LiveLife Therapy Solutions, Inc.
Specializing in Assistive Technology

Smartphone and Tablet Accessibility Features

As a result of this presentation, learners will be able to:
1. Describe accessibility features and how they apply to smart devices
2. Find and use accessibility features on an android device
3. Find and use accessibility features on an Apple device

What are Accessibility Features

- Accessibility is defined by the Centers for Disease Control and Prevention (2020) as "when the needs of people with disabilities are specifically considered, and products, services, and facilities are built or modified so that they can be used by people of all abilities"
- Examples:
    o High contrast
    o Switch control
    o Increased default zoom or font size

Accessing Android Accessibility Features

- Settings → Accessibility
- Consider an internet search for video tutorials
- Differ with each device

Android Accessibility Features – Display

• Screen reader
• Text/display
    • Font size
    • Display size
    • Bold text
    • Color correction and inversion
    • Remove animations
    • Large pointer
    • High contrast text
	• Extra dim
	• Dark theme
	• Magnification
	    • Full/partial screen
	• Select to speak

Android Accessibility Features – Interaction

• Large menu
• Switch access
    • Variety of settings related to setting up and using switches
• Timing controls (e.g. hold to select)
    • Adjust timing
    • Accessibility timeout
    • Auto click
	• System controls
	    • One-handed operation
	    • Power button ends calls
	    • Auto rotate
	• Vibration settings
	    • Adjustable vibration strength for calls, notifications, and touch feedback

Android Accessibility Features – Captions

• Live captioning
    • Hide profanity
    • Show sound labels
    • Caption calls
	• Live transcription
	• Captioning
	    • Size and style options
	• Call transcription

Android Accessibility Features – Audio

• Sound amplifier (w/ headphones) • Sound notification	• Audio balance adjustment

Accessing Apple Accessibility Features

- Settings → Accessibility
- Apple support describes all accessibility features in detail
- Consider an internet search for video tutorials

Apple Accessibility Features - Vision

VoiceOver	Display and Text Size
• Speech, braille • Verbosity, audio • Commands, activities rotor, rotor actions, typing • Speak notifications, navigate images, large cursor, caption panel, double-tap timeout **Zoom** • Zoom • Follow focus, smart typing • Keyboard shortcuts, zoom controller, zoom region, zoom filter • Maximum zoom level **Magnifier** • Use camera to magnify	• Bold text, larger text, button shapes, on/off labels, reduce transparency • Increase contrast • Differentiate without color • Smart invert • Classic invert • Color filters • Reduce white point • Auto-brightness **Motion** • Reduce motion • Auto-play message effects • Auto-play video previews **Spoken Content** • Speak selection • Speak screen • Typing feedback • Voices • Speech rate • Pronunciations **Audio Descriptions** • Automatically plays audio descriptions

Apple Accessibility Features – Physical/Motor

Switch Control • # of switches and recipes • Scanning style • Timing – Auto screen timing, pause on first item, loops, move repeat, long press • Tap behavior, focused item after tap • Keyboard – scan same key after tap, always tap keyboard keys, extended predictions • Switch stabilization – hold durration, ignore repeat • Gliding cursor • Audio – sound effects, speech • Menu items • Group items • Visual – large cursor, cursor color • Saved gestures **Touch** • AssitiveTouch • Haptic Touch • Touch accommodations • Shake to undo • Call audio routing	**Voice Control** • Set up voice control • Language, customize commands • Vocabulary • Command feedback – show confirmation, play sound, show hints • Overlay **Home Button** • Click speed – default, slow, slowest • Press and hold to speak – Siri or off • Rest finger to open **Apple TV Remote** • Directional buttons **Keyboards** • Full keyboard access • Key repeat • Sticky keys • Slow keys • Show lowercase keys

Apple Accessibility Features – Hearing

Hearing Devices • MFI hearing devices pairing • Hearing aid compatibility **Sound Recognition** • On/off for detection of certain sounds	**Audio and Visual** • Headphone accommodations • Mono audio • Audio balance **Subtitles and Captioning** • Closed captions + SDH • Style • Show Audio transcriptions

Apple Accessibility Features – General

Guided Access	Accessibility Shortcut

• On/off to keep device in single app with controlled features
Siri
• Type to Siri
• Voice feedback – with silent mode off, only with "Hey Siri," Always speak responses
• Always listen for "Hey Siri"
• Shows apps behind Siri
	• Triple click home button to toggle on/off:
	    • AssistiveTouch
	    • Classic Invert
	    • Color Filters
	    • Full Keyboard Access
	    • Increase contrast
	    • Reduce transparency
	    • Reduce white point
	    • Smart invert
	    • Switch control
	    • Voice control
	    • VoiceOver
	    • Zoom

Key Takeaways

- Smartphones and tablets have many accessibility options
- Accessibility options differ from device to device
- Appropriate use of accessibility features can make a device much more user friendly for a variety of users

References

1. Centers for Disease Control and Prevention. (2020). Disability inclusion strategies. Retrieved from https://www.cdc.gov/ncbddd/disabilityandhealth/disability-strategies.html#:~:text=Accessibility%20is%20when%20the%20needs,by%20people%20of%20all%20abilities.