Introduction to Screen Readers

[Simon] A screen reader is a piece of software that will read the contents of the screen out loud using text-to-speech, and provide touchscreen or keyboard gestures to interact with the device. This is typically used by blind or visually impaired people to access their devices without the need to see the screen. So the default screen reader on all Apple devices is called VoiceOver. And on the iPhone and pretty much everywhere else, it can be enabled by going into "System Settings" and then "Accessibility", which is where we are right now. And the first setting on the screen is VoiceOver, which is already enabled for this demonstration and it sounds like this:

[Screen reader] VoiceOver on button

[Simon] Another way to get to VoiceOver and enable it is just to tell Siri to "enable VoiceOver". And the final way, which people would find most convenient if they use it frequently, is to go all the way to the bottom of "Accessibility Settings" and go to the "Accessibility Shortcut Setting".

[Screen reader] Accessibility shortcut, VoiceOver button

[Simon] So when you go into this screen,

[Screen reader] Configure and then triple-click the side button to toggle accessibility features on or off.

[Simon] As VoiceOver just said, you can configure which accessibility features you'd like and then triple-click the side button to turn those features on and off. And when you only have one selected, it won't ask which one you want, it will just do it. So you can't see it because it's scrolled off the screen. But if we go to the very bottom, we can see that VoiceOver is selected as the only accessibility feature. What this means.

[Screen reader] Magnify

[Simon] Let's go back to the top, is that if I triple-click the side button on my phone.

[Screen reader] VoiceOver off

[Simon] It will turn voiceover off and if I do it again,

[Screen reader] VoiceOver on settings accessibility

[Simon] We're exactly back where we were. Note that on older devices that have a home button, you need to triple-click the home button instead. If you're not sure which thing you're supposed to do, the "Accessibility Shortcut Settings" will tell you the same way it said "Side button", it will say "Home button" on older devices. So let's talk a little bit about how to actually navigate with VoiceOver. The most simple navigation method is probably just touching something on the screen. So since Apple knows that a lot of totally blind people are going to be using it, they've made it so that instead of activating something when you touch it, it just reads it to you. So if I touch somewhere random on the screen right now,

[Screen reader] Control nearby devices,

[Simon] it will read what I just touched. And if I hold my finger on the screen,

[Screen reader] background sounds

[Simon] and then I just run my finger down it

[Screen reader] dim flashing light, full keyboard x, increase contrast

[Simon] It will essentially let me feel around the screen to find out what's there. Let's get out of this and go back to "Accessibility Settings".

[Screen reader] TDY settings, off button, zoom off button VoiceOver on button

[Simon] So I'm just running my finger up and down the screen until I find what I want. Once I find what I want, I can double tap anywhere on the screen and it will activate that item.

[Screen reader] VoiceOver switch button on

[Simon] So now we're in the VoiceOver subcategory of "Accessibility Settings". The other way that we can navigate with VoiceOver is by swiping left and right on the screen. And what this does is takes you systematically from the top leftmost item to the bottom right most item. So in "VoiceOver Settings" what this means is that we'll just go through every single item in this screen, and when it needs to scroll to find more items, it will automatically scroll. So I don't have to worry about doing that manually. If I swipe right now

[Screen reader] VoiceOver speaks items on the screen

[Simon] It's going to read the next item.

[Screen reader] Tap once to select an item, double-tap to activate the selected item, learn more

[Simon] And VoiceOver just made a little clicking noise in addition to the usual noises it makes. That means that that's a link. This is the verbosity setting you can configure. We'll see more about that in the next demonstration.

[Screen reader] VoiceOver practice button

[Simon] The only other main navigation gesture you might need to know is the three finger swipe or the three finger scroll. If you prefer the way that a sighted person might scroll with one finger, a VoiceOver user will do with three fingers. So if you swipe up or down with three fingers, it will scroll the screen down or up. If you swipe left or right with three fingers, it will turn a page in, for instance, an ebook reading app or a home screen.