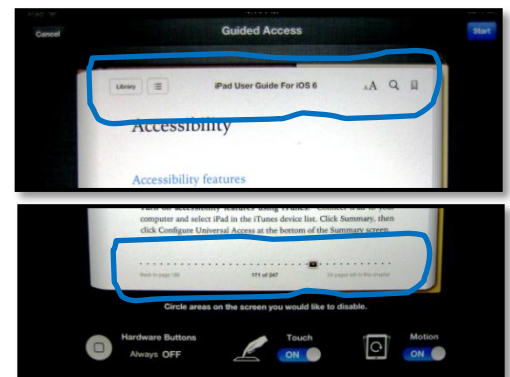10. *Select* the **(End)** button to end the Guided Access session.
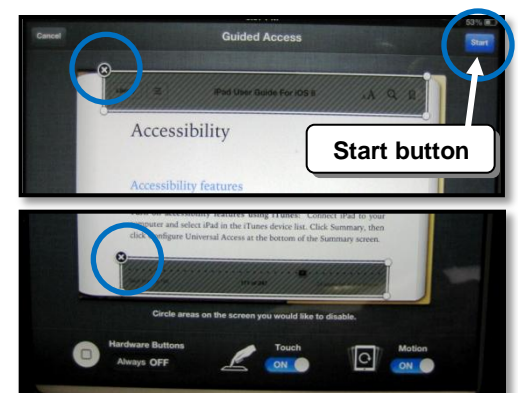

Figure 103: Draw a box around desired area

Start button

Figure 104: Desired area is blocked

Appendix A (Quick Commands List)

VoiceOver

Speech

1. **VoiceOver Help**:
   a. Turn on VoiceOver on.
   b. Turn on VoiceOver Practice:
      i. Go to Settings > Accessibility > VoiceOver
      ii. Select the "VoiceOver Practice" button.
      iii. Touch the screen and then practice the gestures.
      iv. Select the "Done" button in top-right corner of screen.

2. **Speech ON/OFF**
   a. If Zoom is unchecked in Settings **(3-Finger_DOUBLE TAP)** toggle.
   b. If Zoom is checked in Settings **(3-Finger_TRIPLE TAP)** toggle.

3. **Speak an item:**
   a. **(1-Finger_TAP)**.

4. **Adjust speech rate:**
   a. Access "Rotor"; (2-Finger_Rotate) to select "Speech Rate".
   b. Increase Speech Rate: **(1-Finger_FLICK UP)**.
   c. Decrease Speech Rate: **(1-Finger_FLICK DOWN)**.

5. **Pause and resume speech:**
   a. **(2-Finger_TAP)** toggle.

6. **Start reading from the top of screen:**
   a. **(2-Finger_FLICK UP)**.

7. **Start reading from current position:**
   a. **(2-Finger_FLICK DOWN).**

Navigation

1. **To select an Item:**
   a. **(1-Finger_TAP)**.

2. **To activate a selected Item:**
   a. **(1-Finger_DOUBLE TAP)** Once the desired item is selected, double tap anywhere.

3. **To scroll a vertical list:**
   a. Scroll Up: **(3-Finger_SWIPE DOWN)**.
   b. Scroll Down: **(3-Finger_SWIPE UP)**.

4. **Go to Next or Previous page:**
   a. Next Page: **(3-Finger_SWIPE RIGHT)**.
   b. Previous Page: **(3-Finger_SWIPE LEFT)**.

1. **Dragging icons on the "Home" screen:**
   Note: This allows you to move icons around and to create folders. To create a folder, drag one icon onto another icon.

   a. Go to the "Home" screen; press (Home) button.
   b. Select the desired icon; **(1-Finger_TAP)**.
   c. Place icons in "Jiggle" mode **(1-Finger_DOUBLE TAP & HOLD)** anywhere and without lifting your finger, drag the icon to the desired location. VoiceOver will announce your column and row location.
   d. Lift finger when you have your desired location.

2. **(2-Finger_SPLIT-TAP) select and activating an item:**

   a. **Use (1-Finger_TAP & HOLD)** to select an item and while still holding the finger on the selected item **(1-Finger_TAP)** with another finger.

3. **Activate the "Back" button or cancel pop-ups, lists, etc.:**

   a. Slide two fingers back and forth in a "Z" pattern **(2-Finger_SCRUB)**.

4. **Open and select an item from the "Item Chooser":**

   a. **(2-Finger_Triple Tap)**.
   b. Then **(1-Finger_FLICK RIGHT or LEFT)** to move through list.
   c. Lastly, **(1-Finger_DOUBLE TAP)** to activate the item.

5. **Screen curtain ON/OFF:**

   a. VoiceOver only checked in "Settings" **(3-Finger_TRIPLE TAP)**.
   b. Both VoiceOver and Zoom checked in "Settings" **(3-Finger_4 TAPS)**.

6. **Multitasking gestures: Use 4 or 5 fingers to:**

   a. Go to the "Home" screen **(4/5-Finger_PINCH)**.
   b. Reveal the Multitasking Bar **(4/5-Finger_FLICK UP)** to reveal Multitasking Bar
   c. Switch between apps that are open **(4/5-Finger_FLICK LEFT or RIGHT)**.

7. **Vertical navigation:**

   a. Set the "Rotor" to "Vertical Navigation" **(2-Finger_ROTATE)**.
   b. Use **(1-Finger_FLICK UP or DOWN)**.

8. **Scroll continuously through a list:**

   a. Select an item in a list **(1-Finger_TAP)**.
   b. Then **(1-Finger_DOUBLE TAP & HOLD)**.
   c. Lastly, **(1-Finger_FLICK UP or DOWN)** to scroll.

9. **Announce the Status Bar:**
   Note: the "Status Bar" has the Wi-Fi signal strength, time, battery level, etc.

   a. Select the "Status Bar" by **(1-Finger_TAP)** at the top of the screen.

10. **Announce additional information:**

    a. To get additional information about the page **(3-Finger_TAP)**.

Common Braille Display Commands (All braille displays with braille dot keys)

Activate VoiceOver Help & Screen Curtain

1. Enter "VoiceOver Help"; press **(Dots 1-3-space)** [K-space].
2. Exit "VoiceOver Help"; press **(Dots 1-2-space)** [B-space].

Misc Commands

1. Activates "Home" button and goes to the "Home" screen; press **(Dots 1-2-5-space)** [H-space].
2. Activate an item; press **(Dots 3-6-space)** or **(Cursor Routing Button)**.
3. "Tab" function; press **(Dots 2-3-4-5-space)** [T-space].
4. Contracted braille ON/OFF; press **(Dots 1-2-4-5-space)** [G-space] toggle.
5. Screen Curtain ON/OFF; press **(Dots 1-2-3-4-5-6-space)** toggle.
6. Announce location: page number, column/row and focus; press **(Dots 3-4-space)** [ST-space].

Speech Commands

1. **Speech ON/OFF:**
   a. Press **(Dots 1-3-4-space)** [M-space] toggle.
2. **Speech Volume:**
   a. Increase Volume; press **(Dots 3-4-5-space)** [AR-space].
   b. Decrease Volume; press **(Dots 1-2-6-space)** [GH-space].
3. **Adjust Speech Rate:**
   a. Access "Rotor"; press **(Dots 5-6-space)** to select "Speech Rate".
   b. Increase Speech Rate; press **(Dot 3-space)**.
   c. Decrease Speech Rate; press **(Dot 6-space)**.

Navigation Commands

1. Top of page/first element: press **(Dots 1-2-3-space)** [L-space].
2. Bottom of page/last element: press **(Dots 4-5-6-space)**.
3. Move to next item; press **(Dot 4-space)**.
4. Move to previous item; press **(Dot 1-space)**.
5. Scroll Right 1 Page; press **(Dots 1-3-5-space)** [O-space].
6. Scroll Left 1 Page; press **(Dots 2-4-6-space)** [OW-space].
7. Scroll Down 1 Page; press **(Dots 1-4-5-6-space)** [TH-space].
8. Scroll Up 1 Page; press **(Dots 3-4-5-6-space)**.
9. Move to Status Bar; press **(Dots 2-3-4-space)** [S-space].
10. Rotor Settings: next item; press **(Dots 5-6-space)**.
11. Rotor Settings: previous item; press **(Dots 2-3-space)**.
12. Rotor: next item; press **(Dot 6-space)**.
13. Rotor: previous item; press **(Dot 3-space)**.
14. Open/Close Task/App Switcher; press **(Dots 1-2-5-space)** [H-space] twice quickly; toggle.
15. Enter; press **(Dots 1-5-space)** [E-space].

Reading Commands

1. Read from Current Position; press **(Dots 1-2-3-5-space)** [R-space].
2. Read from the Top of Screen; press **(Dots 2-4-5-6-space)** [W-space].
3. Pause & Resume Speaking; press **(Dots 1-2-3-4-space)** [P-space] toggle.
4. Pan Braille Right; press **(Dot 5-space)**.
5. Pan Braille Left; press **(Dot 2-space)**.

Editing Commands

1. Contracted braille ON/OFF; press **(Dots 1-2-4-5-space)** [G-space] toggle.
2. Route braille cursor to desired braille cell; press **(Cursor Routing Button)** under/above cell.
3. "Tab" function; press **(Dots 2-3-4-5-space)** [T-space].
4. Delete; press **(Dots 1-4-5-space)** [D-space] or press **(Dot 7-space)**.
5. Enter; press **(Dots 1-5-space)** [E-space].
6. Select text **(Dots 2-5-6-space)**.
    a. **Note:** To select by words or lines, first change "Rotor" to words or lines.
7. Select all **(Dots 2-3-5-6-space)**.
8. Unselect text **(Dots 2-3-5-space)**.
9. Cut **(Dots 1-3-4-6-space)** [X-space].
10. Copy **(Dots 1-4-space)** [C-space].
11. Paste **(Dots 1-2-3-6-space)**.
12. Undo typing **(Dots 1-3-5-6-space)** [Z-space].
13. Redo typing **(Dots 2-3-4-6-space)**.

Note: The controls, functions and commands listed below are unique to the Refreshabraille 18 braille display. You can also use with this braille display, all the common commands listed in the *"Common Braille Display Commands"* section listed on pages 101-102.
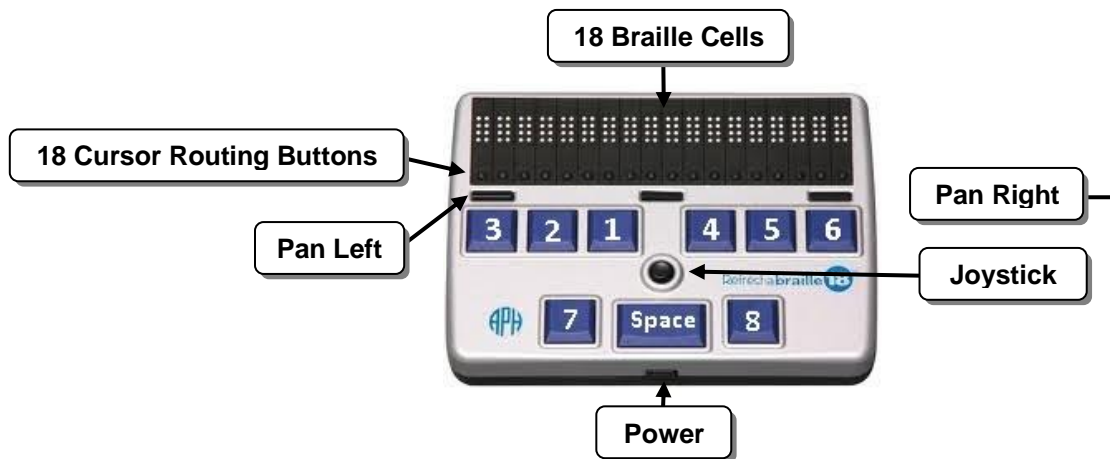
Figure 105: Refreshabraille 18

1. Move to previous item; press **(Joystick Left)**.
2. Move to next item; press **(Joystick Right)**.

3. Move to previous "Rotor" item; rock up **(Joystick)**.
4. Move to next "Rotor" item; rock down **(Joystick Down)**.

5. Select item; press as a button **(Joystick Press)**.

6. Pan Braille to the left; press **(Left Panning Button)**.
7. Pan Braille to the right; press **(Right Panning Button)**.

8. "Back" button if present; press **(Power Button)**.

Note: The controls, functions and commands listed below are unique to the Focus 40 Blue braille display. You can also use with this braille display, all the common commands listed in the *"Common Braille Display Commands"* section listed on pages 101-102.
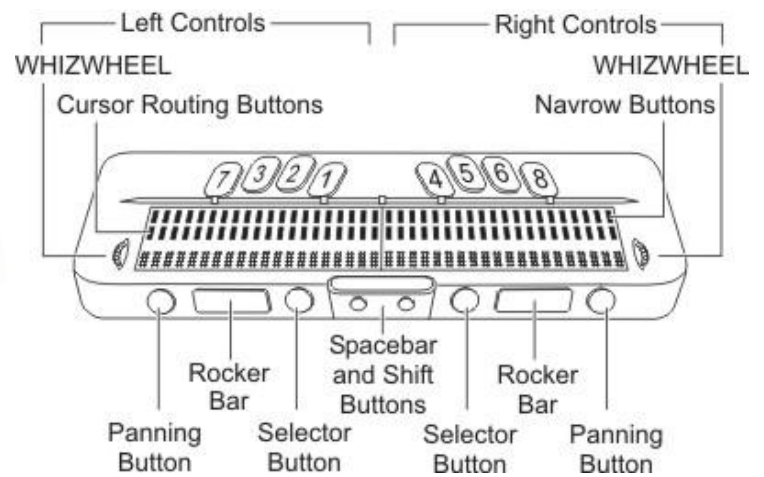

Figure 106: Focus 40 Blue Classic

Figure 107: Focus 40 Blue Classic controls

1. Activates the selected item; press down as a button on **(Left** or **Right WhizWheel)**.
2. Activates the selected item: press one of the **(Cursor Routing** or **Navrow Buttons)**.

3. Move to the previous item using the "Rotor" setting; rotate up **(Left WhizWheel)**.
4. Move to the next item using the "Rotor" setting; rotate down **(Left WhizWheel)**.

5. Pan braille to the right; press **(Right Panning Button)**.
6. Pan braille to the left; press **(Left Panning Button)**.

7. Scroll up one page; press **(Left Rocker Up)**.
8. Scroll down one page; press **(Left Rocker Down)**.

9. Scroll left one page; rock/press up **(Right Rocker)**.
10. Scroll right one page; rock/press down **(Right Rocker)**.

11. Activates the "Back" button and Stops VoiceOver Help; press **(Left Selector Button)**.
12. Start & Stops the current action, such as, playback of music and video **(Right Selector Button)**.

Note: The controls, functions and commands listed below are unique to the Apex setup as a braille display. You can also use with this braille display, all the common commands listed in the *"Common Braille Display Commands"* section listed on pages 101-102.
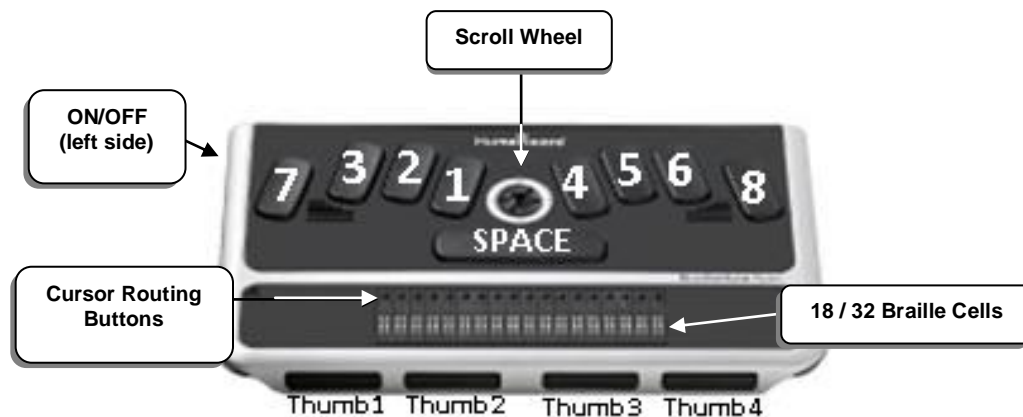

Figure 108: Braille Note

1. Bypass Function; press **(Dots 4-5-6-8-space)** prior to using the following commands:

    a. Activate Home button; press the by-pass command **(Dots 4-5-6-8-space)**, then **(Dots 1-2-5-space)** [H-space]

    b. Scroll Right to Next page; press the by-pass command **(Dots 4-5-6-8-space)**, then **(Dots 1-3-5-space)** [O-space].

    c. Enter function; press the by-pass command **(Dots 4-5-6-8-space)**, then **(Dots 1-5-space)** [E-space].

    d. Screen Curtain ON/OFF; press the by-pass command **(Dots 4-5-6-8-space)**, then press **(Dots 1-2-3-4-5-6-space)**.

2. Activates the "Home" button **(Thumb keys 2-3)**.

3. Pan Braille to the left; press **(Thumb key 2)**.
4. Pan Braille to the right; press **(Thumb key 3)**.

5. Move to the previous item; press **(Thumb key 1)**.
6. Move to next item; press **(Thumb key 4)**.

7. Activates the "Delete" function; press **(Thumb keys 1-2)**.
8. Activates the "Return" function; press **(Thumb keys 3-4)**.

9. Activates the "Eject" function; press **(Thumb keys 1-3)**.

Appendix B: Quick Reference Table (iPad – VoiceOver – Braille Displays)				
SPEECH – Gestures & Commands				
	VoiceOver (VO)	**Refreshabraille 18**	**Focus 40 Blue**	**Apex as a Display**
VoiceOver ON/OFF	Press "Home" button 3 times, quickly	Press "Home" button 3 times, quickly	Press "Home" button 3 times, quickly	Press "Home" button 3 times, quickly
VoiceOver HELP	Go to Settings, VoiceOver & select "VoiceOver Practice"	On: (Dots 1-3-space) [K-space] Off: (Dots 1-2-space)	On: (Dots 1-3-space) [K-space] Off: (Dots 1-2-space)	On: (Dots 1-3-space) [K-space] Off: (Dots 1-2-space)
Speech on/off Zoom OFF	3-finger_ Double Tap	(Dots 1-3-4-space) [M-space]	(Dots 1-3-4-space) [M-space]	(Dots 1-3-4-space) [M-space]
Speech on/off Zoom ON	3-finger_ Triple Tap	(Dots 1-3-4-space) [M-space]	(Dots 1-3-4-space) [M-space]	(Dots 1-3-4-space) [M-space]
Pause Speech	2-finger_ One Tap	(Dots 1-2-3-4-space) [P-space]	(Dots 1-2-3-4-space) [P-space]	(Dots 1-2-3-4-space) [P-space]
Resume Paused Speech	2-finger_ One Tap again	Again press: (Dots 1-2-3-4-space) [P-space]	Again press: (Dots 1-2-3-4-space) [P-space]	Again press: (Dots 1-2-3-4-space) [P-space]
Start Reading from Focus Area	2-finger_ Swipe Down	(Dots 1-2-3-5-space) [R-space]	(Dots 1-2-3-5-space) [R-space]	(Dots 1-2-3-5-space) [R-space]
Start Reading from Top of Page	2-finger_ Swipe Up	(Dots 2-4-5-6-space) [W-space]	(Dots 2-4-5-6-space) [W-space]	(Dots 2-4-5-6-space) [W-space]
Volume UP (Method 1: Rotor)	Step 1. Set *Rotor* to *Volume*; 2-finger_ Rotate Step 2. 1-finger_Flick Up	Step 1. Set *Rotor* to *Volume*; (Dots 2-3 or 5-6-space) Step 2. (Dot 3-space)	Step 1. Set *Rotor* to *Volume*; (Dots 2-3 or 5-6-space) Step 2. (Dot 3-space)	Step 1. Set *Rotor* to *Volume*; (Dots 2-3 or 5-6-space) Step 2. (Dot 3-space)
Volume UP (Method 2)	iPad Volume button	(Dots 3-4-5-space) [AR-space]	(Dots 3-4-5-space) [AR-space]	(Dots 3-4-5-space) [AR-space]
Volume DOWN (Method 1: Rotor)	Step 1. Set *Rotor* to *Volume*; 2-finger_ Rotate Step 2. 1-finger_Flick Down	Step 1. Set *Rotor* to *Volume*; (Dots 2-3 or 5-6-space) Step 2. (Dot 6-space)	Step 1. Set *Rotor* to *Volume*; (Dots 2-3 or 5-6-space) Step 2. (Dot 6-space)	Step 1. Set *Rotor* to *Volume*; (Dots 2-3 or 5-6-space) Step 2. (Dot 6-space)
Volume DOWN (Method 2)	iPad Volume button	(Dots 1-2-6-space) [GH-space]	(Dots 1-2-6-space) [GH-space]	(Dots 1-2-6-space) [GH-space]
Speech Rate FASTER	Step 1. Set *Rotor* to **Speech Rate**; 2-finger_ Rotate Step 2. 1-finger_ Flick Up	Step 1. Set *Rotor* to *Speech Rate*; (Dots 2-3 or 5-6-space) Step 2. (Dot 3-space)	Step 1. Set *Rotor* to *Speech Rate*; (Dots 2-3 or 5-6-space) Step 2. (Dot 3-space)	Step 1. Set *Rotor* to *Speech Rate*; (Dots 2-3 or 5-6-space) Step 2. (Dot 3-space)
Speech Rate SLOWER	Step 1. Set *Rotor* to *Speech Rate*; 2-finger_ Rotate Step 2. 1-finger_ Flick Down	Step 1. Set *Rotor* to *Speech Rate*; (Dots 2-3 or 5-6-space) Step 2. (Dot 6-space)	Step 1. Set *Rotor* to *Speech Rate*; (Dots 2-3 or 5-6-space) Step 2. (Dot 6-space)	Step 1. Set *Rotor* to *Speech Rate*; (Dots 2-3 or 5-6-space) Step 2. (Dot 6-space)

Appendix B: Quick Reference Table (iPad – VoiceOver – Braille Displays)				
NAVIGATION – Gestures & Commands				
	VoiceOver	**Refreshabraille 18**	**Focus 40 Blue**	**Apex as a Display**
Jump to Top of Page/First Element	2-finger_ Swipe Up (and starts reading)	(Dots 1-2-3-space) [L-space]	(Dots 1-2-3-space) [L-space]	(Dots 1-2-3-space) [L-space]
Jump to Bottom of Page/last Element		(Dots 4-5-6-space)	(Dots 4-5-6-space)	(Dots 4-5-6-space)
Move to Next Item	1-finger_Flick Right	- (Dot 4-space) - (Joystick, Rock Right)	- (Dot 4-space) - (Rocker Bar, Down). - (Whiz Wheel, Rotate Down)	- (Dot 4-space) - (Thumb Key 4)
Move to Previous Item	1-finger_Flick Left	- (Dot 1-space) - (Joystick, Rock Left)	- (Dot 1-space) - (Rocker Bar, Up). - (Whiz Wheel, Rotate Up)	- (Dot 1-space) - (Thumb Key 1)
Pan Braille Right	N/A	- (Dot 5-space) - (Right Pan Button)	- (Dot 5-space) - (Right Pan Button)	- (Dot 5-space) - (Thumb Key 3)
Pan Braille Left	N/A	- (Dot 2-space) - (Left Pan Button)	- (Dot 2-space) - (Left Pan Button)	- (Dot 2-space) - (Thumb Key 2)
Scroll Right One Page	3-finger_Swipe Left	(Dots 1-3-5-space) [O-space]	(Dots 1-3-5-space) [O-space]	Step 1: By Pass (Dots 4-5-6-8-space) Step 2: (Dots 1-3-5-space)
Scroll Left One Page	3-finger_Swipe Right	(Dots 2-4-6-space) [OW-space]	(Dots 2-4-6-space) [OW-space]	(Dots 2-4-6-space) [OW-space]
Scroll Down One Page	3-finger_Swipe Up	(Dots 1-4-5-6-space) [TH-space]	(Dots 1-4-5-6-space) [TH-space]	(Dots 1-4-5-6-space) [TH-space]
Scroll Up One Page	3-finger_Swipe Down	(Dots 3-4-5-6-space)	(Dots 3-4-5-6-space)	(Dots 3-4-5-6-space)
Vertical Navigation	Step 1. Set *Rotor* to "**Vertical Nav.**"; 2-finger_ Rotate Step 2. 1-finger_ Flick Up	Step 1. Set *Rotor* to *Vertical Nav.*; (Dots 2-3 or 5-6-space) Step 2. (Dot 6-space) or (Dot 3-space)	Step 1. Set *Rotor* to *Vertical Nav.*; (Dots 2-3 or 5-6-space) Step 2. (Dot 6-space) or (Dot 3-space)	Step 1. Set *Rotor* to *Vertical Nav.*; (Dots 2-3 or 5-6-space) Step 2. (Dot 6-space) or (Dot 3-space)
Screen Curtain On/Off (Zoom OFF)	3-finger_Triple Tap, toggle	(Dots 1-2-3-4-5-6-space), toggle	(Dots 1-2-3-4-5-6-space), toggle	(Dots 1-2-3-4-5-6-space), toggle
Screen Curtain On/Off (Zoom ON)	3-finger_4 Taps, toggle	(Dots 1-2-3-4-5-6-space), toggle	(Dots 1-2-3-4-5-6-space), toggle	(Dots 1-2-3-4-5-6-space), toggle