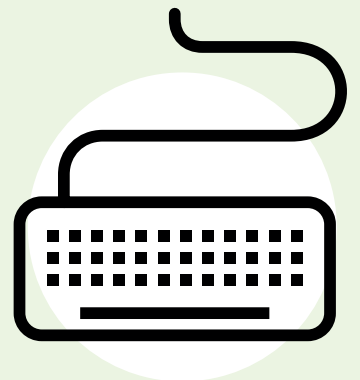


• **henshaws**

*beyond expectations*

August 2021



• **information  
technology**

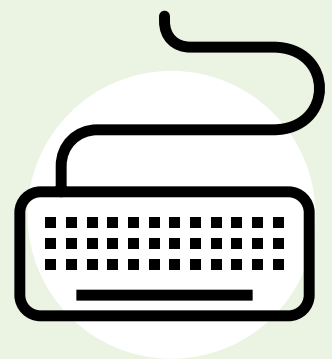
# • introduction

Accessible Information Technology (IT) has become an indispensable part of modern life, changing the way we communicate and access information. For example, computers with accessible technology (more of that later) have opened up a wide range of opportunities for people with a visual impairment, from word processing and reference materials to email, the Internet and gaming. This is made possible by a range of specialised software products that allow people with a visual impairment to use computers, even those people with reduced or no useful vision. One key aspect to remember is, by the time this resource has been written and you have read it, some of the information will be old news. It's a bit like buying that brand-new television from your favourite electrical shop; the day it arrives at your home and you have switched it on, a new model has just been released. So, if you want to know what is current, you can find more information in this resource in the section '**where to go for more help?**'

## How can technology help?

Technology is a problem solver without a doubt; working through which solution(s) fit best is a very personal journey. Choosing the right kind of assistive technology can transform the abilities of visually impaired people to perform everyday computing tasks like:

- reading documents
- producing letters and reports
- sending and receiving emails
- browsing the web
- communicating through social media
- working with spreadsheets and data entry



It is useful to remember when reading this resource and when choosing what accessible features suit you best, those that are 'built-in' (and free!), and those that are additional specialist software.

So many students with a visual impairment will attempt to access remote learning and classroom learning with whatever equipment they have within the home (computer, laptop, tablet or smartphone) and restricted / no access to any direct support they may have at their place of education.

Students with visual impairments may require special tools to access information both inside and outside of the classroom. One of the toughest balancing acts is to try and match the school/college solution(s) with home life if possible. It's great to deliver a fantastic solution in school, but what happens when you get home.

This assistive technology ranges from low-tech devices such as reading magnifiers to complex high-tech Braille printers. No matter the terms that may be used to describe a student's visual impairment, there are tools to meet the needs of a variety of levels of vision.

### **How can I get Support?**

A starting point would be to look for support within your educational environment. The type of support and level of support you may be able to access will depend on your school, college or higher education setting.

If you are in school you will be able to access support from a special needs coordinator (SENCO) and/or the local authority qualified teacher for the visually impaired (QTVI) as these take the lead on school age children and young people.

For young adults who access higher education (college and university), it is important to know that VI individuals have to take the lead on sourcing resources and what is available to them.

Disabled Students' Allowance (DSA) takes the lead on Higher Education and what resources they have available, for example you will need to be advised from disability student support services.

It is also important to note that different local authorities have different levels of resources, usually dependent on funding available to them.



## How might I get financial support?

There are a number of organisations that may be able to offer financial assistance. Financial support may be available to fund the purchase of technology, equipment, education or in some cases day-to-day living expenses  
<https://www.henshaws.org.uk/grants/>



## Choosing a computer

How you choose a computer depends on your individual needs and what you want to be able to do. There are various options which can be used on their own or in a combination. It is important to seek advice before buying a computer. PC specialist shops do not usually have the knowledge to advise a visually impaired person on the best options available.

It is advisable to contact Henshaws Digital Team who have the specialist knowledge to advise you before buying a computer or the access software. They can provide an assessment and advise you on the best options to suit your individual needs.

Henshaws IT Team is certainly one area that you can ask for support. You can contact Henshaws IT Team: 0300 222 5555. We also have two places you can visit: **Henshaws YouTube Channel** and **Henshaws Knowledge Village**



# ask yourself...

## What do I want the computer for?

- Do you want to write letters, essays, a book or complete homework? You will need a word processor.
- Do you want to keep in touch with family and friends? You will need to have an Internet connection to be able to use email.

## What are my individual needs?

- You may not be sure of this, especially if you are new to computing. It is advisable to arrange a demonstration of access technology before you buy, to avoid making an expensive mistake.

## IT Training

- If you are new to the world of computers, then you may be interested in training. Henshaws provides free formal and informal IT training on built-in accessibility and accessibility software and you should contact Henshaws for further information.
- Henshaws offer a holistic digital assessment to explore what options are available to you. This is done on a one to one basis.
- Following an assessment, Henshaws can offer training on accessibility features and accessibility software.



# • my computer my way - help making all your devices easier to use

Abilitynet's 'My Computer My Way' (MCMW) is a great resource produced with the help of Microsoft which covers making pretty much any device from any manufacturer as accessible as possible for users who experience sight loss. This particular section assists those with a visual impairment.

## Keyboarding

Learning your way around the keyboard and, ideally, learning to touch type are key skills for visually impaired computer users.

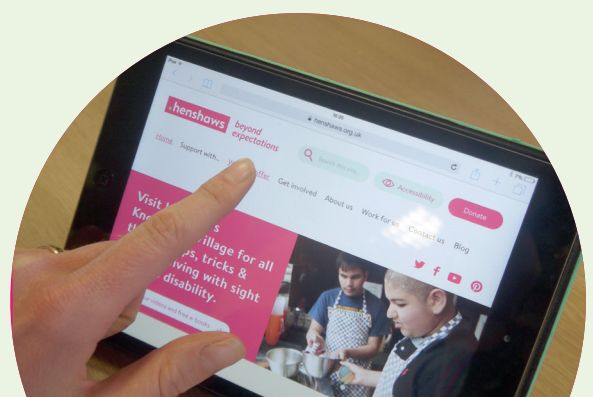
Using a keyboard is often faster than using a mouse, and for people with little or no vision, it can be the most practical way to input data and interact with a device. Working with keyboard shortcuts or 'hotkeys' is an effective and efficient method for anyone to control a computer.

## High Visibility and Larger Keys Keyboards

The letters on a standard computer keyboard are small and can be hard to see. A simple alternative option is to purchase a high contrast keyboard or modify the keys on your existing keyboard by covering them with high contrast stickers. These use larger letters and come in upper- and lower-case sets.

## Screen Magnification Software

This allows the contents of the computer screen to be magnified to a level that is comfortable for a person with reduced vision. Using the magnification software in conjunction with a large screen and the correct colour scheme can make vast improvements in the person's ability to see the computer screen.





### **Larger Monitor**

Larger screens present much larger images and text to view, and screens are available today that are over 30 inches. Using a monitor arm can also be very useful in adjusting the viewing distance/angle and reducing potential glare.

### **Screen Readers**

Screen readers allow people to use a computer without the need to see the screen.

The contents of the screen are read to the user via the computer's speaker system. For example: A person can type a letter and the screen reader will say each letter as it is typed on the keyboard. The person can then have the whole or part of the document read back to them. The same software may be used to access the Internet and email. Screen readers can read web pages and allow the user to perform tasks such as Internet shopping.

### **Interactive whiteboards: screen sharing with learners who have vision impairment**

The interactive whiteboard has become a standard fixture in most of our classrooms. This transmits content on the whiteboard from the teacher's computer directly to the pupil's laptop or tablet via internet or wi-fi. It effectively gives the pupil a remote monitor that they can use to zoom in and out.

It is certainly worth asking your school / VI Team about screen sharing software for in class use – although this may be an area where it is difficult to provide specifics as the type of software /hardware solution needed to make this work in each individual school & classroom, there may be varying constraints dependent on financing and IT network!

### **Braille Display**

Although these can be very expensive, they serve a dual function. Utilising just a few keys, Braille displays allow you to enter data and control your computer, and also to read documents, web pages and email using Braille.







### Reading machines

There are three main types of reading machine:

- **Standalone devices** combine a camera/scanner, Optical Character Recognition (OCR) software, screen reader and/or monitor in a single device. They are easy (but not very flexible) to use. OCR is useful for people with dyslexia too.
- **Computer-based devices** connect a camera/scanner and OCR software to your computer, allowing you to take advantage of your existing screen display options, as well as utilising screen reading.
- **Portable devices** are lightweight and easy to use on the move.

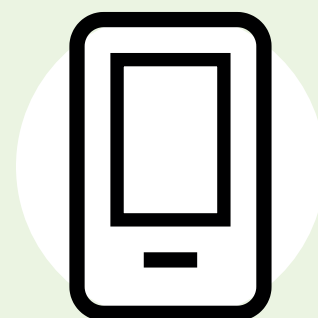
### Video Magnifiers

Video magnifiers (or closed circuit televisions – CCTVs) connect a high definition camera to a monitor display. This allows you to magnify different types of printed document or handwritten text to a high level.

### Smartphones and Tablets

Most mobile devices come with assistive technology that can help with reading, writing and organisation. Common built-in features include text-to-speech and dictation technology. Built-in assistive technology features vary among mobile brands. Apple specifically has ‘native’ solutions for people with no sight, as well as for people with some useful vision, and Apple has devices across the whole spectrum of technology... phone, tablet, computer. The benefit to this is that once you know one device, the other operating systems are very similar and easy to learn.

Virtually all Android and iOS smartphones now come equipped with accessibility software, including screen readers and magnifiers, as standard. Securing and accessing your phone has also improved as many smartphones use biometric security, such as fingerprint or facial recognition.





## **Dictation**

There are several tools that can help people with writing. The first is the built-in Dictation (speech-to-text) feature. This feature lets you write with your voice instead of typing.

## **VoiceOver (IOS) - TalkBack (Android)**

Built-in screen reader that allows you to navigate around your phone or tablet. As this uses audio feedback, you can use your device without being able to see the screen.

## **Siri (IOS) - Google Assistant (Android)**

Built-in voice assistant that can be used to navigate around and control certain features on your phone or tablet.

## **Speak Screen (IOS)**

A feature that will enable the user to have the text that is displayed on the screen read out to them. This can mainly be used for text conversations and emails.

## **Display Options (IOS and Android)**

It is possible to change some features to make the display easier to see in some cases. This includes brightness, high contrast fonts, keyboard, inverting colours, and applying colour filters.

## **Text Options (IOS and Android)**

The text displayed on the phone or tablet screen can be manipulated by switching to bold text and changing the text size, and allows for the pinch feature.

## **Zoom (IOS)**

A feature on your iPhone that makes everything bigger. It can be set to part of the screen or full screen.

## **Negative Colours**

This is an alternative theme for the general display properties. Instead of text being black on a white background, this feature inverts the colour scheme to black on white.

# • apps for smartphones and tablets

Following on from our Henshaws '24 of the best apps for people with a visual impairment' eBook, we have produced a 2nd edition featuring 40 apps.

We have divided the eBook into categories so it should be easy to find what you're looking for:

- **Productivity** – Find out what apps are out there for reading text, identifying products and carrying out many more everyday tasks independently.
- **Reading and Books** – Discover the different ways you can read books, access library services and keep up with the latest news straight from your device.
- **Outdoor Navigation and Transport** – Discover a range of apps for navigating from A to B, obtaining location information and keeping up-to-date with public transport timetables.
- **Entertainment** – Find out how you can use apps to access TV, music and games.
- **Miscellaneous** – Discover apps for making typing easier, accessing information about visual impairment and more.

We have also included a list of additional resources so you can find out even more about apps and accessibility, or ask any questions you may have.

The apps will require you to have a certain level of ability with technology but please don't let that put you off.

We offer free digital assessments and training for people of all abilities, monthly Tech Talk groups and our online Knowledge Village featuring blogs, videos and other eBooks.

If you want more information about the services that we offer to help you get up and running with technology, please give us a call on **0300 222 5555** or email **[info@henshaws.org.uk](mailto:info@henshaws.org.uk)**

# • henshaws technology

Technology is a game changer for people with sight loss and with the right training, can restore independence. Follow this link to Henshaws Knowledge Village to check out some of Henshaws top picks of the best accessibility technology out there.

# • where to go for more help?

It is OK to ask for help as this can be something that students with a VI can struggle with for many reasons (not wanting to stand out or cause a fuss etc etc). However, it is such an important life skill to be able to 'take ownership' of the challenges you face as a person with sight loss, so try to feel comfortable by seeking assistance in the best way when you need to!

## **Please note**

If a person is blind or has some sight, resources vary, and are very specific to visually impaired people's needs i.e. portable devices is a key element to identifying the correct equipment (how portable it is will help the needs of the visually impaired person). Although not featured in this resource, the Kindle e-reader is a very accessible device.

The amount of tech available is vast, so this resource has been produced with the support and expertise of various qualified teachers of visually impaired children and young people (QTVIs and other specialists in learning environments), senior VI consultant low vision and rehab workers and support staff to visually impaired young people in education. Those wishing to access advice and guidance, local authority QTVIs are able to assess the needs of a child or young person, depending on their needs. You may/should be able to access support from a special educational needs unit support, or/ and ask for SENCO or LENCO to support.