

Assistive Technology Trends



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Overview

- Assistive technology team update
- Power mobility
- Eye gaze
- Tablets & accessibility features
- The “Cloud”
- Social media
- Favourite apps



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Assistive Technology, or AT, refers to equipment that maintains or improves the lives of individuals with disabilities. AT may include:

- Alternate access to technologies such as computers or power wheelchairs (via switches, joysticks, head pointers, eye gaze etc.)
- Augmentative and Alternative Communication (AAC) systems, such as communication boards, speech generating devices (SGDs), or talking switches
- Electronic Aids for Daily Living (EADLs), tools that allow children with disabilities to control lights, appliances and other devices within their environment
- Written communication output options for children unable to use traditional methods (paper/pencil, handwriting)
- Customized mounting of AT devices (such as computers, SGDs, wheelchair control mechanisms or other medical equipment) for ease of access



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The AT Team at Sunny Hill provides services for children 0 to 19 years old throughout British Columbia. Children who are seen by the team include:

- Children who are not talking because of delays in physical development and/or delays in thinking and learning
- Children who may benefit from an augmentative communication system because although they are able to talk, they are extremely difficult for people to understand
- Children who have a disability that affects their ability to explore toys with their hands
- Children who are having difficulty with written output or with accessing the computer for play and development
- Children who have power mobility needs



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Sunny Hill Assistive Technology Team

- Consultation by SLP & OT
 - Loan Bank: 6 month loan program to trial recommended technology before decision is made to purchase
 - need to find external funding source
- SET BC



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Power Mobility

Tools to measure performance

- Rancho Los Amigos Power Mobility Rating Scale
- Assessment of Learning Powered Mobility Use (ALP) and Facilitation Strategies by Josephine Durkin & Lisbeth Nilsson (2014)
- <http://www.lisbethnilsson.se/en/alp-tool/>



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Power Mobility

Early power mobility

- Moving helps kids develop social and learning skills
- Most kids walk by 12 – 18 months
- Kids with disabilities need the chance to move at the same age
- Research suggests kids as young as 7 months can begin to use power mobility equipment, and use it well by 18-24 months

Beginning Power Mobility (PDF) <http://www.settingandmobility.ca/PowerMobility.com/BeginnigPowerMobility.pdf>



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Eye Gaze

- Size
- Cost
- Training activities for new users



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Early Power Mobility



Roslyn Livingstone (OT) is submitting a proposal for *Power Mobility Days*

- children under 5 not expected to be efficient ambulators
- to be held at various CDC's
- Kids to try a range of devices such as the Bugzi, Wizzybug, Cub, ride on toy cars

Goal: Future provincial loan pool for training



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Eye Gaze

- ACETS Eye Gaze screening checklist
 - www.setbc.org/download/public/ACETS_Eye_Gaze_Screening.pdf
- Prior experience with a low tech eye gaze system is helpful e.g. Etran
- Ability to make choices & follow 2 step directions
- Able to recognize picture symbols



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Eye Gaze



Tobii i15 - dedicated device with built in camera



Eye Gaze Activities

<http://www.inclusive.co.uk/software/eye-gaze-software>

Look to Learn

-fun and engaging interactive activities specially created to teach early eye gaze access and develop choice making skills

-<https://www.youtube.com/watch?v=taAbRErXpjs>



WINDOWS 8 TABLET



TOBII PCEYE GO EYE TRACKER

EYEMOBILE BRACKET



Eye Gaze Activities

<http://www.inclusive.co.uk/software/eye-gaze-software>

Inclusive Eye Gaze

•Attention & Looking

•18 Carefully Graded Activities. These fun and meaningful activities can be used with anyone trying their first steps with eye gaze. They provide a progression of skills from experiential/cause and effect to targeting, ensuring early success and effective teaching.



Entry level eye tracker - PC Eye Explore



PC Eye Explore bundled with Boardmaker activities gives students a new and natural way to participate!

<https://www.youtube.com/watch?v=1eQ6URR8Cz4>



Eye Gaze Activities

<http://www.inclusive.co.uk/software/eye-gaze-software>

Inclusive Eye Gaze

•Choosing & Learning

18 activities designed to prepare eye gaze users for further communication and learning activities by developing choice making and access skills.



Resource – free download

Your Essential Guide to Eye Gaze in the Classroom

www.inclusive.co.uk/eyegaze-downloads



iPad

iOS 9 Accessibility features

Settings > General > Accessibility

Touch Accommodations

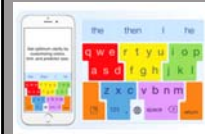
- Hold Duration:** helpful for someone who struggles with accidental presses
- Ignore Repeat:** multiple touches within the specified duration are treated as a single touch
- Tap Assistance:** can be set to use the Initial Touch Location or the Final Touch Location
- Supports uppercase and lowercase onscreen keyboard
- Guided Access** - cannot exit app



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SuperKeys for younger writers

For children needing an accessible keyboard, we recommend the Clicker Connect and Clicker Docs apps, both of which include SuperKeys as an accessibility option.



Cricksoft's SuperKeys gives you just seven large keys to target instead of more than 30 small ones! Just tap the cluster containing the letter you want, and then tap the letter in the enlarged cluster. There's no double-tapping, no essential swiping, and no learning required.



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Keedogo Plus for iPad

- Use in any app
- Select lowercase letters
- Set ABC or QWERTY layout
- Optional colored vowels
- Simplified keyboard
- Select preferred font, including dyslexic or large, school-friendly font
- Turn Auto-Capitalization and Auto-Spacing
- User configurable word prediction
- Cursor keys to navigate through text
- Select English, Spanish, French or Dutch



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Phonics keyboard extension by Therapy Box



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Keeble for iPad

- Compensate for motor challenges with Select on Release or Select on Dwell
- Use Switch Control with optimized scanning keyboards: abc and frequency of use
- Prevent accidental selections with Timing options
- Hear which key you are touching when moving your finger across the keyboard
- Use Speak as you Type to hear each key, word or sentence whilst typing
- Turn ON Keyboard Clicks



Keeble allows students and adults with physical or vision impairments to type in any app



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iPad

Better Support for Bluetooth Keyboards

- Key Repeat:** turns off the key repeat (it is enabled by default) in order to prevent multiple characters from being entered when a key is held down on the keyboard. The options for customizing this feature include adjustments for the delay before a key that is held down starts repeating, as well as how quickly the key repeat will take place.
- Sticky Keys:** allows the user to press the modifier keys for a keyboard shortcut in sequence rather than having to hold them down all at once. The options for this feature include a quick way to turn it on by pressing the Shift key quickly five times, as well as playing a sound to alert the user when it has been turned on.
- Slow Keys:** changes how long the user has to hold down a key before it is recognized as a keypress (essentially a hold duration). The only option for this feature is to adjust the length the key has to be pressed before it is recognized.



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iPad Accessibility



Switch access in iOS 9

Switch interface – bluetooth vs plug in
Automatic and step scanning
Lots of customization options



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Chromebook accessibility features

The Chrome operating system includes several accessibility features that may be helpful to the individuals using the Chromebook.

- Automatic Clicking
- On-Screen Keyboard
- Sticky Keys
- Large Mouse Cursor
- High Contrast Mode
- Screen Magnifier



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Android accessibility features

Android accessibility features and apps enable you to customize your Android device to suit your needs. A brief summary of features is below, along with links to more information.

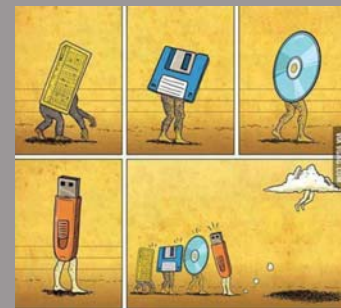
Services and tools for using your Android device

- **Screen reader (TalkBack):** TalkBack is a screen reader that's included on your Android device. TalkBack uses spoken feedback to describe your actions and to tell you about alerts and notifications. [Learn more about TalkBack.](#)
- **Switch access:** Switch access enables you to control your device with one or more switches. For users with limited mobility, switch access provides an alternative to using the touch screen. [Learn more about switch access.](#) (Android 5.0+)
- **Braille support (BrailleBack):** BrailleBack is an add-on accessibility service that lets you connect a supported refreshable braille display to your Android device via Bluetooth. BrailleBack works with TalkBack for a combined speech and braille experience, allowing you to input text and interact with your Android device. [Learn more about BrailleBack.](#)

<https://support.google.com/accessibility/android/answer/6006564>



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Settings to customize your Android device

The following settings are available in **Settings > Accessibility**. Follow the links to find detailed information about each setting.

- [Captions \(Android 4.4+\)](#)
- [Magnification gestures](#)
- [Large text](#)
- [High-contrast text \(Android 5.0+\)](#)
- [Power button ends call](#)
- [Auto-rotate screen](#)
- [Speak passwords](#)
- [Accessibility shortcut](#)
- [Text-to-speech output](#)
- [Touch-and-hold delay](#)
- [Color inversion \(Android 5.0+\)](#)
- [Color correction \(Android 5.0+\)](#)

<https://support.google.com/accessibility/android/answer/6006564>



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Google Chrome World



Chrome Browser
Chrome Operating System
Chromebook hardware
Google Drive



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Google Chrome World



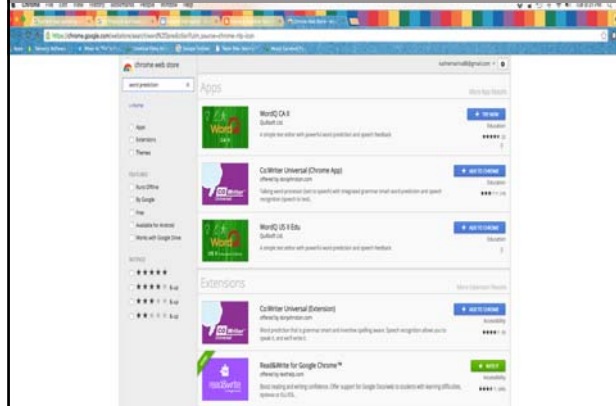
Google Chrome Browser

- Install apps or extensions from the Chrome Web store
- Supports screen readers

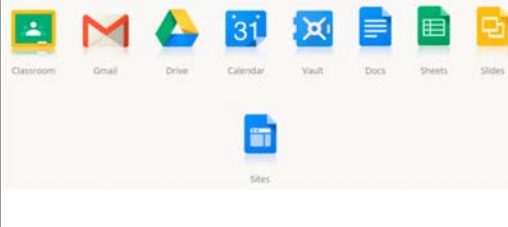


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Google Chrome Web Store to purchase apps



GAFE: Google Apps for Education



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Google Chrome Tools

Co:Writer Universal – word prediction tool for Google Chrome

- ✓ Corrects the most phonetic and inventive spellings with Linguistic Word Prediction and FlexSpell
- ✓ Brings speech recognition to Google Drive, email, and websites
- ✓ Supports college and career vocabulary with over 3 million Topic Dictionaries
- ✓ Automatically brings in content words in when writing on webpages
- ✓ Works offline — if your school is like most and has internet outages or speed issues, you need this!
- ✓ 1 year subscription: 1-10 seats \$116/seat
- ✓ <https://www.youtube.com/watch?v=OPTKYdCv0>



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Google Chrome World



Google Drive

- Free Google service allows you to store files online & access them anywhere, from any device
- Need an internet connection
- Free web based apps
 - Documents
 - Spreadsheets
 - Presentations
 - Forms
 - Drawings
- Students can access their files online from any machine



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Google Chrome Tools

Snap and Read Universal – reading tool for Google Chrome

<http://doughnorton.com/snap-read/> - VwZgZgH0v

- Reads accessible and inaccessible text aloud
- Works across Google Drive, email, websites, Kindle Cloud Reader, and PDFs
- Works offline
- Dynamic Text Leveling
- Study tools
- Translation into over 90 languages
- Data for reading level and usage
- Bibliographer
- 1 year subscription: 1-10 seats \$116/seat

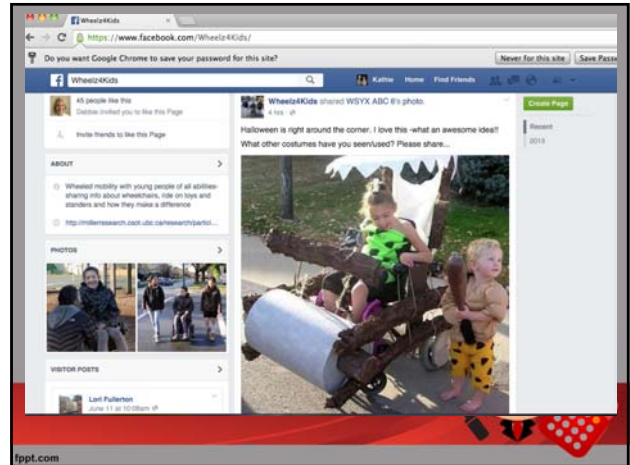


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Keeping up

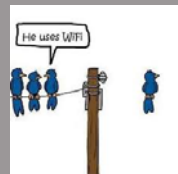


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Social Media



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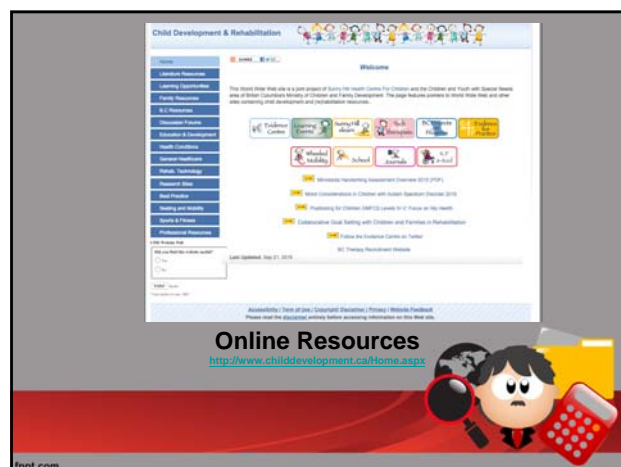
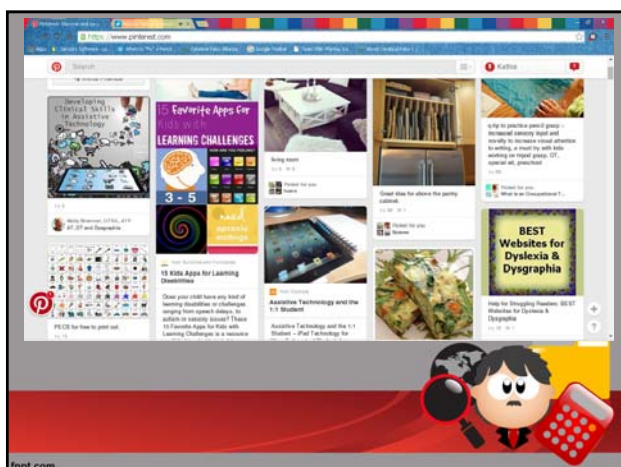
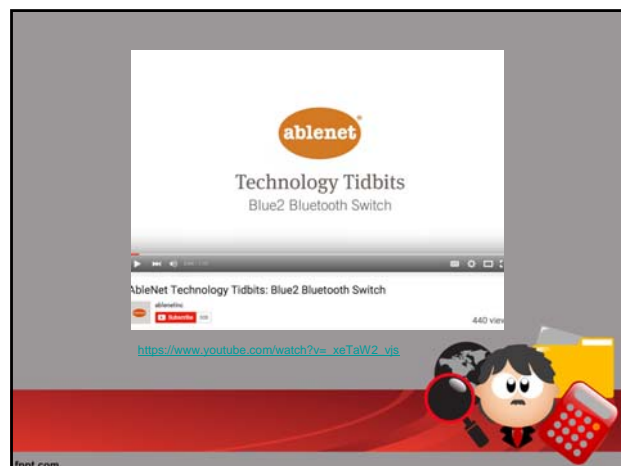
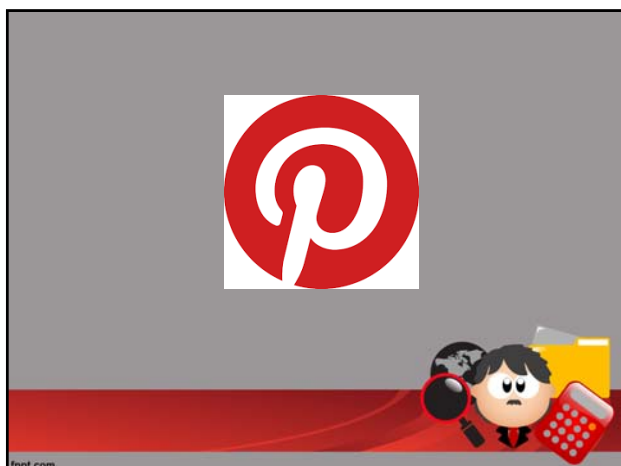
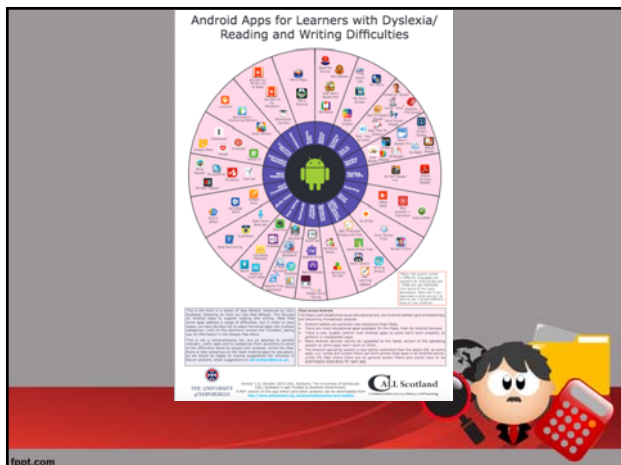


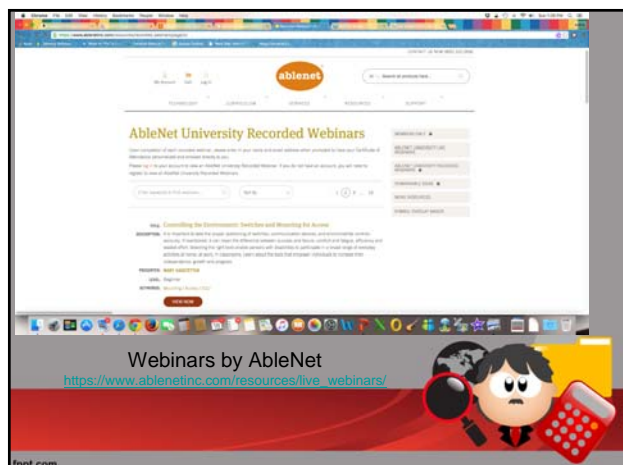
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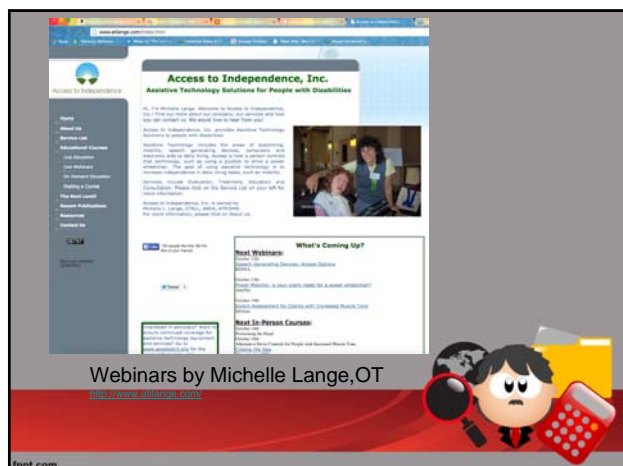


Apps

July 2015:

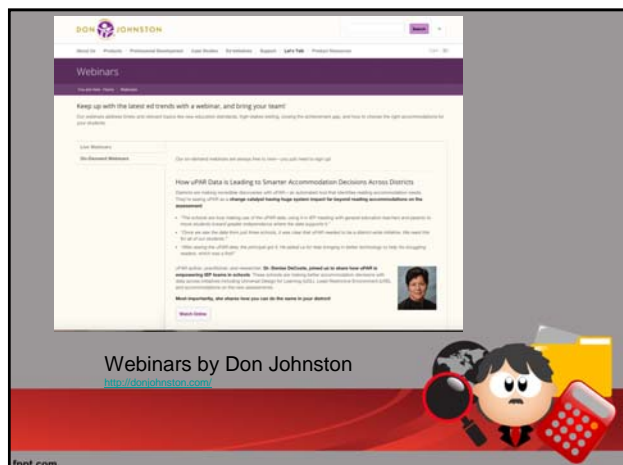
- 1.6 M apps in Google Play
- 1.5 M apps in iTunes store
- 60,000 new titles added each month

https://www.adjust.com/assets/downloads/AppStore_Report2014.pdf



My go to.....

- www.otswithapps.com
- <http://a4cwsn.com/>
- <http://www.janefarrall.com/>
- <http://www.callscotland.org.uk/downloads/posters-and-leaflets/>



Some favourite apps for writing

Clicker Sentences

Clicker Connect

Clicker Docs

Snap Type

Some favourite apps for communication....

Tap Speak Choice
TapSpeak Sequence

Touch Chat HD
Proloquo2Go
LAMP Words for Life
TD Compass

Verbally
Quick Type



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Time to shut down!