

# Apple iPhone with VoiceOver

## Lesson 1 - Orientation and Basics



This lesson has been designed for use with the iPhone 6s, 6+, 7, 7+, 8 and SE2 in conjunction with the VoiceOver screen reader and iOS 13.5. If you require further information regarding your iPhone and VoiceOver, please contact Gary Eady using the following email address: [geady@sightforsurrey.org.uk](mailto:geady@sightforsurrey.org.uk).

### 1. Introduction

This lesson describes key buttons, switches and plugs on the exterior of your iPhone. It also introduces VoiceOver and the gestural language it uses to navigate around the screen. By the end of this lesson you should know:

- The location of the power button, Mute Switch, the volume buttons, the headphone jack, The Home Button and the USB port for charging your device and connecting it to a computer.
- What VoiceOver and Siri are, and how they work together to help you use your iPhone.
- How to power up your iPhone and start VoiceOver without assistance.
- The parts of the screen and where they are situated.
- How to use gestures to control VoiceOver.

This section introduces terms and actions which will be used throughout the iPhone with VoiceOver lessons. Even if you have been using your iPhone for a while, it is recommended that you glance at the review sections and try the exercises anyway as a quick refresher.

#### 1.1 Siri

Siri is the name Apple has given to its speech recognition software. Speech recognition allows computers, including tablets and smart phones, to recognize spoken commands or words and then act on them. Using Siri you can command your iPhone to perform many tasks. For example, locate information, make appointments, set reminders or dictate text.

#### 1.2 VoiceOver

Since your iPhone has a touch screen which always feels uniformly flat, Apple uses a special software called VoiceOver to make the device accessible to people with visual impairments. With VoiceOver turned on, your iPhone will speak information

about any item on the screen you touch. VoiceOver also reads alerts and popup messages when they appear.

## **VoiceOver Gestures**

If you didn't need VoiceOver, you could simply look at the screen and tap the feature you want. However, using VoiceOver requires constant contact with the screen, so the techniques used by sighted people will not work. VoiceOver uses a series of 'gestures' to accomplish the same things. Gestures are made by moving one or more fingers around the screen, or by tapping with one or more fingers.

## **2. Around the Block**

Before powering on your iPhone, let's take a look at the buttons, switches and connection points around the outside edges. Hold your device with the touch screen facing you and the round button centred below the touch screen. In this position the longer edges of your device should be on the left and right sides, and the shorter edges should be on the top and bottom.

### **2.1 Portrait and Landscape Orientation**

Typically, when an artist paints a portrait of a person, they orient their rectangular canvas so that the long sides are vertical. When an artist paints a picture of a landscape, they orient the rectangular canvas so the long sides are horizontal and the short sides are vertical. These two positions have given rise to the terms "Portrait" and "Landscape" Orientation. If you hold your device with the long sides on the right and left, and the round button centred beneath the screen, you are holding it in Portrait Orientation. This is the most common orientation!

### **2.2 The Wake/Sleep Button**

With your iPhone held in portrait orientation, you will find the Wake/Sleep button on the right edge of the device, towards the top corner. You use this button to power the device on and off, and to manually activate or clear the lock screen.

### **2.3 The Ring/Silent Switch**

With your iPhone held in portrait orientation, you will find the Ring/Silent Switch on the left edge of your device, near the top corner. When the switch is pushed toward the back of the device, it silences the rings, bleeps and alert tones. When the switch is pushed toward the front, you will hear sounds normally.

**NOTE 1:** The Ring/Silent Switch doesn't silence VoiceOver. It also will not silence music and movies, alarms, or sounds made by many game applications. Camera and Voice Memo sounds are not always silenced either.

### **2.4 The Volume Buttons**

Just below the Ring/Silent switch, are the volume buttons. They affect the volume of whatever sound your iPhone is making at the time. If you are playing music or

movies, then the media volume only will be affected. If you are on a FaceTime call or a phone call, then volume for that conversation will be affected. Siri's volume is also controlled by these buttons. You have to use them whilst Siri is speaking. The volume of VoiceOver, ring tones, alert tones and all other sounds are all changed as a group by these buttons. The button closest to the Ring/Silent Switch increases the volume. The one beneath it decreases the volume.

## **2.5 The Headphone/Microphone Jack**

On the iPhone 6s and 6+, this jack is situated on the bottom edge of your iPhone, towards the left corner. You can plug a wired pair of earphones or ear buds into this jack. If the earphones have a microphone, you will be able to use it when talking on the phone or directing Siri. On the iPhone 7, 7+, 8, and SE2, there is no headphone jack. To use headphones, you will either need a pair of headphones that connect via Bluetooth, or a pair of headphones which connect to the computer/charger port using a special adaptor.

## **2.6 The Computer/Charger Port**

If you hold your iPhone in portrait orientation, you will find a slot at the centre of the bottom edge. This is where you connect the charging cable. It also acts as the USB port to connect your device to a computer or a wired pair of headphones on the iPhone 7, 7+, 8 and SE2.

## **2.7 The Home Button**

On the front of the iPhone, centred below the touch screen, is the Home Button. It has several functions that vary depending on your accessibility settings. Primarily you use it to return to the starting or Home Screen.

### **The Home Button and Reachability**

On devices with larger screens, such as the iPhone 6+ and 7+, many people have difficulty reaching items near the top of the screen. The iOS Operating System includes a feature to alleviate this problem. It is called Reachability. When this feature is invoked, items normally displayed on the top half of the screen temporarily slide down to cover the bottom. This allows you to reach these items without having to change your grip on your iPhone. The screen returns to normal once you interact with an item, or if you do nothing for 10 seconds.

Normally when you use the Home Button, you press or click it one or more times. Pressing or clicking the Home button means you push down on it, until you feel it click. To activate the Reachability feature, simply tap the Home button twice without clicking it. Upon doing this, your iPhone makes a swishing sound, and the items move. The same sound is made when the items shift back to their normal position.

The Home Button is also the fingerprint sensor. You can program your iPhone to use a fingerprint to perform certain functions such as unlocking your device, or use



the fingerprint in place of a password for making purchases. You can set up to 5 different finger prints to perform these functions. They can be from different hands or from different people such as your friend or relative.

## **2.8 The Front and Rear Facing Cameras**

Your iPhone has two cameras. If you hold your device in Portrait orientation with the Home button centred at the bottom, the Front Facing camera is situated at the top centre of the screen. This camera is used to show the operator of the device during video calls, and for taking pictures of yourself. The Rear Facing camera is situated on the back of the device facing away from you. It is in the upper right corner near the Wake/Sleep button. This camera is used for taking pictures and videos of others much like a traditional camera.

## **3. Powering Up**

To power up your iPhone, hold the Wake/Sleep button in for about 3 seconds. Upon doing this, an Apple logo should appear on the screen, but you will get no audible indication that it is there. You may need someone to look at it to confirm it has completed the start-up sequence. If VoiceOver was turned on when your iPhone powered down, then it will turn on automatically once your iPhone finishes powering up.

If this is the first time your iPhone has been powered up, you will have to go through the lesson called Initial Setup Instructions, before continuing with this lesson.

### **3.1 Turning On VoiceOver with the Home Button**

If your iPhone is configured correctly, you can press and release the Home button three times quickly to toggle Voiceover on and off. If Voiceover was not previously turned on, and your device was completely powered off, wait about five seconds after releasing the Wake/Sleep button before triple clicking the Home button.

### **3.2 Using Siri to Turn on VoiceOver**

Once your iPhone is powered up, you can also try to turn on VoiceOver by using Siri. Find a quiet place and do the following:

1. Hold down the Home Button until you hear two bell tones. This means that Siri is listening to you and is ready to take your command.
2. In a clear voice, full of pride and confidence say "Turn VoiceOver on"!
3. Between two and five seconds later, you will hear two higher pitched bell tones. This indicates that Siri has stopped listening to you. Then Siri will say, "OK, I have turned VoiceOver on".
4. If this doesn't happen, repeat steps one and two, but give your device a dirty look and speak in a slower and firmer voice.

### 3.3 Turning on VoiceOver with Sighted Assistance

If VoiceOver still doesn't turn on, Then it is time to get some help from a sighted person. After all, sometimes "we all need somebody to lean on", or "we get by with a little help from our friends" and "Everything is awesome when you are part of a team". By now you should be tired enough of song lyrics, that you will ask for help. It is really OK once in a while, and it will prevent you from having to read more lyrics.

Ask the sighted person to do the following:

1. From the Home Screen, activate the Settings icon. Upon doing this, the Settings screen will be displayed.
2. In the Settings screen, locate and activate the Accessibility button. Upon doing this, the Accessibility screen will be displayed.
3. Scroll to the bottom of the screen and activate the Accessibility Shortcut button. Upon doing this, the Accessibility Shortcut screen will be displayed.
4. In the Accessibility Shortcut screen, make sure that Voiceover is the only option selected. This will ensure that triple clicking the Home button will turn Voiceover on and off.

Then ask them to hand you the iPhone. Now triple click the Home button. Upon doing this, Voiceover will be turned on! You can now turn VoiceOver off and then on again by triple clicking the Home Button.

If VoiceOver is turned on when you power off your iPhone, the next time you power up, it will start automatically! So now that you know how to turn VoiceOver on and off, it is recommended to leave it on at all times!

## 4. Locks and Keys

When your iPhone is turned on, it can be in one of two modes, either awake or asleep. When it is asleep, the screen displays no items and is black. This mode prevents you from accidentally activating buttons, making phone calls, and so on. It also saves battery power. When your iPhone is awake, you can use it normally and have access to all of its features.

In section 2.2, you learnt about the Wake/Sleep button. When your device is awake, you can press this button once to put it to sleep. You may want to do this if you know you won't need it for a while, but you need it to be on to alert you of incoming calls or messages.

Some people call this "putting the device to sleep", and others call it "locking the device", but both mean the same thing. When you press the Wake/Sleep button, Voiceover will say, "Screen Locked" and the screen will be turned off.

## 4.1 Unlocking or Waking Up Your Device

You can press either the Wake/Sleep button or the Home button to begin the process of waking up or unlocking your device. When you do, Voiceover will say "Touch ID or Enter Passcode", or it will announce the time, depending on whether you have set up your device to recognize your fingerprint. If you do nothing for about 10 seconds, your device will automatically go to sleep and return to the Locked Screen again.

## 4.2 The Explore Gesture

As previously discussed, VoiceOver uses a series of gestures to control your device. Gestures are made by moving one or more fingers around the screen, or by tapping with one or more fingers. The Explore gesture is the simplest gesture. Simply place your finger on the touch screen and then move it around without breaking contact with the screen surface. As your finger touches each item, VoiceOver will tell you what it is, and provide you with hints on how to access it. Drag your finger slowly and stop when VoiceOver speaks. Be sure to listen to the entire description before moving on, otherwise you might miss something important!

You perform the Explore gesture by placing one finger on the screen, and then dragging it slowly across the screen in whatever direction you wish. You can even change directions whilst moving. If you decide to Explore a different area of the screen, you can pick up your finger and put it down again in the new location. Apple calls this gesture the Touch gesture. Throughout this lesson, and in all future lessons, it will be referred to as the Explore gesture, as this more accurately describes how it is used.

As your finger touches items on the screen, Voiceover will read the text of each item. If you keep your finger still long enough, Voiceover will tell you what type of item it is, and even provide you with hints as to what to do next.

Let's use the Explore gesture to find out what is on the Unlock Screen. If you are on the Locked Screen, press the Wake/Sleep button, or the Home Button once, to wake up your device. Then, using your index finger, touch the upper left corner of the screen. If nothing happens when you touch the screen, try moving your finger down slightly until you hear Voiceover speak, or until you hear a sound somewhat like a click.

Now slowly explore with your finger in a horizontal line moving to the right. Don't lift your finger. When Voiceover starts speaking, hold your finger still until you hear the entire announcement. It is important to listen to Voiceover's entire announcement, because after telling you what is on screen, Voiceover often gives you hints as to what to do next.

Depending on a number of factors, you may hear different things read to you. For example, you may hear about the current cellular signal strength, or whether you are connected to a wireless network. You may also hear the word "Locked", meaning your iPhone is locked, and you may also hear the current battery status.

If you move your finger back to the centre of the screen, and then move slowly downward using the Explore gesture, you will first hear the time and then the date announcements.

Gradually move your finger down the centre of the screen toward the Home Button. As you move down the screen, you will hear a series of clicks. This is because the screen is divided into an imaginary grid. As your finger moves from one grid square to the next, your iPhone makes this sound. When your finger is slightly above the Home button, Voiceover will say, "Press Home to unlock".

### **4.3 The Current or Focused Item**

The last item spoken by VoiceOver is important, because your next gesture will act on that item, no matter where on the screen you perform it. Apple calls the last item Voiceover spoke the "Selected Item", but that can cause some confusion when working with lists of items. So throughout this lesson, and in all future lessons, it will be referred to as the Current, or Focused Item.

**NOTE 2:** Low vision users of Voiceover may be able to locate the Current Item visually, because Voiceover places a thick border around it.

### **4.4 Buttons**

So far you have learnt about the physical buttons on the side of your iPhone. However there is another type of button which can appear on the screen. You cannot feel it, but it is there nevertheless. When a button appears on the screen in this way, it is called a virtual button.

The last announcement made by Voiceover before you lifted your finger should have been "Press Home to Unlock, button", which means that the Current or Focused Item is a virtual button with the text, "Press Home to unlock".

Now that you know the current item is a button, how do you press it?

### **4.5 The One Finger Double Tap**

When a virtual button is the Focused Item, a One finger double tap anywhere on the screen will press the button and activate the corresponding function. Throughout this lesson, and in all future lessons, the One Finger Double Tap will be referred to as the "Activate" gesture.

There are a few things to keep in mind when performing the Activate gesture:

- Once the button you want is the Focused or Current Item, the taps can be anywhere on the screen. They don't have to be on the button itself.
- The taps must be quick. They have to take place within a quarter of a second of each other. Otherwise the gestures will be interpreted as Explore gestures, and the button you wanted to press will no longer be the Current Item.



- You must be sure that no other part of either hand is touching the screen. Sometimes people accidentally touch the screen with their wrist, or accidentally touch it with another finger. This will change the meaning of the gesture.
- Be careful that your finger doesn't slide across the screen as you tap. It must "bounce" off the screen without sliding or the gesture will be misinterpreted by Voiceover.

Bearing these things in mind, go ahead and Press or Activate the button. If you perform the gesture correctly, you should end up on the Passcode Screen.

## 4.6 Passcodes

By default, your iPhone requires you to enter a four or six digit passcode during the initial setup process. It may seem inconvenient to have to enter this code every time you wake up your device, but this passcode is there to protect you and the data on your device. Without it, anyone can access private data you store on your iPhone. They can even erase or tamper with it. Not having a passcode on your device is like going out of the house and leaving the front door wide open.

It is strongly recommended that you use a passcode. Your passcode should not be something easy to guess like your birthday, Anniversary, or any part of your National Insurance number. These are known as weak passcodes. Instead use something easy for you to remember, but hard for anyone to guess. Maybe part of a friend's telephone number or an old locker combination. In later lessons you will learn how to create more secure passcodes, but the passcode you have at present will do for now.

## 4.7 The Passcode Screen

The passcode screen has twelve virtual buttons on it. These are the numbers 1 through 0 and two other buttons, labelled Emergency and Cancel. The Cancel button changes its name to become the Delete button once a number has been entered. The numbers are arranged just like a telephone keypad. When you are prompted to enter your passcode, use the Explore gesture to find the correct buttons, and use the Activate gesture, a One Finger Double Tap, to press each button.

If you enter a number in error, locate the Delete button and perform the Activate gesture to delete the last number entered. If you enter an incorrect passcode, you will be asked to try again. If you enter the code correctly, your iPhone will chirp, and you will be taken to the Starting Home Screen.

**NOTE 3:** The Emergency button on the Passcode Screen allows you, or anyone else, to use your iPhone to dial 999 without entering the passcode. Be careful not to activate this button accidentally!

## 5. The Starting Screen Layout

Your Starting Screen is laid out in a grid structure, divided into three active areas. The Status Bar, which runs across the top of the screen. The Home Screen, which is laid out in a grid of four columns by five rows in the centre of the screen, and the Dock which runs along the bottom of the screen.

### 5.1 The Status Bar

The status bar is where you will find important pieces of information about the current condition of your iPhone. Examples may include how many bars of cellular service you have, the strength of your wireless signal, whether or not Bluetooth is on, the current time and how much battery life is remaining. Try exploring the status bar by moving your finger from left to right across the top of the screen.

Don't worry yet about what each thing means. As you explore, VoiceOver will announce each item and then say "Status Bar Item" to indicate which part of the screen you are on. Go slowly and listen to everything VoiceOver has to tell you.

**IMPORTANT:** When learning how to use VoiceOver, it is recommended to move slowly and take your time. It has a lot of information to convey, and until you are used to it, you need to take the time to hear it all.

As you move between items, you may notice that you hear a click sound. If you move down off the status bar, you will hear a chirp as well. This tells you that you have moved off the Status Bar and onto a different area of the screen. Move your finger back to the top of the screen again to get back onto the Status Bar.

### 5.2 The Home Screen

The Home Screen is in the middle of the screen and takes up the largest portion of it. When your iPhone is held in portrait orientation, it is arranged in a grid structure, consisting of four columns by 5 rows. Only one item at a time can occupy a grid square. The Home Screen can have multiple pages, each of which has a four column by five row grid. You will learn how to access other pages of the grid in the Gestures section, coming up later in this lesson. There are two types of items which can appear in the spaces of the Home Screen grid. These are icons and folders.

Your device can display the Home Screen in Landscape orientation as well. In Landscape orientation the grid will have 5 columns and 4 rows. This means that items may be in a different place than where you expect them to be!

#### Icons

Icons are small images with an accompanying text label, which vaguely represent an application. For example the icon for the weather app appears as an image of the sun partially obscured by a cloud.

## **Folders**

Folders can contain groups of related icons, just like a file folder contains related documents. For example, if you have three icons for Games such as Minecraft, Candy Crush and Pokemon Go, you can create a folder called Games and store the three icons there. This saves precious grid squares in the home screen and makes it easier to organize your device.

### **5.3 The Dock**

The Dock is an area at the bottom of the screen where you can keep the icons for the things you use most. This way no matter which page of the home screen you are on, the icons you use most are always available without having to move through multiple pages on your Home Screen. You can use them or learn about them using the same techniques you use on the Home Screen grid.

As you move your finger across the bottom of the screen to explore the items in the Dock, VoiceOver will announce each one. You will also hear a click as you move from item to item. If you move your finger up out of the Dock area, you will hear a chirp. This is just like the behaviour when you move off the status bar onto the Home Screen.

### **5.4 The Inactive Zones**

There are two inactive areas of the screen. When your iPhone is in Portrait orientation, one is at the top above the Status Bar. The other is at the bottom. The one at the bottom extends to the left and right of the Home Button, and for a narrow space above it. There is no tactile way to detect these inactive areas, but you need to be aware of them, because if you perform one of the VoiceOver control gestures discussed throughout these lessons, they will not work correctly if one of your fingers is in these zones. If you hold your iPhone in Landscape orientation, these areas move to the left and right side of the screen.

At the top of the screen, you can feel a slight depression in the centre where the camera and microphone are. Anything to the right and left of this depression is inactive space.

## **6. Exercises**

- 1. What is the difference between Portrait and Landscape orientation?**
- 2. With your device held in Portrait orientation, where is the wake/sleep button, and what does it do?**
- 3. What techniques have you learnt so far to turn VoiceOver on and off on your iPhone?**
- 4. What is an icon, and what is a folder? What is the one thing folders can do that other icons cannot?**

5. **What are VoiceOver gestures? What are the two gestures discussed so far and how do you perform them?**
6. **Where is the Status Bar? Use the "Explore" gesture with your finger. How many items are on it? How many bars of cellular signal strength are available? How much battery power is left?**
7. How can you adjust the volume of VoiceOver using what you have learnt so far?
8. **How many items are on the Home Screen? Name at least three!**
9. Where is the Dock? What are its similarities with, and differences from the Home Screen? Name the items on the Dock from left to right.

The answers to these questions can be found on Page 23.

## **7. Basic Navigation**

You have already learnt about the Explore gesture. This is the most basic way to locate things on the screen. Simply move your finger until you find the item you want.

### **7.1 The Current Item**

The last item announced by VoiceOver is the Current Item. This is important to understand, because if the last item VoiceOver announced was "Settings", and you perform the Activate gesture on another part of the screen, the Settings item will be activated instead. In other words your device will act on the last item VoiceOver announced, regardless of where you perform the next gesture. Apple calls this item the "Selected Item" but this can cause some confusion when working with lists of items. So throughout this lesson, and in all future lessons, it will be referred to as the Current Item.

The following navigation gestures will move around the screen relative to the current item.

### **7.2 One Finger Swipe Left and One Finger Swipe Right**

Remember your iPhone's screen is laid out like a grid. The single row grid at the top is called the Status Bar. The four column by five row grid in the middle is called the Home Screen, and the grid at the bottom is called the Dock.

Let's use the Explore gesture to find the leftmost item in the Status Bar. Once you find it, lift your finger so it becomes the current Item. Now imagine that an annoying bug has crawled on to a random spot on your screen, and you want to get him off as fast as possible. Don't give him any warning by touching the screen first. Quickly swipe one finger at him, in a rightwards direction, so you launch him off the right side of the screen.

If you performed the gesture correctly, VoiceOver will announce the next item to the right in the Status Bar, and it will become the new Current item. If VoiceOver started reading something else on your screen, then one of two things happened: Either you touched the screen before you swiped, or you didn't swipe fast enough. In either case, VoiceOver will interpret these actions as the Explore gesture and begin reading from where you touched the screen. If this happens, simply use the Explore gesture to find the left-most Status Bar icon again and have a swipe at that pesky little bug one more time.

Repeat the One Finger Swipe Right gesture until you get VoiceOver to read each item in the Status Bar. You will know you are at the end, because your next swipe will produce a strange sound.

### **7.3 The Thunk Sound**

This sound is a little bit like someone striking a small drum. When you hear this sound it means that you have reached the end of a screen or list and cannot swipe any further in that direction.

Now that you have gone as far as you can in that direction, let's go back the other way with a One Finger Swipe Left. Just launch that pesky bug off the left side of your screen, and you will begin moving backwards through the items. Remember not to pause on the screen or go too slow. If you do, your device will think you are Exploring instead of Swiping.

**NOTE 4:** You can begin any swipe gesture from anywhere in the Home Screen or Dock. VoiceOver remembers the current item and moves from there rather than the items your finger passed over during the Swipe.

### **7.4 Three Finger Single Tap**

It is easy to lose track of where items are as you swipe through them. Knowing their position in the grid makes them easier to locate with the Explore gesture the next time you need them. You can find out where the current item is on the screen by tapping the screen once with three fingers simultaneously.

When using the Three Finger Single Tap gesture, your fingers should be slightly separated. They can touch the screen anywhere except the inactive spaces, but they must all touch at the same time. Apple calls this gesture the Speak Item Summary gesture. Throughout this lesson, and in all future lessons, it will be referred to as the "Where Am I gesture", as this more accurately describes where the Current Item is on the screen.

Now, let's use the Explore gesture to locate the item that displays the time in the Status Bar. With this as the current item, perform the "Where Am I" gesture. Upon doing this, VoiceOver will announce "Top of Screen", followed by suggestions of additional gestures. You can ignore these suggestions for now.

If VoiceOver announced a different item, then it is highly likely that one of your fingers touched the screen before the other two, and VoiceOver interpreted that as an Explore gesture. Find the time display in the Status Bar again and have another go!

Now make the first item in row 1 of the Home Screen the current item and try the Three Finger Single Tap or "Where am I" gesture again. This time, VoiceOver will give you a lot more information. It will say, "Row 1, Column 1, Home", followed by the current page number and the total number of pages available. Then it will tell you how to open the item.

Just to be complete, make the first item in the Dock the Current Item and perform the "Where Am I" gesture. Upon doing this, VoiceOver will say, "in dock, position 1, bottom of screen, double tap to open".

## 7.5 Swiping through the Home Screen Grid

Now let's go back to the Home Screen and make the first item in row 1 the Current Item. You can do this using the Explore gesture or by making any item on the Home Screen the Current Item and repeating the One Finger Swipe Left gesture until you hear the Think noise.

1. Now perform a One Finger Swipe Right 3 times. VoiceOver will announce the next three items in turn and make the last one the Current Item.
2. Perform the "Where Am I" gesture. In other words the Three Finger Single Tap. VoiceOver will announce, "Row 1, column 4, Page 1, Top of Screen".
3. Perform a One Finger Swipe Right.
4. Perform the "Where Am I" gesture. Notice VoiceOver now begins its announcement with "Row 2, Column 1". Unlike swiping through the Status Bar, when you swipe through the Home Screen and Dock, VoiceOver will advance to the next row automatically. Rows are numbered top to bottom, and columns are numbered left to right.
5. Now perform a One Finger Swipe Left. This time, the VoiceOver announcement begins with "Row 1, Column 4". So VoiceOver backs up rows automatically as well!

**NOTE 5:** When "Where Am I" describes locations, it considers the Status Bar and the first two rows of the Home Page grid to be the top of the screen. Rows 3 and 4 of the Home Page grid are the centre of the screen. Row 5 of the Home Page grid is considered the bottom of the screen along with the Dock area.

### Rules for Swiping

- Swipe changes the Current Item. The Current Item is the last one spoken by VoiceOver and is the one that will be acted upon with your next gesture.

- Swipes must be horizontal. Vertical Swipes have different meanings depending on the circumstances. A vertical swipe will NOT move to the item immediately above or below the Current Item.
- You cannot touch the screen before you swipe, or your device will interpret your action as the Explore gesture and change the Current Item.
- If you swipe too slowly, your device will also interpret that as the Explore gesture.
- A One Finger Swipe Right reads through items from left to right, then top to bottom, just like you read words from a book.
- A One Finger Swipe Left reads items from right to left and then bottom to top (the reverse of the One Finger Swipe Right).
- You cannot use a One Finger Swipe to move from one page to another in the Home Screen. There is a separate gesture for this which we will cover soon.
- The One Finger Swipes will skip blank spaces on the grid.

From now on for purposes of clarity, a One Finger Swipe Right will be referred to as the "Next Item" gesture, and a One Finger Swipe Left will be referred to as the "Previous Item" gesture.

**NOTE 6:** In Western Countries, reading order is left to right and top to bottom. VoiceOver is actually scanning the screen in the same order, but sometimes the Next Item and Previous Item gestures appear to read the screen in a different order than you would expect after using the Explore gesture. This is because if the item on the right is taller than the item on the left, VoiceOver will encounter it first and read it ahead of the item on the left.

For example, the Reminders Application displays your tasks in a list. There is a checkbox on the left side of each row followed by the name of the task to its right. However, since the Task Name is taller than the check box, VoiceOver will read the item on the right first. The Next Item gesture, a One Finger Swipe right, causes VoiceOver to read the check box second. This could mislead you into thinking the Check box is on the right of the Task Name rather than the left where it really is.

## 7.6 Two Finger Swipe Up

The Next Item and Previous Item gestures begin from the location of the Current Item, but suppose you want to hear every item on the screen. You can do this by swiping up the screen with two fingers. Upon doing this, VoiceOver will begin to read everything on the screen, starting from the first item below the Status Bar.

## 7.7 Two Finger Swipe Down

Maybe you don't want to hear the entire screen. Perhaps you only want to hear the screen from the Current Item to the bottom. Then the Two Finger Swipe Down is for you!

There are some things you need to keep in mind about the Two Finger Swipe Down gesture:

- If the current item is on the Status Bar, then this gesture only reads the Current Item plus all remaining items on the Status Bar.
- If the Current Item is in the Home Screen or Dock, then VoiceOver will read the Current Item and all remaining items until it reaches the end of the Dock.
- Both fingers should be slightly separated and both need to touch the screen at the same time. If you touch with only one finger first, VoiceOver will interpret this as the Explore gesture and the item the first finger touched will become the new Current Item.

When VoiceOver finishes reading the Home Page and the Dock, you will hear the Thunk sound.

From now on the Two Finger Swipe Up gesture will be referred to as the "Read from Top " gesture and the Two Finger Swipe Down gesture will be referred to as the "Read to Bottom" gesture.

## **7.8 Two Finger Single Tap**

Suppose VoiceOver is reading and you suddenly hear the item that you are looking for. You need a way to pause VoiceOver so you can work with that item. The Two Finger Single Tap is it! This acts like the Play/Pause button on your DVD or book reader. If you want VoiceOver to resume from the point at which you paused it, perform a Two Finger Single Tap again.

**IMPORTANT!** Be careful. If you just do a One Finger Tap, VoiceOver will stop reading, but it will interpret this as the Explore gesture, and the Current Item will become the item you just tapped. This is probably not what you wanted, and you cannot use the Two Finger Single Tap to resume reading again.

From now on, the Two Finger Single Tap gesture will be referred to as the "Pause/Resume" gesture.

## **7.9 Three Finger Swipe Left and Three Finger Swipe Right**

The home screen grid can have multiple pages. These pages are arranged horizontally like the pages of a fold out pamphlet. You can find out how many pages are currently on the grid by making any item on the Home Screen the Current Item and then performing the "Where Am I" gesture. After announcing the Row and Column Numbers, VoiceOver will say "Page X of Y", where X is the current page and Y is the total number of Home Screen pages.

### **Why is the First Home Screen Page 2 and not Page 1?**

Page 1 on your iPhone is not part of the Home Screen grid. It is called the "Today" screen. This screen contains a combination of "Widgets" and Siri suggestions. Widgets are a quick and easy way to add extra functionality to your iPhone, providing you with the information you need in one place. They are small programs



that provide shortcuts to features normally found inside apps. Siri suggestions are apps and routines that Siri thinks you would like to have quick access to, based on your previous activity. The Today view screen, Widgets and Siri suggestions will not be discussed in this lesson.

In order to move to the next page on the Home Screen grid, you can take three fingers and Swipe them across the screen from right to left so that they make three horizontal parallel lines. This works best if you separate your fingers a little bit. To move to the previous page on the Home Screen grid, take three fingers and Swipe them across the screen from right to left.

Give it a try. Use the Three Finger Swipe Left gesture to scroll to the next page of the Home Screen. If you did this gesture correctly, VoiceOver will begin its next announcement with "Page x of y", where X is the number of the page you are on, and Y is the total number of pages on the grid. VoiceOver will then announce the top left item on the new page and make it the Current Item. If you did the swipe and heard the Thunk sound, then there are no more pages to move to in that direction.

Now use a combination of the Next Item and Previous Item gestures to find out which items are available on this page. When you have done this, use the Three Finger Swipe Left gesture to return to the previous page of the Home Screen.

If you accidentally scroll too far to the left, you will end up on page 1, the Today screen. Remember, this is not part of the Home screen grid. To return to page 2, which is the first Home Screen page, you can either use the Scroll Right gesture, or you can press the Home Button.

From now on, for purposes of clarity, the Three Finger Swipe Left gesture will be referred to as the "Scroll Right" gesture. The Three Finger Swipe Right gesture, from now on, will be referred to as the "Scroll Left" gesture.

### **Rules for the Scroll Left and Scroll Right Gestures**

- All three fingers must contact the screen at the same time. Otherwise the first finger that touches the screen will perform the Explore or Next Item/Previous Item gesture.
- The swipe must be horizontal. Vertical three finger Swipes have different meanings depending on the circumstances.

It may seem a bit confusing that a swipe to the right scrolls the page to the left, but imagine the seven pages printed on the outside of a drum on a spindle. If you are looking at one page, and you swipe your fingers to the left, the drum will rotate to the left. This will make the page to the right of the one you were looking at roll into view.

## **7.10 Picker Items**

There is another way to change Home Screen pages. Immediately above the first item in the dock is an item that VoiceOver reads as "Page 2 of x, Adjustable", where page 2 is the first Home Screen page and x is the total number of pages on the grid.

With this item as the current item you can perform a One Finger Swipe up or a One Finger double tap to increment the page. A One Finger Swipe down will decrement the page. When you hear the Thunk sound, you cannot go any further in that direction.

The item that changes the page number is called a "Picker Item", even though in this case VoiceOver doesn't announce it as such. Picker items usually contain numbers, weekdays or months. When a Picker item is the Current Item, you can increment or decrement the value with a One Finger Swipe up or down respectively.

VoiceOver will give you an indication you are on a Picker Item either by saying, "Picker Item" in its announcement, or by ending its announcement with the words "Adjustable, swipe up or down with one finger to adjust the value".

Some Picker Items are cyclical, meaning that if you try to go past their largest or smallest value, they will cycle around to the bottom or Top of the list. For example a picker item that shows months will cycle through the months in order until December. If you increment again past December, it cycles around to January. If you try to decrement below January, it cycles around to December.

## **7.11 The Increment and Decrement Gestures**

From now on, when a Picker Item is the Current Item, the One Finger Swipe up and the One Finger Swipe down gestures will be referred to as the "Increment" and "Decrement" gestures respectively.

## **7.12 Another Look at the Dock**

Perform the Scroll Screen Right gesture until page 3 of the Home Screen grid is displayed. Now, take a moment to explore the Dock area. Notice that the same icons appear there that appeared when you were on Page 2 of the Home Screen grid. This is the advantage of the Dock. You can keep the icons you use the most in this area! This way you can access them no matter what page of the Home Screen grid you are on!

Now let's return to Page 2 of the Home Screen grid by using the Scroll Left gesture, or by making the Picker Item the Current Item and using the Decrement gesture.

# **8. Other VoiceOver Gestures**

## **8.1 Three Finger Double Tap**

This is the Toggle Speech gesture. It toggles the VoiceOver speech off and on. Once you turn the VoiceOver speech off this way, you can only turn it on again with the same gesture. If your screen locks whilst speech is off, you can press the Home button once, and perform a Three Finger Double Tap to turn it back on again.

**Note 7:** With the speech toggled off, VoiceOver is still fully functional, you just cannot hear it. You will know that VoiceOver is still running, as you will hear small clicks when you navigate the screen. The main purpose for toggling the speech off is to allow you to listen to something else, for example a music track or video, without VoiceOver speaking and interrupting the audio. When the music or video has finished, you can toggle the speech back on using the Three Finger Double Tap gesture again.

## 8.2 Three Finger Triple Tap

This is the Toggle Screen Curtain gesture. The Screen Curtain blacks out your screen! You toggle the Screen Curtain off again by repeating the gesture. The most common reason for toggling the Screen Curtain on, is to allow you to enter passwords or to carry out banking transactions. It makes it impossible for anyone to see what you are doing and see which keys you have pressed on the onscreen keyboard!

## 8.3 Four Finger Double Tap, VoiceOver Help Mode

This gesture turns on VoiceOver help. It is designed to allow you to practice making VoiceOver gestures and to find out what a particular gesture does. It is a little tricky to tap with four fingers at the same time, so it might take one or two tries until you get it right. When you do, VoiceOver will say, "Starting help".

Whilst you have help on, try the gestures you have learnt so far. Remember that Apple calls the Explore gesture the Touch gesture. Try the Next Item and Previous Item gestures at different rates of speed to see what happens.

### Exiting Help Mode

There are three ways to exit help mode. Two of them use gestures we've already talked about. You can perform a four finger double tap, or press the Home button once. The third way uses the two finger scrub gesture described in the next section. No matter which method you choose, VoiceOver will say "stopping help" and your iPhone will be fully functional again.

## 8.4 The Two Finger Scrub

To make this gesture, take two fingers, usually your Index and Middle fingers, and place them on the left side of the screen. Ensure that the fingers are slightly apart and then in one continuous movement, slide them to the right, then back to the left and then back to the right again. Be careful not to lift your fingers or pause too long as you change directions!

This gesture has three functions, depending on what screen or menu you have open. They are as follows:

- Exits Help Mode.
- Cancels an open menu without taking any action.
- Activates the Back button, found in many app screens.

## 9. Review

**At this stage, you have learnt quite a few VoiceOver gestures. Let's review them and what they do.**

### **Explore**

Move one finger around the screen without breaking contact with the surface. Apple also refers to this as the "Touch" gesture. VoiceOver reads everything your finger passes over. The last item your finger touched becomes the Current Item.

### **Next Item**

One Finger Swipe Right. Reads the next item in the grid and makes it the Current Item.

### **Previous Item**

One Finger Swipe Left. Reads the previous item in the grid and makes it the Current Item.

### **Where Am I**

Three Finger Single Tap. Gives you information about the location of the Current Item on the screen.

### **Read from Top**

Two Finger Swipe Up. Causes VoiceOver to begin reading from the top of the screen, starting with the first item beneath the Status Bar.

### **Read to Bottom**

Two Finger Swipe Down. Causes VoiceOver to read from the Current Item to the bottom of the Dock.

### **Pause/Resume**

Two Finger Single Tap. This gesture pauses VoiceOver. The item VoiceOver began reading last becomes the Current Item. Restarts VoiceOver from where it paused.

### **Scroll Left**

Three Finger Swipe Right. Moves through the pages of the Home Screen Grid in descending order.

### **Scroll Right**

Three Finger Swipe Left. Moves through the pages of the Home Screen Grid in ascending order.

## **Toggle Speech**

Three Finger Double Tap. Turns off Speech until you turn it on with the same gesture.

## **Screen Curtain Toggle**

Three Finger Triple Tap. Toggles the Screen Curtain on and off. When the Screen Curtain is 'on', the screen is blacked out.

## **VoiceOver Help**

Four Finger Double Tap. Turns VoiceOver gesture help/practice on.

## **Increment**

One Finger Swipe up, or single finger double tap. When a Picker Item is active, this gesture increments its value by one.

## **Decrement**

One Finger Swipe down. When a Picker Item is active, this gesture decrements its value by one.

## **9.1 The Current Item**

Knowing which item is the Current Item is very important. Remember that the Current Item is the item that will be acted on by your next gesture. Remember, the last item announced by VoiceOver will be the Current Item!

## **9.2 Item Review**

So far you have learnt about these items which can appear on your screen:

### **Status Bar**

The status bar appears at the top of the screen. It is where you will find important pieces of information about the current condition of your iPhone. Examples may include how many bars of cellular signal strength you have, the strength of your wireless signal, whether Bluetooth is on or off, the current time, and how much battery life you have left. The Status Bar cannot become the current Item, but the icons within it can.

### **Dock**

The Dock is an area at the bottom of the screen that holds icons for the things you use most. This way no matter which page of the home screen you are on they are always available.

### **Icons**

Icons are small images with an accompanying text label, which vaguely represent an application. Additionally, an icon can also represent a function inside an app, for example save or print.

## Folders

Folders can contain groups of related icons, just like a file folder contains related documents.

## Picker Item

Picker items allow you to increment or decrement their values by performing a One Finger Swipe up or One Finger Swipe Down. The swipe doesn't have to take place on the item. Anywhere on the screen will do. VoiceOver indicates a Picker item by ending its announcement with the words "Adjustable, swipe up or down to adjust the value".

## 10. Exercises

1. Using the Explore gesture, try to find the battery level indicator. Hint, it is in the Status Bar. How much battery power do you have left?
2. Use the Explore gesture again to find the "Settings" icon. Then use the Where Am I gesture to have VoiceOver tell you its exact location.
3. Use the Next Item gesture to find what icon comes after the Mail icon in the Dock.
4. Use the Previous Item gesture to find out what icon comes before the Reminders icon.
5. What part of the screen is the App Store icon in? Use the "Where Am I" gesture to get the exact row and column number in the grid.
6. How do you get VoiceOver to begin reading all the items below the Status Bar starting with the first? What gesture makes it pause before it reaches the end and sets the last item spoken to the Current Item?
7. Use the Read Top Down gesture to have VoiceOver begin reading the icons on the Home Screen. Pause VoiceOver when it reads the Music icon. Use the Where Am I gesture to determine the Row and Column number of that icon.
8. Make VoiceOver read all the icons beginning with the Reminders icon and ending at the last icon in the Dock.
9. Use the Read Top Down gesture or the Next and Previous Item gestures until you find the Messages icon. Then use the Where Am I gesture to hear its location on the screen.
10. Based on what you heard from the Where Am I gesture, try to find the Messages icon as soon as you touch the screen with the Explore gesture. If it is not the first icon VoiceOver reads, pick up your finger and try again.
11. Try repeating questions 9 and 10, but this time try it with the Clock icon.

12. Try the same thing with the Camera icon. As you become more familiar with the layout of your device, you will be able to rely less on gestures that navigate your screen sequentially like Next Item, Previous Item, Read Top Down and Read to Bottom. Instead, you will be able to move right to the item you want with the Explore gesture.
13. Use the Scroll Left gesture to move to the next page of the Home Screen grid. How many items are on this page?
14. What happens if you use the Scroll Left gesture again?
15. What is special about the Dock area?
16. What do the Three Finger Double Tap and Three Finger Triple Tap gestures do?

The answers to these questions can be found on Page 24.

Congratulations! You have completed Lesson 1 - Orientation and Basics. In this lesson, You have learnt how to get around your new device. Take a break. In the next lesson, you will learn more advanced VoiceOver gestures such as how to activate items and navigate lists. You will also learn how to do some simple typing.

## Answers to Section 6 Exercises

1. What is the difference between Portrait and Landscape orientation?

Your iPhone is in Landscape Orientation when its long sides are horizontal. To be in Portrait orientation, the long sides must be vertical and the "Home" button must be at the bottom of the screen.

2. With your iPhone held in Portrait orientation, where is the wake/sleep button, and what does it do?

In portrait orientation, this button is on the right edge of the iPhone, near the top right corner. There are three functions of interest here.

- When your iPhone is off, holding down this button for several seconds begins the power up sequence. Remember, you will get no audible signal until the end of the boot process. So be patient.
- Press the button quickly to lock or unlock the screen.
- Hold the button down to power off your iPhone.

3. What techniques have we learnt so far to turn VoiceOver on and off on your iPhone?

Hold down the Home button until you here the double bell tone. Then say "Turn VoiceOver on", or "Turn VoiceOver off". When you turn VoiceOver off, Siri may not confirm the action is complete. Your iPhone may simply stop talking. Another way of turning VoiceOver on and off is to press the Home button three times quickly.

4. What is an icon, and what is a folder? What is the one thing folders can do that other icons cannot?

An icon is a small image, with an accompanying text label, that you can Activate to launch a program. VoiceOver will say the name of the program associated with the icon.

A folder is a special type of icon that can contain other icons. This is useful because similar programs can be put in a single folder. This helps to keep your screen organized.

5. **What are VoiceOver gestures? What are the two gestures discussed so far and how do you perform them?**

Gestures are made by tapping or moving your fingers around the screen. So far we have covered the Explore gesture. Place your finger on the screen and move it around, whilst maintaining contact with the screen. We have also covered the Activate gesture. Make an item the Current Item and perform a One Finger Double Tap.



6. **Where is the Status Bar? Use the "Explore" gesture with your finger. How many items are on it? How many bars of cellular signal strength are available? How much battery power is left?**

The Status bar runs across the top of the screen. You can count the number of items by moving your finger slowly from left to right. Be careful not to drift down below the Status bar. Your iPhone will "chirp" if you do. The cellular signal strength indicator is the first item on the Status bar. It is at the extreme left. VoiceOver will announce "X of 5 bars", where X is a number usually between 1 and 5. The battery level indicator is the last item on the Status Bar. It is at the extreme right. Voiceover will announce, as a percentage, the amount of battery power you have remaining.

7. How can you adjust the volume of VoiceOver using what we have discussed so far?

Use the volume buttons on the side of your iPhone. Remember VoiceOver needs to be speaking when you make the adjustment.

8. How many items are on the Home Screen? Name at least three!

You can count them using the explore gesture and moving your finger across each item. Typically, you will find the Messages, Calendar, Camera, Clock, Photos, App Store, Settings and Reminders icons on the Home Screen.

9. Where is the Dock? What are its similarities with, and differences from the Home Screen? Name the items on the Dock from left to right.

The dock runs across the bottom of the screen. It is a grid like the Home Screen, but it has only one row. As you change from page to page of the Home Screen, the items in the Dock always remain visible. Typically, you will find the Phone, Safari, Mail and Music icons in the Dock.

## **Answers to Section 10 Exercises**

1. Using the Explore gesture, try to find the battery level indicator. Hint, it is in the Status Bar. How much battery power do you have left?

Simply move your finger across the screen to use the Explore gesture. Don't break contact with the screen's surface. Remember to go slow so you hear everything VoiceOver has to say. The Battery Power indicator is at the extreme right side of the Status Bar.

2. Use the Explore gesture again to find the "Settings" icon. Then use the Where Am I gesture to have VoiceOver tell you its exact location.

Move your finger around the screen until you hear VoiceOver say "Settings". Then lift your finger from the screen. The Mail icon will be the current item. The Where Am I gesture is a three finger single tap. VoiceOver will tell you the icon's position. You should find the Settings icon in the Home Screen grid.

3. Use the Next Item gesture to find what icon comes after the Mail icon in the Dock.

The Next Item gesture is a single finger Swipe right. The icon which is usually to the right of the Mail icon is the Music icon. However, this can vary from one device to another.

4. Use the Previous Item gesture to find out what icon comes before the Reminders icon.

The Previous Item gesture is a single finger Swipe left. Usually, the Camera icon is directly before the left of the Reminders icon.

5. What part of the screen is the App Store icon in? Use the "Where Am I" gesture to get the exact row and column number in the grid.

This icon is normally on the first page of the Home Screen.

6. How do you get VoiceOver to begin reading all the items below the Status Bar starting with the first? What gesture makes it pause before it reaches the end and sets the last item spoken to the Current Item?

The Read Top Down gesture, a two finger Swipe up, starts reading from the top of the screen. To pause reading, use a two finger single tap. This is the Pause/Resume gesture. Performing the Two Finger Single Tap gesture again will start reading from where VoiceOver left off, providing you have not performed any other gesture since you paused VoiceOver.

7. Use the Read Top Down gesture to have VoiceOver begin reading the icons on the Home Screen. Pause VoiceOver when it reads the Music icon. Use the Where Am I gesture to determine the Row and Column number of that icon.

The Read Top Down gesture is a two finger Swipe up. The Pause Resume gesture is a two finger single tap. The Where Am I gesture is a three finger single tap. Remember to space your fingers out a little, and avoid having one of them touch the inactive zones.

8. Make VoiceOver read all the icons beginning with the Reminders icon and ending at the last icon in the Dock.

First you must find the Reminders icon. You can use the Explore gesture, or the Next/Previous Item gestures until you find it. Then use the Read to Bottom gesture, a Two Finger Swipe Down, to begin reading from that point.

9. Use the Read Top Down gesture or a combination of the Next and Previous Item gestures, until you find the Messages icon. Then use the Where Am I gesture to hear its location on the screen.

The Read Top Down gesture is a Two Finger Swipe Up. The Next Item gesture is a One Finger Swipe Right. The Previous Item gesture is a One Finger Swipe Left. The Where Am I gesture is a Three Finger Single Tap. Remember to space your fingers out a little when performing this gesture, and avoid having one of them hit the inactive zones.

10. Based on what you heard from the Where Am I gesture, try to find the Messages icon as soon as you touch the screen with the Explore gesture. If it is not the first icon VoiceOver reads, pick up your finger and try again.

The location of the Messages app is usually at the top left corner of the Home Screen. However, this can vary from one device to another.

11. Try repeating questions 9 and 10, but this time try it with the Clock icon.
12. Try the same thing with the Camera icon.
13. Use the Scroll Left gesture to move to the next page of the Home Screen grid. How many items are on this page?

Perform a Three Finger Swipe Left, to move to the next page of the Home Screen. Now, use the Explore gesture to count the icons. You can also use a combination of the Next and Previous Item gestures, or you can use the Read Top Down gesture to count them.

14. What happens if you use the Scroll Right gesture again?

You will either go to the fourth page of the Home Screen grid, or you will hear the "Thunk" sound which signifies there are no more pages to move to in that direction.

15. What is special about the Dock area?

As you scroll through pages on the Home Screen the items in the Dock remain stationary and are always visible.

16. What do the Three Finger Double Tap and Three Finger Triple Tap gestures do?

The Three Finger Double Tap stops VoiceOver from speaking. You must use the same gesture to start VoiceOver speaking again. The Three Finger Triple tap is the Screen Curtain gesture. When the Screen Curtain is 'on', the screen is blacked out.