



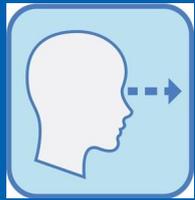
Additional Support Needs: Supporting learners with an iPad

November 2017



All iPads (and iPhones) have inbuilt Accessibility features, which support learners with Additional Support Needs to access apps or information, and use their device more effectively to support learning.

The Accessibility features can be divided into four main categories:



1. Vision



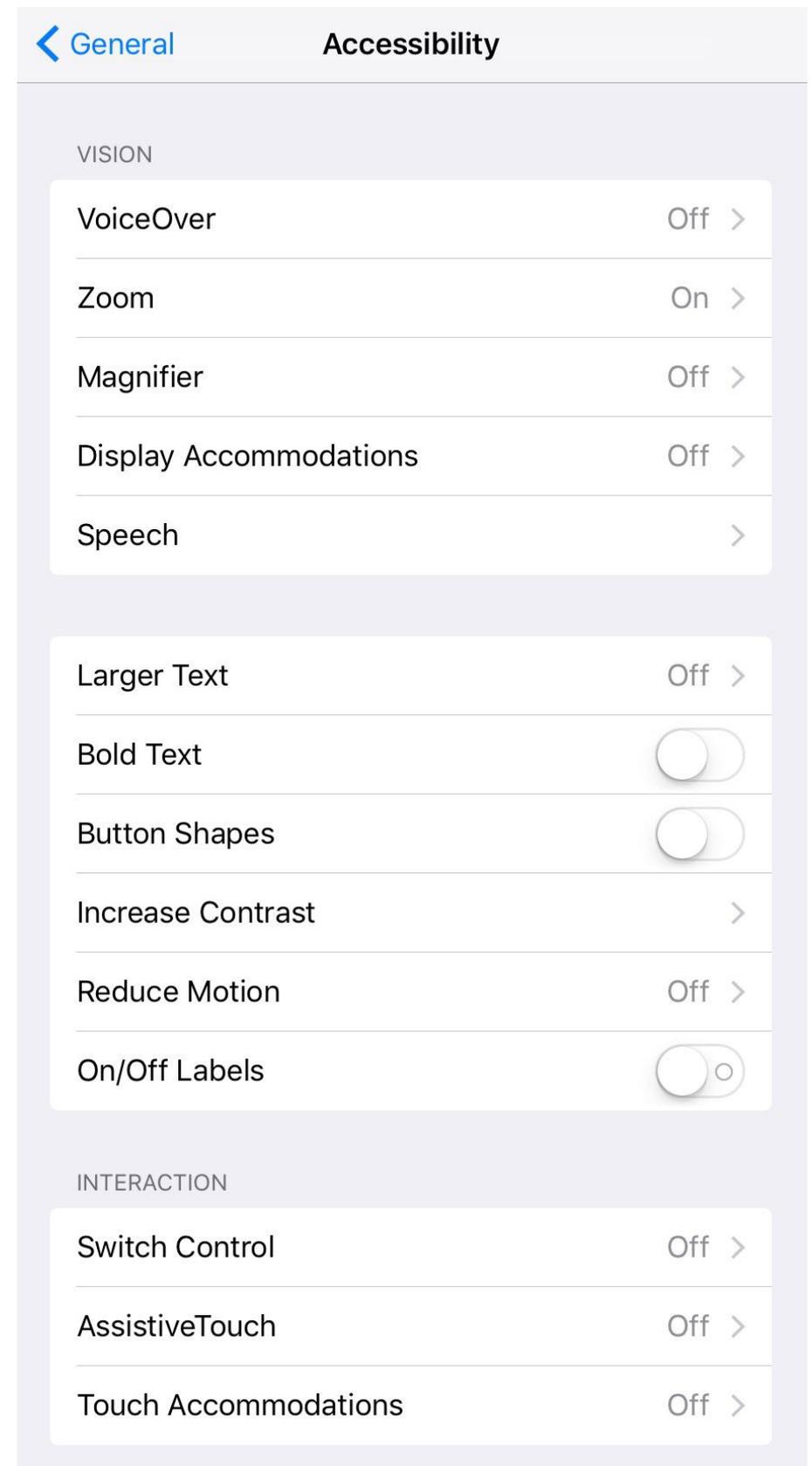
2. Hearing



3. Learning



4. Fine Motor Skills



1. Vision



Within the Accessibility section of Settings there is a large selection of vision settings, which can be adapted to suit each individual student's visual preferences. The menu to the right illustrates the available settings on an iPad Air 2 and these options may vary according to model of the device.

VISION

VoiceOver Off >

Zoom On >

Magnifier Off >

Display Accommodations Off >

Speech >

Larger Text Off >

Bold Text

Button Shapes

Increase Contrast >

Reduce Motion Off >

On/Off Labels



VOICE OVER

This enables a screen reader on the iPad, i.e. a feature that will read aloud content on the screen. Voice Over works with those Apps that are pre-installed on an iPad. The ability of Voice Over to read Apps which are not developed by Apple will depend if they are VoiceOver friendly.

USING VOICE OVER

Simple gestures allow this function to be used easily by visually impaired users to interact with items on the screen such as tapping, double tapping, three-finger swipe, which will initially require some practice and familiarisation.

1. Vision *VOICE OVER*



1. To start Voice Over tap Settings > General > Accessibility and Voice Over. Tap the Voice Over button to turn it on. Voice Over will start reading information aloud whenever and wherever you touch or select an item. Double tapping with 3 fingers will switch speech on and off but it will not close VoiceOver. Take care - if you triple tap you will black out the screen (i.e. turn on the Screen Curtain)! To see the screen again triple-tap to turn Screen Curtain off. More information about this in 3.

2. Voice Over works more efficiently when you use Gestures. For example, Double tap to activate an item, such as turning Voice Over On and Off. To navigate back to the Accessibility options, double tap the Accessibility button at the top of page and so on. To scroll through items or pages, 'Flick' the screen with three fingers. Another way to navigate around the screen is to hold your finger down and glide it along the screen. Voice Over will read each item aloud - double tap the item to open it.

3. When Voice Over is activated a new button appears on the screen called 'Voice Over Practice'. Voice Over Practice is designed to be a 'safe' area where you can practice taps, double tapping, flicks etc. Voice Over Practice is supported with speech guidance which speaks relevant commands. We would recommend that you use Voice Over Practice to familiarise yourself with the different commands and gestures.

Screen Curtain – triple tapping anywhere on the screen will activate Screen Curtain. This will black-out the screen, simulating what it would be like for a blind user. To switch off Screen Curtain, triple tap the screen with three fingers. Most people, if they do it by accident, think they have broken the iPad. Don't Panic!

4. Speaking Rate is a simple sliding bar to increase or decrease the rate of the speech.

5. There are some options in this section that allow you to finely tune Voice Over. For example 'Typing Feedback' provides options for software keyboards and hardware keyboards (Bluetooth attachment). You can choose to set Voice Over to speak characters, words, and a combination of both characters and words. Pitch Change will change the pitch of the voice, e.g. when pronouncing capital letters etc.



ZOOM

Zoom magnifies items on the screen. Buttons, icons and other items can be magnified up to 500% the original size.

To start Zoom tap Settings > General > Accessibility and Zoom. When you tap the Zoom button you will notice it magnifies very slightly to indicate Zoom is active.



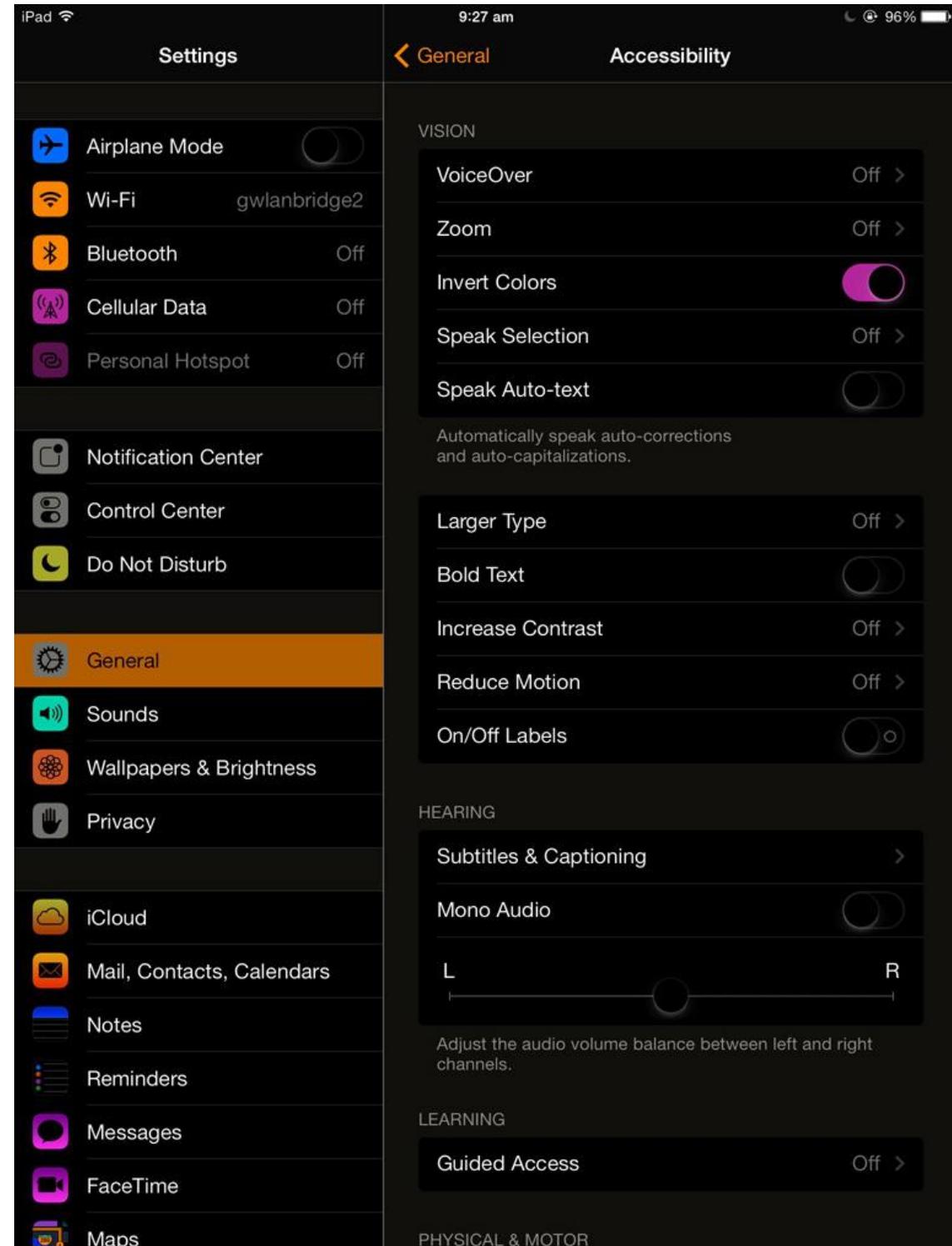
Like Voice Over, Zoom also requires basic gestures to use it properly:

- Double tap three fingers to magnify.
- Drag three fingers to magnify or zoom.
- Double tap three fingers - hold and drag to zoom in or out – this takes practice but worth the time as it gives you greater control over the magnification levels.



INVERT COLOURS

When 'Invert Colors' is activated it will invert screen colour and text. The background becomes predominantly black, text is shown in white. Highlighting and activated buttons are shown with an orange tinge.





The 'Grayscale' option is on devices operating iOS 8 or later. Text and images will be displayed in greyscale, which is particularly helpful to users with colour blindness or sensitivity.

For users who are colour blind or have trouble reading text on a screen you can choose a filter to help differentiate colours. The filters available are:

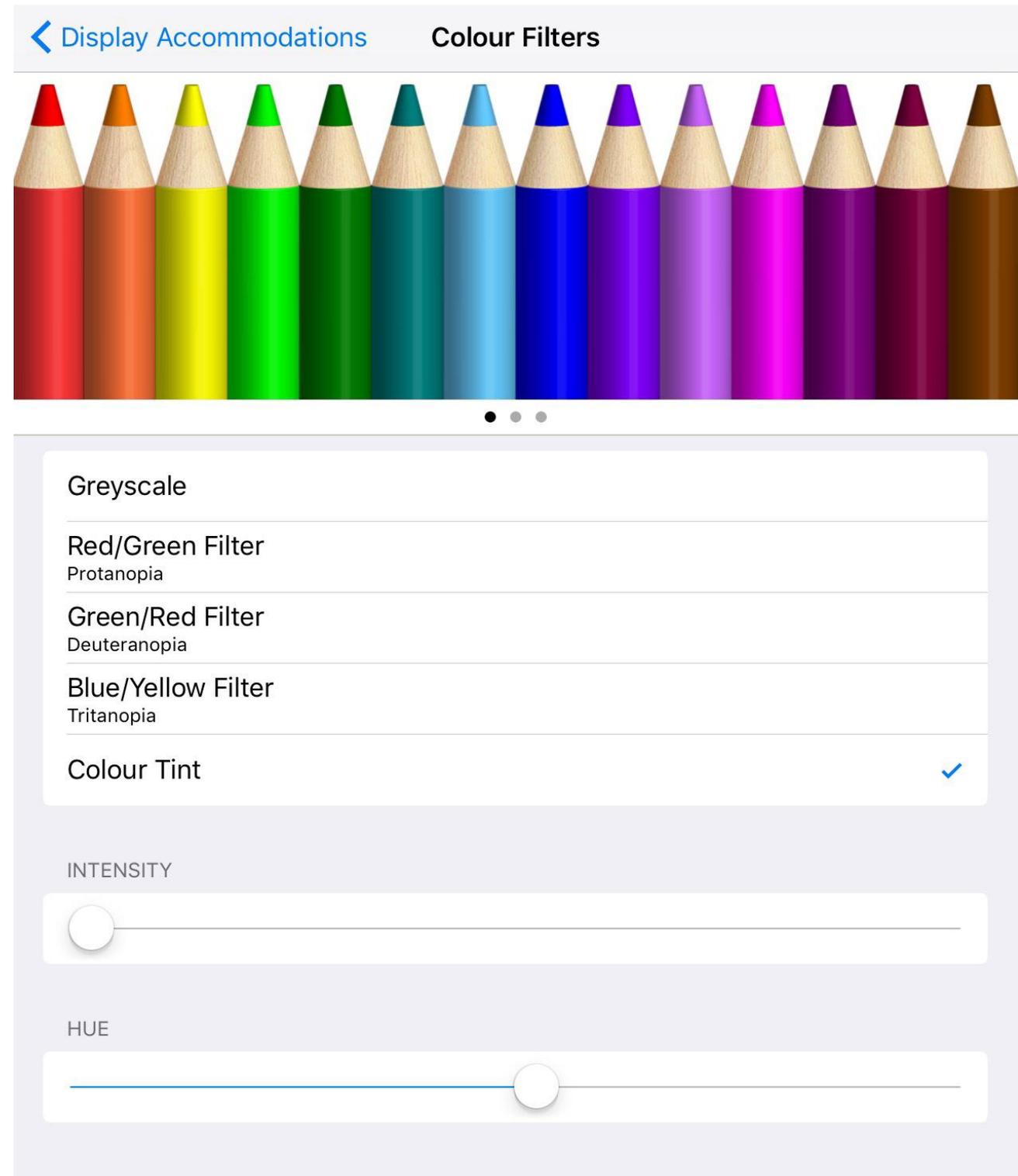
Red/ Green: for Protanopia colour blindness

Green/Red: for Deuteranopiacolour blindness

Blue/Yellow: for Tritanopia colour blindness

Colour Tint: To overlay the screen with a single colour filter. This can be useful for students with dyslexia.

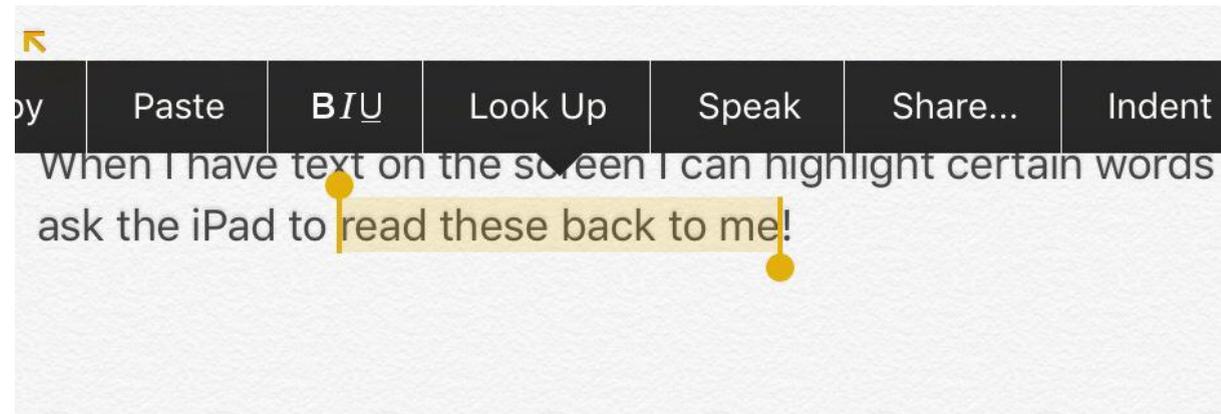
This feature can be used in combination with other accessibility settings such as 'Invert Colours' and 'Increase Contrast'.



1. Vision *SPEECH*



Speak selection - This can be used to read individual words aloud to help with spelling or used to proof read larger documents. To highlight a word, double tap the word (or tap and hold) until the pop up menu appears. You can highlight individual sentences or paragraphs by double-tapping the text with two fingers in quick succession. You can then press the Speak option to have the sentence read back.



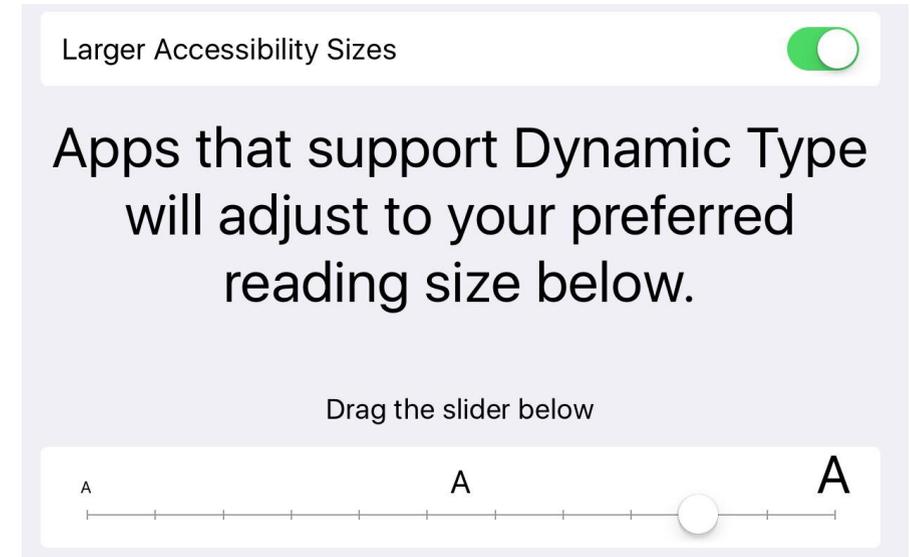
Speak screen - This function can be used to read the entire content of an individual screen. When enabled, swipe down with two fingers from the top of the screen to hear the content of the screen.

Voices – From this menu, you can select the voice output for speech settings. You can choose from a selection of the most commonly used world languages. Within each language option, there are further choices for accent and dialect.

Speaking rate – allows you to set the speech speed from very slow to fast using a sliding scale.



Larger Text - Larger Text offers significant visual enhancements for someone with visual difficulties. The size of text can be increased up to 56pt. Larger Text only works in Apps that support 'Dynamic Type' i.e. Calendar, Mail, Messages and Notes. It is not possible to increase the size of the font on the keyboard but it is possible to use Larger Text in conjunction with other Accessibility features such as Zoom and Invert Colors.



Bold Text, Button Shapes, Increase Contrast - Along with Larger Text, Bold Text, Button Shapes, Increased Contrast, Reduce Motion and On/Off Labels combine to make up the last section of Vision and are intended to make items on the screen such as text and shapes easier to identify and see.

General Accessibility

- **Bold Text** emboldens or thickens text descriptions under App icons and other text areas on the screen particularly the on-screen keyboard.
- **Button Shapes** is intended to make buttons easier to distinguish from other text on the screen (such as icon labels).
- **Increase Contrast** makes it easier for low-vision users to fine tune display settings by improving the contrast on some backgrounds to increase legibility. Darken Colors uses slightly darker versions of the colours used in some Apps and Reduce White Point makes the general 'glare' of the iOS a little duller.

2. Hearing *OVERVIEW OF HEARING SETTINGS*



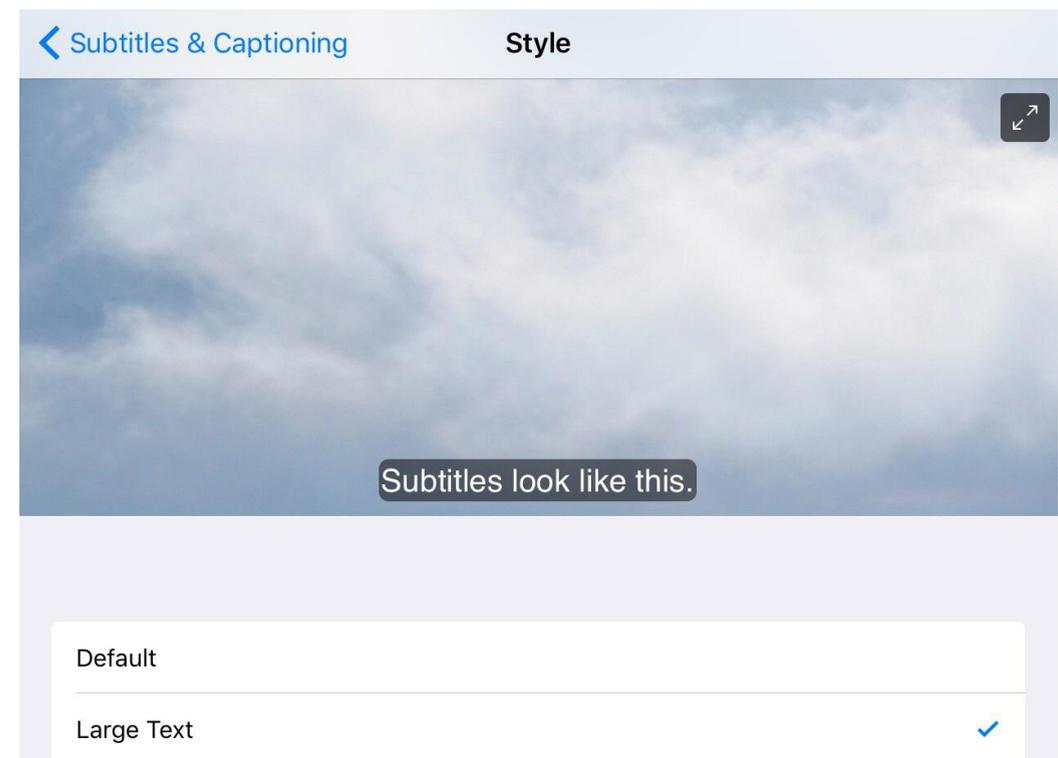
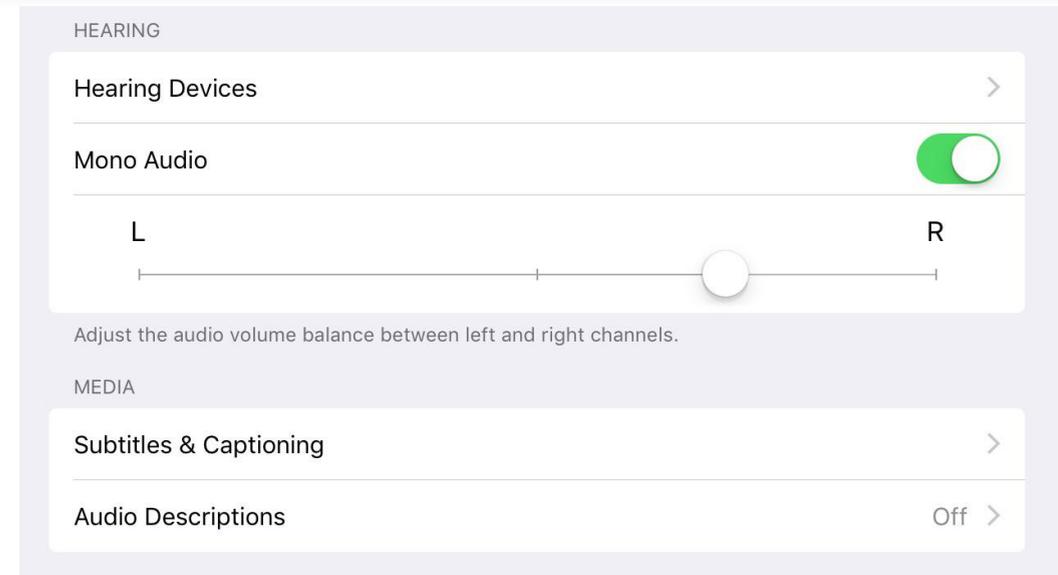
Hearing includes several options that could be useful for a user with hearing difficulties, i.e. Subtitles & Captioning, Mono Audio and adjusting the audio volume balance between left and right channels.

Subtitling and closed captioning are both processes of displaying text on a visual display to provide additional or interpretive information. If subtitles or closed captioning are available on films or other visual media streamed via the iPad there is an option to turn these features on for deaf or hearing impaired users.

The Mono Audio feature is designed to be used with headphones, i.e. slide the Hearing slider bar to whichever ear has the best auditory ability. For example, if the user hears best with their left ear then the Hearing slider bar should be set to the left hand side.

Notification Center

Some deaf or hard of hearing people could find the Notification Center useful for setting up visual prompts, via the Calendar and Reminders Apps

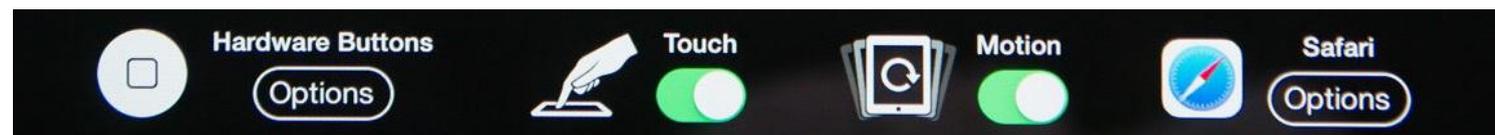




GUIDED ACCESS

Guided Access is the only tool listed under Learning in Accessibility but it is a significant and important option for children with additional support needs. Guided Access was integrated into Accessibility with the release of iOS 6.

Guided Access 'locks' the Home button, so that the user can't exit the App he or she is in, and therefore can't 'go wandering' all over the iPad to distract him/herself from the task in hand. Guided Access also allows you to choose and control which features of the App you want to make available to the user, and which features you might want to 'lock' or disable.





The main thing is to pick a PassCode that you will remember and that is easy for other people to remember.

(You can use the same one that you've used before on the iPad) e.g. 0000 or 9999. Write it down and keep it somewhere secure but easy for key people to access in emergencies! DO NOT let the user see it and make sure the PassCode is not too easy for the user to guess. If you get stuck in Guided Access because nobody knows the password or something else goes wrong, don't panic – instead do a full reboot, i.e. hold the Home button and the Power/On-Off button down at the same time for 15 seconds and slide to Power Off.

Restart by holding the Power On-Off switch ON until the white Apple appears. Finally go into Settings, General, Accessibility and Guided Access and turn it OFF.

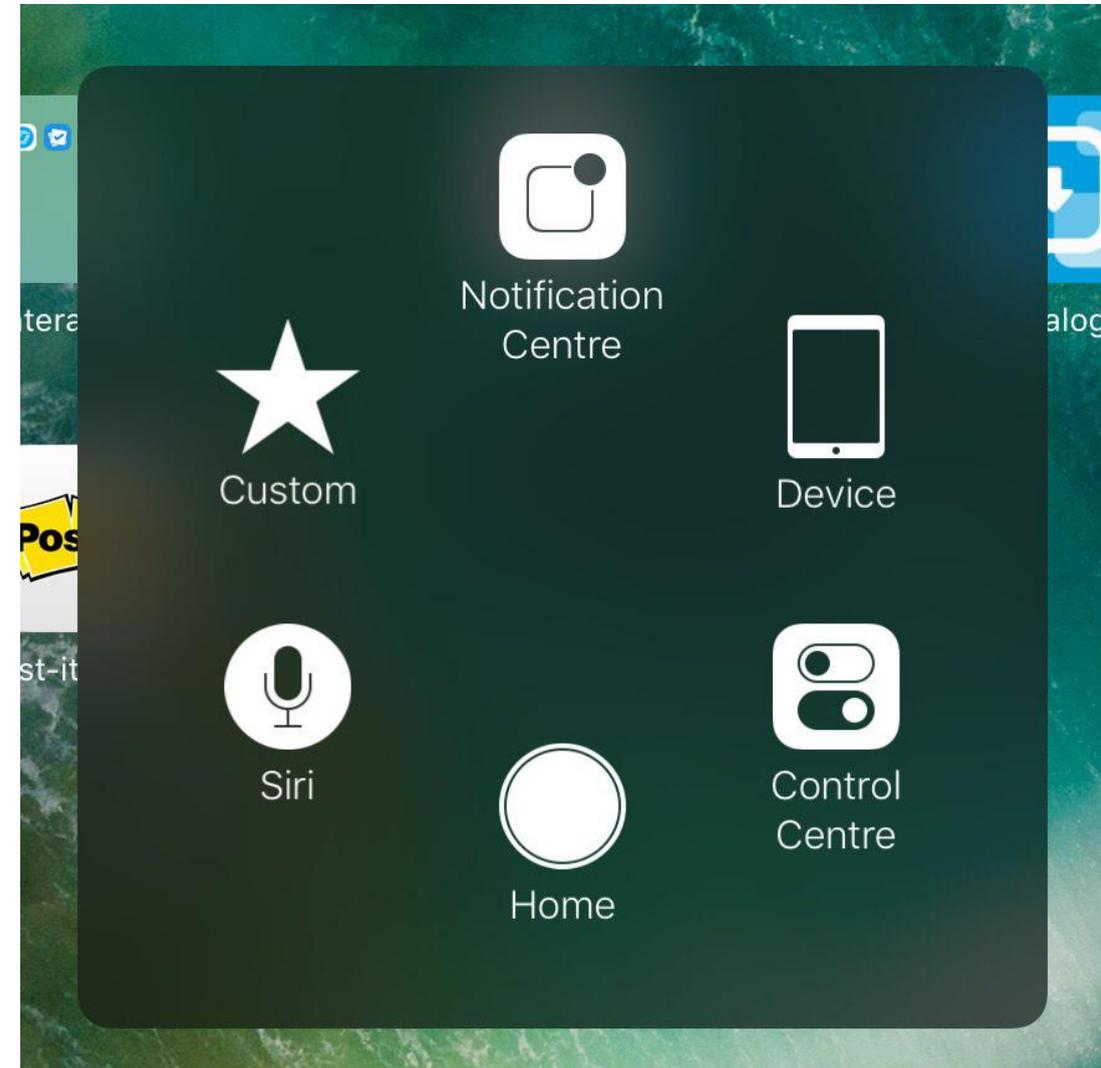
4. Fine Motor Skills *ASSISTIVE TOUCH*



Assistive Touch allows users to perform gestures and button actions on the iPad with one touch. When Assistive Touch is activated it initially appears as a black transparent square (with rounded corners) on the iPad's screen. The transparent square can be placed anywhere on the screen. The Assistive Touch menu appears as a large transparent square which sits 'above' the screen and has four different options; Siri, Device, Favourites and Home.

Assistive Touch provides one-tap access to all of the iPad's functions including rotation, shaking, volume changes and taking a Screenshot. Gestures such as pinch and swipe can be recalled by a tap, and custom gestures can be recorded and played back on command.

Assistive Touch would be particularly useful for someone who is physically unable to use the hardware features on the iPad, such as volume control, Home button, rotate screen etc.





Touch accommodation can be used where the learner finds it challenging to work with the iPad touch screen. There are three main ways in which touch can be accommodated:

- **HOLD DURATION** This changes the amount of time the learner has to hold their finger down on the iPad screen before the device will recognise this.

- **IGNORE REPEAT** If a learner has a tendency to tap the iPad screen multiple times in error rather than a single touch, this setting can eliminate this.

- **TAP ASSISTANCE** This allows the preference of either first touch or last touch of the iPad screen.

The screenshot shows the 'Touch Accommodations' settings page in the iPad Accessibility menu. The page is titled 'Accessibility' and 'Touch Accommodations'. It features several settings, each with a toggle switch and a description:

- Touch Accommodations:** A toggle switch is turned on (green). Below it, text reads: 'If you have trouble using the touchscreen, adjust the following settings to change how the screen will respond to touches. You can triple-click the Home button at any time to turn Touch Accommodations on or off.'
- HOLD DURATION:** A toggle switch is turned on. The setting is 'Hold Duration' with a value of '0.10 Seconds'. Below it, text reads: 'The duration you must touch the screen before a touch is recognised.'
- IGNORE REPEAT:** A toggle switch is turned on. The setting is 'Ignore Repeat' with a value of '0.10 Seconds'. Below it, text reads: 'The duration in which multiple touches are treated as a single touch.'
- TAP ASSISTANCE:** The setting is 'Off'. Below it, there are two options: 'Use Initial Touch Location' and 'Use Final Touch Location', with the latter selected (indicated by a blue checkmark). Below this, text reads: 'Enable Tap Assistance to allow any single finger gesture to perform a tap.'
- TAP ASSISTANCE GESTURE DELAY:** This section is partially visible at the bottom of the screen.