

Use of ICT to assess reading in National 3 & 4 Literacy

Human readers are not permitted as a reasonable adjustment when learners are required to show evidence of their reading skills in SQA National Literacy Units (see <http://www.sqa.org.uk/sqa/64698.html>) but the use of ICT is allowed:

“In order to minimise the disadvantage faced by some disabled learners in attaining the National Units in Literacy, the use of word processors and other assistive technologies such as screen readers, spell checkers or speech-recognition software would be acceptable as reasonable adjustments.”
(Specification 3 - Literacy Units <http://www.sqa.org.uk/sqa/64702.html>)

Teachers, parents and learners have asked how ICT can be used to support assessment of Literacy and in this guide we will look at some methods. (We are also writing a guide on ICT alternatives to scribes, for assessment of writing, which will be made available on the [CALL Digital Assessment](#) web site.)

The task - meeting the standard for National 3 Literacy Reading

The *National 3 Literacy Unit Specification* states that:

“The purpose of this Unit is to develop the learners’ reading, listening, writing and talking skills in a variety of forms relevant for learning, life and work. Learners will develop the ability to understand simple ideas and information presented orally and in writing. Learners will also develop the ability to communicate ideas and information orally and in writing with technical accuracy.”¹

If we look specifically at the reading assessment standards, the required outcome from the Unit is that:

“The learner will:

- 1 Read and understand simple word-based texts by:*
 - 1.1 Selecting and using relevant information*
 - 1.2 Identifying audience and purpose*
 - 1.3 Showing awareness of effectiveness”¹.*

The actual text itself that learners will read should:

- *“contain a few ideas or sets of ideas;*
- *contain familiar vocabulary;*
- *use simple expression.”² p.18*

Note that assessment of literacy at National 3 or 4 is not ‘an exam’ – it is expected to be carried out in class as part of the learning and teaching programme.

¹ National 3 Unit Specification: Literacy (National 3): H23W 73 <http://www.sqa.org.uk/sqa/47502.html>

An example of how a teacher might obtain evidence of reading ability is given in SQA's *Literacy 3 Unit Support Notes*² p.12:

Assessment evidence	Outcome 1	1.1 Selecting and using relevant information	1.2 Identifying audience and purpose	1.3 commenting on effectiveness
Learner writes answers to questions about an information website he/she has read	Read and understand simple word-based texts	Questions ask for key information on the website	Questions ask about the audience and purpose of the website	Questions ask learner to comment on the layout of the website

Having read the text, a learner demonstrates their understanding of the text by answering questions about it. The learner might give their response by for example:

- hand-writing;
- typing;
- dictating to a scribe;
- recording their answers as audio or video using a hand-held recorder;
- recording their answers as audio or video directly into the computer.

Making Literacy assessment accessible

SQA provide three example assessment packages that include sample texts and question on their secure web site. The exemplars are Word files and so if a teacher was using these, s/he could for example:

- print the text out on white or coloured paper;
- enlarge the text using a photocopier;
- copy the text and give it to the learner as a Word file, for reading on a laptop, tablet, iPad, mobile phone etc;
- change the font and font size and then print it out, or give the adapted digital file to the candidate to read on a computer or other device;
- ask the local authority visual impairment transcription service to convert the file into Braille;
- convert the Word file to another format such as PDF or AZW (e.g. for reading on a Kindle).

In many cases subject teachers will be using assessment materials that they have created themselves, which are usually word processed files. The methods listed above could also be used to make these assessments accessible.

Reading with ICT

The SQA exemplars must be kept secure, and so we will use some text from the Scottish Government's 'Eat Healthier' web site³ to illustrate how text from a web site could be accessed using ICT.

² Unit Support Notes — Literacy (National 3), <http://www.sqa.org.uk/sqa/47502.html>

³ <http://www.takelifeon.co.uk/eat-healthier/> . Copyright © 2008-2013 Scottish Government.

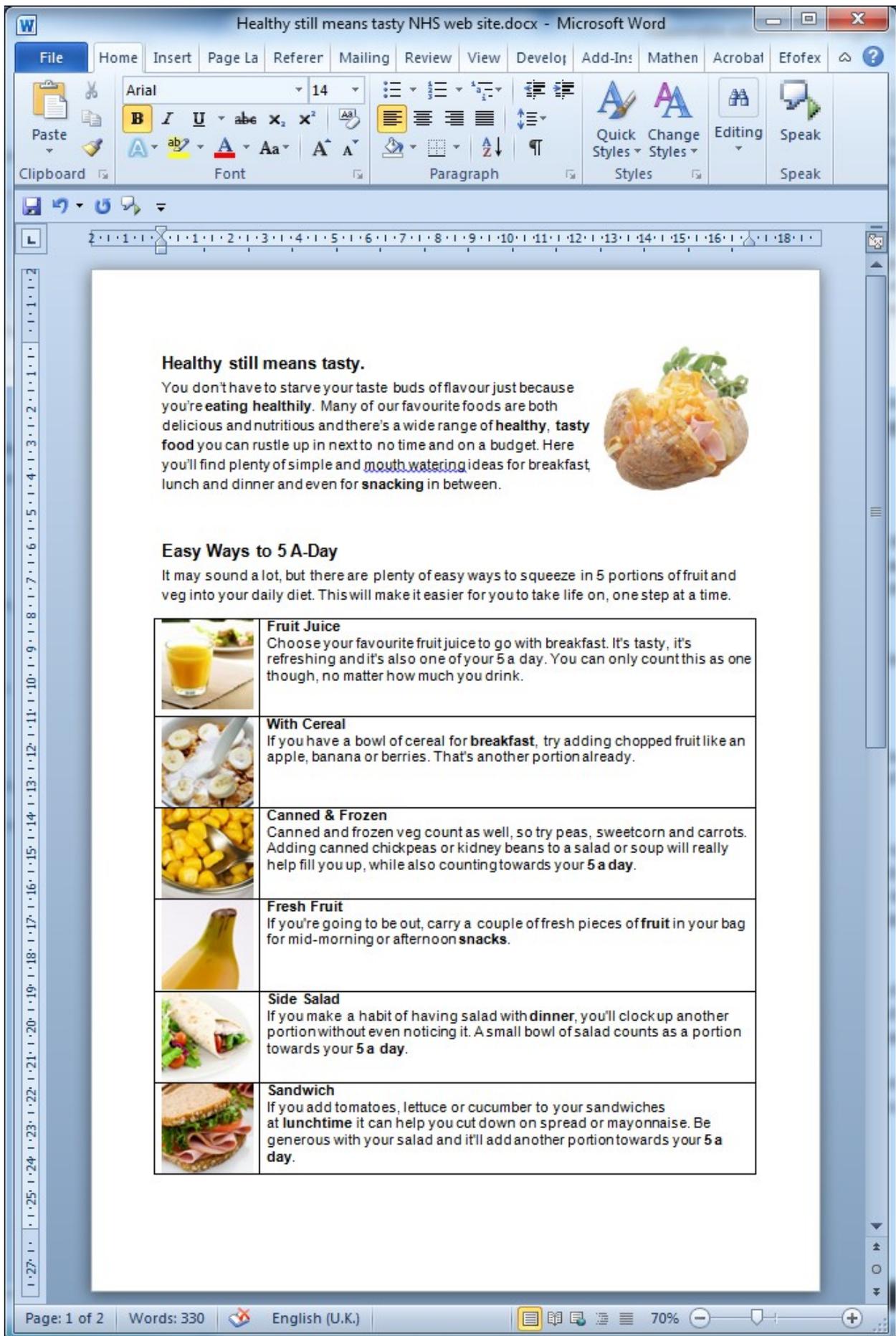


Figure 1: Example text on healthy eating, in Microsoft Word

Reading text using a Windows PC

The text is a Word file, and so there are many ways for a learner with a reading or physical access difficulty to access it. The examples below are all done using Word 2010; other versions of Word have similar accessibility features.

Make the text larger or smaller

Many learners with visual impairment or a reading difficulty, including dyslexia, benefit from a bigger font size.

- Click **View > Zoom** to zoom in to make the text larger, or use the slider in the bottom right corner, or hold down **CTRL** and scroll the mouse.
- Click **View > Web Layout** and then zoom in to choose a large font size. Web layout will reflow the text so that you don't have the scroll left and right if you have high levels of magnification.

Change the page background and text colour

Learners who have visual stress or dyslexia may find text on a coloured background easier to read. Some learners with visual impairment may need a high contrast colour scheme (e.g. yellow on black) as well as magnification.

- Click **Page Layout > Page Colour** and choose a different page background.
- Select all the text (**CTRL-A**), click the **Home** ribbon and choose a different text colour.

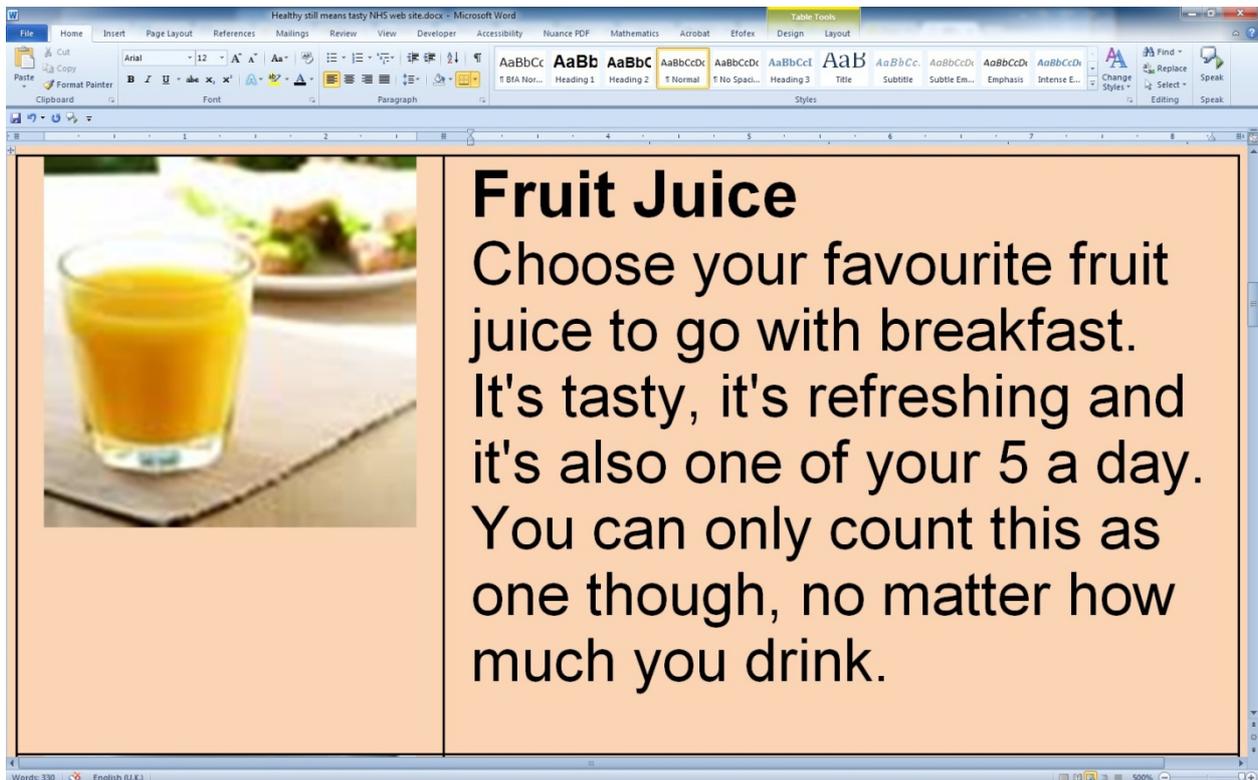


Figure 2: Web layout with zoom at 500%, pale orange background and black text

Change the font, font size and line spacing

Some learners find it easier to read text in particular fonts, or to see a larger font size:

- Select all the text (CTRL-A), click **Home** and choose a different font and/or font size.

Many learners with a visual impairment, visual stress, visual tracking problems or dyslexia can read more comfortably and fluently when each line of text is spaced further apart:

- Select all the text (CTRL-A), click **Home** and then the **Line and Paragraph Spacing** button, and choose the line spacing you want (try 1.5 or 2.0 for line-and-a-half, or double spacing).

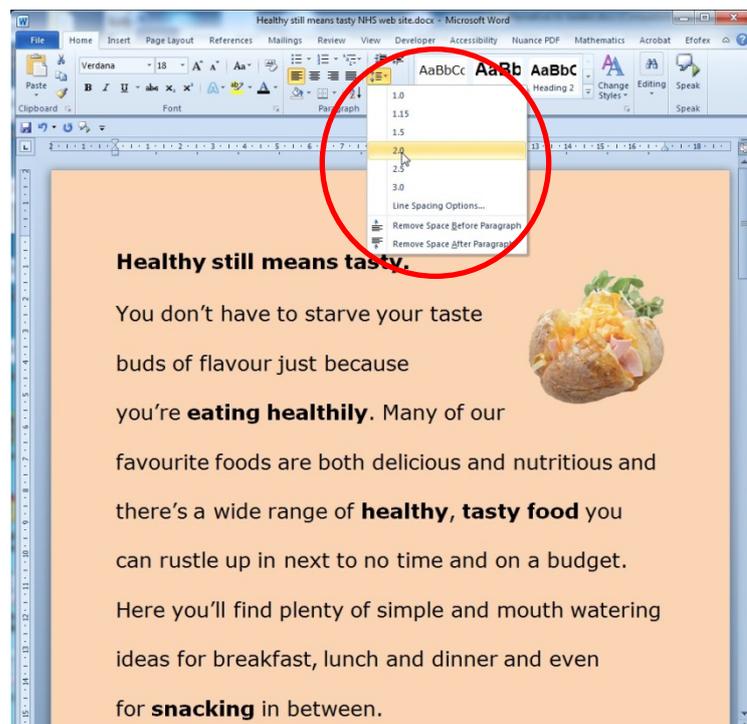


Figure 3: Reading text with Verdana 18, coloured background, and double line spacing

Reading the text with text-to-speech software

Although human readers cannot be used to read the text when assessing reading for National 3 literacy, learners with reading difficulties can use text-to-speech software on a computer, tablet, iPad, smart phone or Kindle.

There are many text-to-speech programs you can use to read text from a Word document, and we'll look at just two of them here by way of example. These tools are both free.

Text-to-speech programs need voices installed on your computer. Your PC will probably have one or two voices already installed, but the standard voices have American accents, so we recommend using the free Scottish computer voices from the web site at <http://www.thescottishvoice.org.uk/>. These are high quality male ('Stuart') and female ('Heather') voices which work with almost all text-to-speech programs on Windows and MacOS computers.

These voices are licenced for school and home use for learners in Scotland. Many local authorities have installed them on all their school computers as a reasonable adjustment under Equality and Accessibility legislation, and also as a tool for all learners. If you don't have them on your computers, ask your technical service to download and install them.

Word Speak button

Word 2010 and 2013 have a free text-to-speech tool called 'Speak'. To add it to the toolbar, follow the instructions in the blog post here: <http://www.callscotland.org.uk/Blog/Blog-Post/?reference=333>.

Once you have the Speak button in the toolbar, select the text you want to read and click **Speak**, and the text will be read out using the computer's default voice.

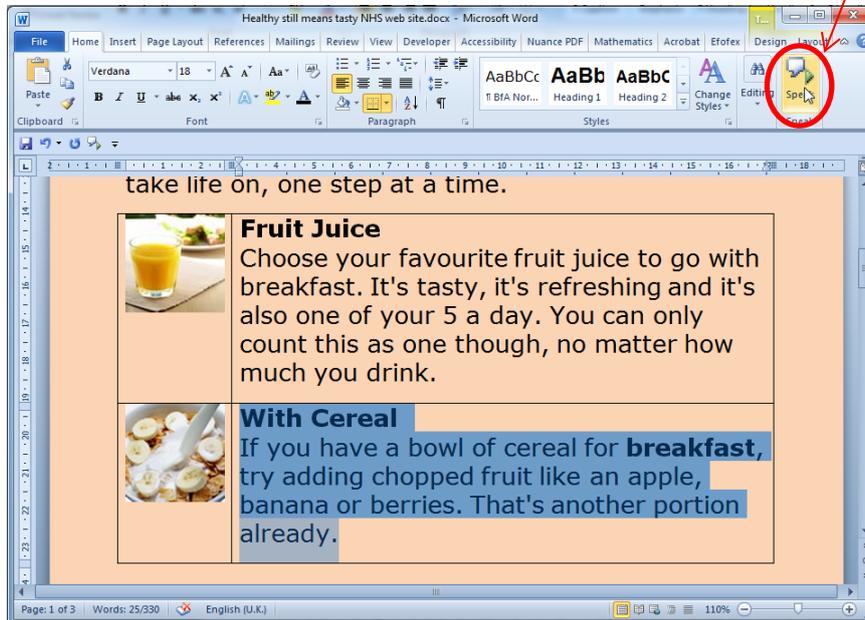


Figure 4: Reading text with Word's Speak button

If you want to change the default voice or the voice speed, open the **Speech Recognition Control Panel**, click **Text-to-Speech**, and choose the voice and settings you want to use. (If you cannot access the Control Panels, contact your technical service or school ICT coordinator.)

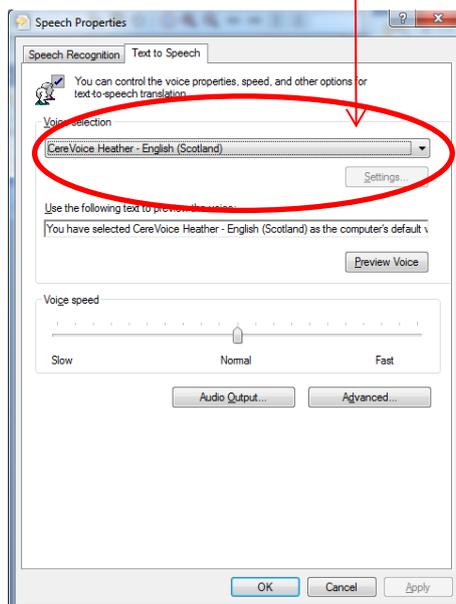


Figure 5: Changing the default computer voice for Word Speak button

WordTalk

WordTalk is a free add-on for Microsoft Word that gives more options and tools than the Word Speak button. For example, WordTalk highlights as it reads so the learner can track the text; it lets you change voices and voice speeds without having to access the Control Panels; it can read a word, a sentence or a paragraph at a time; and learners who have difficulty with a mouse can use keyboard shortcuts. It also has a talking spellchecker and you can save text as audio files (for playing back on an iPod, for example).

WordTalk works with most combinations of Word and Windows. You can download it free from the web site: <http://www.wordtalk.org.uk/>.

Once you have WordTalk installed, click on the **Add-Ins** ribbon, place your cursor where you want to read, and click the relevant WordTalk button to read the paragraph, sentence, word, or the whole text.

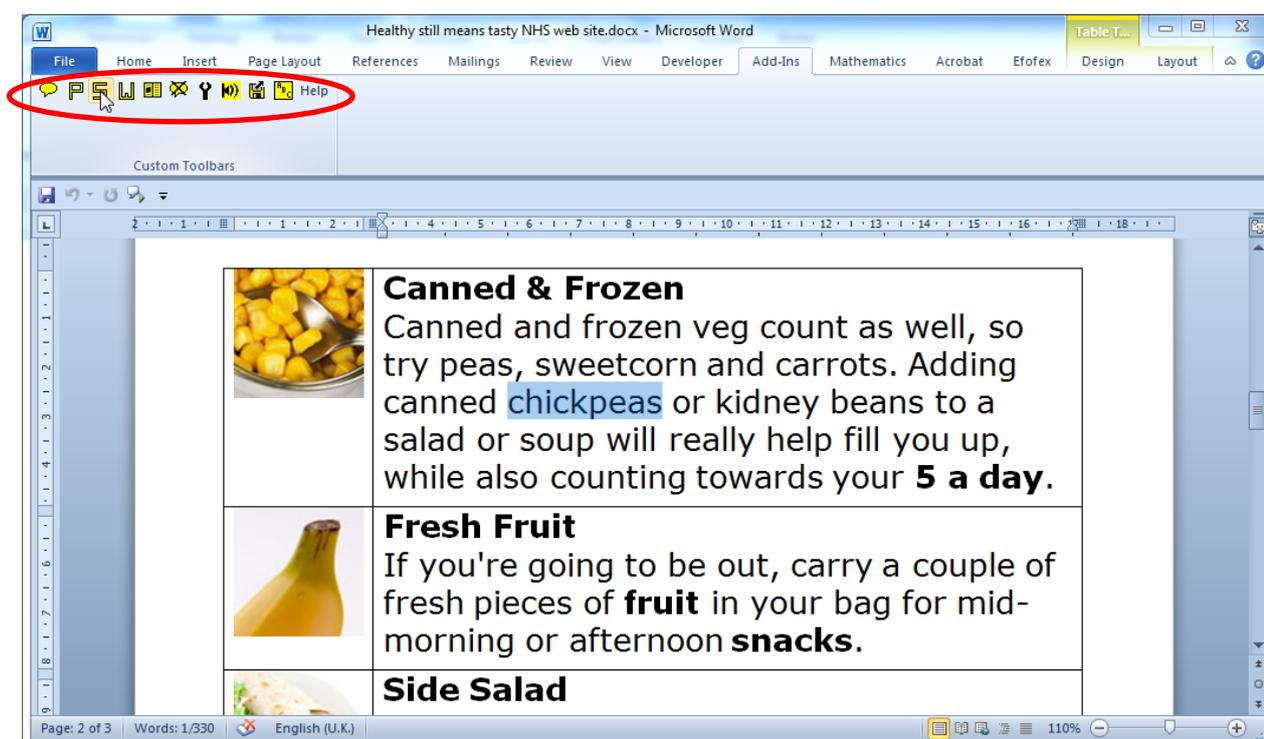


Figure 6: Reading text with WordTalk

Other text-to-speech programs

There are many free and paid-for text to speech programs you can use – too many to cover them all here – but we have listed some of the more popular tools below.

Text Readers

Text readers are mainly designed for designed for people who can see to click on or select text, and have it read out by the computer.

iVona MiniReader	Simple toolbar for reading from anything – Word, PDF, Internet etc.	Free
Natural Reader	Simple toolbar for reading from anything – Word, PDF, Internet etc.	Free
MyStudyBar	A set of accessibility tools including a text reader.	Free

ClaroRead	Comprehensive literacy support software. Text-to-speech; word prediction; talking spellchecker; easy font, spacing and colour adjustment; scanning etc. http://www.clarosoftware.com/	From £49
Read and Write Gold	Comprehensive literacy support software. Text-to-speech; word prediction; talking spellchecker; easy font, spacing and colour adjustment; scanning etc.	From £320
Co:Writer 7	Word predictor with text-to-speech. http://www.educationscotland.gov.uk/about/ordereducationresources/	£39 per licence
Penfriend	Word predictor with text-to-speech. http://www.educationscotland.gov.uk/about/ordereducationresources/	From £45 per licence

Screen Readers

Screen readers are designed for blind people. They operate quite differently from text readers and read out everything on the screen. They can all read Word documents.

NVDA	Free screen reader that can read Word and PDF files, the internet, and allow a blind user to access the computer.	Free
Jaws	Screen reader that can read Word and PDF files, the internet, and allow a blind user to access the computer.	From £659
Supernova	Screen reader that can read Word and PDF files, the internet, and allow a blind user to access the computer.	From £295

Answering questions on the text

As we noted earlier, the learner's understanding of the text is usually assessed by asking questions with reference to the outcome of the Unit. In this example, the questions might ask the learner to:

- give key information on the website;
- say who the website is aimed at, and why;
- comment on the layout of the website and its effectiveness.

The learner can use many different methods to respond to the questions, including:

- hand-writing;
- typing;
- dictating to a scribe;
- recording their answers as audio or video using a hand-held recorder;
- recording their answers as audio or video directly into the computer.

Because the questions are assessing reading skills, the learner could dictate answers to a scribe, or record responses using audio or video.

If using ICT, the questions would normally be provided with the text in the Microsoft Word file, and the learner would type answers directly into the Word document. Spellcheckers and other tools to support writing such as word prediction can also be used.