

School Gardens for Future Citizens

eSchool Garden 

IMMERSIVE RESOURCES IN EDUCATION



EDUCATIONAL TOOLS

I. INCLUSIVE CLASSROOM

Inclusive classrooms are based on assistive technologies in order to support students with learning difficulties by addressing a diversity of needs:

II IMMERSIVE READER

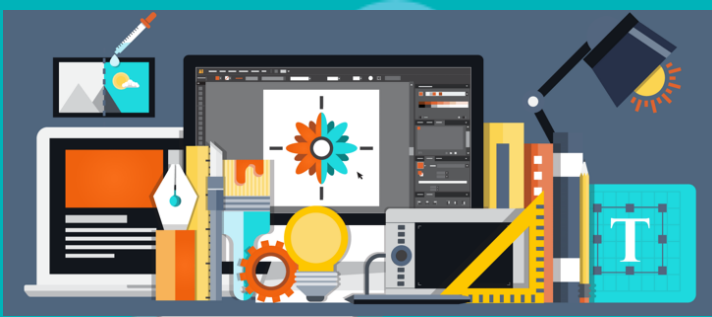
More than 23 million people every month are using the Immersive Reader, improving their reading and writing comprehension.

III DICTATION TOOLS

The terms dictation software, speech-to-text, voice recognition, voice-to-text, and speech recognition can all mean a program that converts your voice to text on a screen in real-time. These programs are very useful for students with writing difficulties.

IV TRANSLATION TOOLS

These tools are supporting students in learning foreign languages by live conversations/ translations



IMMERSIVE RESOURCES IN EDUCATION

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I. INCLUSIVE CLASSROOM

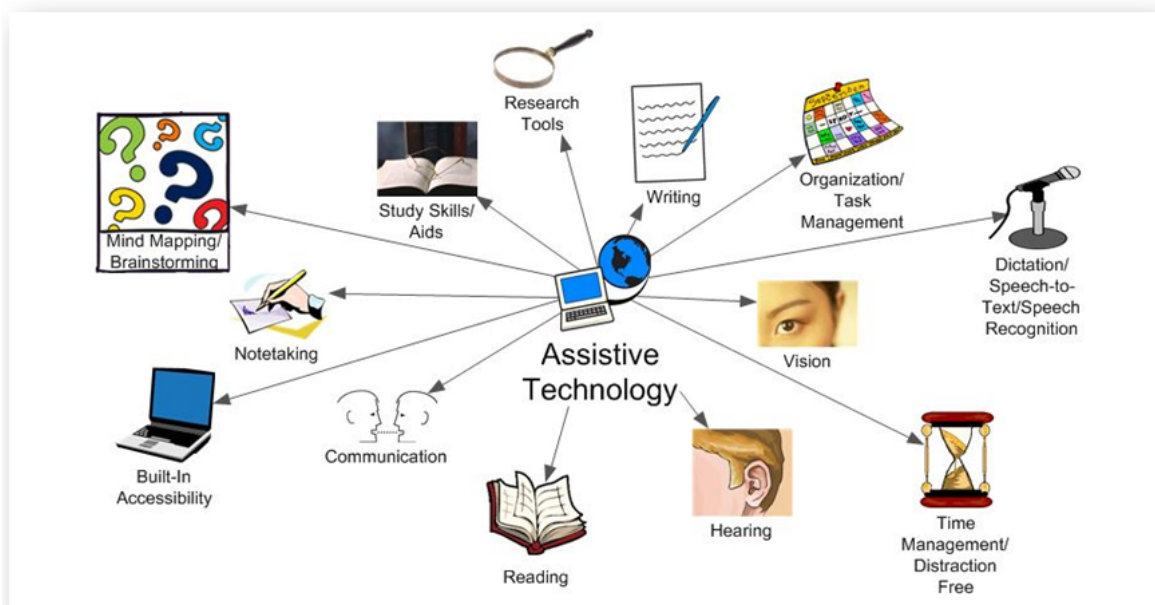
Inclusive classrooms are based on assistive technologies in order to support students with learning difficulties by addressing a diversity of needs:

Learning	Visual	Hearing	Mobility	Neurodiversity	Mental Health
<ul style="list-style-type: none"> • Dyslexia • Dysgraphia • Dyscalculia 	<ul style="list-style-type: none"> • Low vision • Blind • Colorblind 	<ul style="list-style-type: none"> • Deaf • Hard of Hearing 	<ul style="list-style-type: none"> • Cerebral Palsy • Muscle Dystrophy • Amputation 	<ul style="list-style-type: none"> • Autism • ADD/ADHA • Seizure 	<ul style="list-style-type: none"> • Anxiety • Depression • OCD

<https://blogs.slj.com/neverendingsearch/2019/07/18/immersive-reader-a-powerful-tool-to-support-schoolwide-literacy/>

ASSISTIVE TECHNOLOGIES FOR INCLUSIVE CLASSROOMS

There is a variety of new tools and technologies that can be used in classrooms for supporting students in reading, writing, exploring the web, notetaking, assessments and collaboration.



<https://www.augsburg.edu/class/groves/assistive-technology/everyone/>

II. IMMERSIVE READER



Immersive Reader is a powerful text reader, developed to improve reading comprehension based on literary science. For those who struggle with reading, have additional accessibility requirements, or dyslexia, the Immersive Reader can support their reading development. The **Immersive Reader** was originally inspired by focusing on students with dyslexia, and the technology uses the latest science and research around reading, together with inclusive design principles to empower people of all abilities on working in digital environments. Today, more than 23 million people every month are using the Immersive Reader, improving their reading and writing comprehension.

WHAT IS IMMERSIVE READER?

Immersive Reader: is a **free tool** that implements proven techniques to improve reading / writing and math understanding, offering text decoding solutions for students with learning difficulties such as dyslexia, dyscalculia or visual impairments.

Immersive Reader is available for:

- Microsoft Office: Word , PowerPoint, Excel, Outlook, etc.
- Microsoft One Note, Google Education Suite
- Browsers: Google, Edge, etc.
- Other apps

HOW CAN IMMERSIVE READER IMPROVE EDUCATION?

Immersive Reader is one of the components included in **Microsoft Learning Tools** and it offers support for:

- **improving reading and writing** for all learners—regardless of age or ability based on proven techniques .
- the **creation of an inclusive and accessible classroom** in order to meet the needs of today's diverse learners and helping them build life skills.
- **increasing math understanding**
- **enhancing communication** for all students by helping them to understand and access important information with Learning Tools like Translator and Live Captions and Subtitles in PowerPoint.

IMPROVE READING USING IMMERSIVE READER

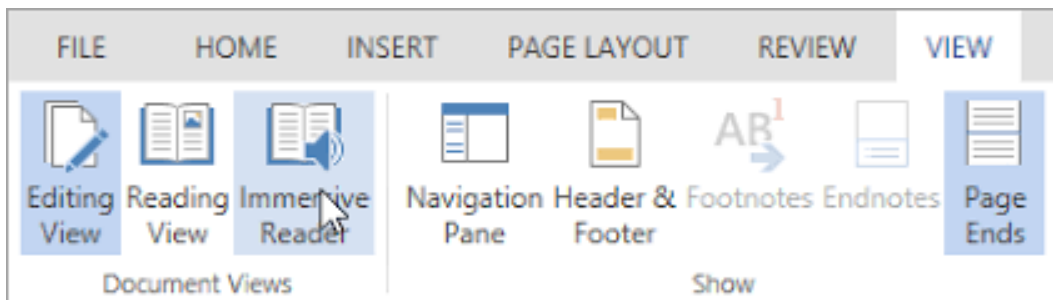


Today's classrooms are incredibly diverse. Students come from many backgrounds and teachers differentiate their instruction for various skill levels and needs.

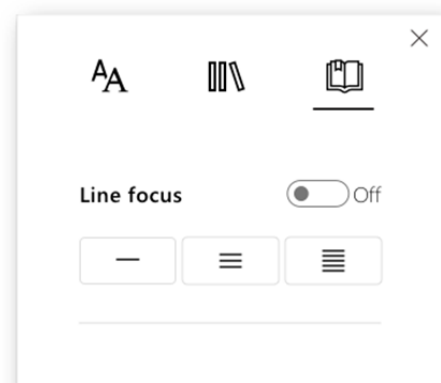
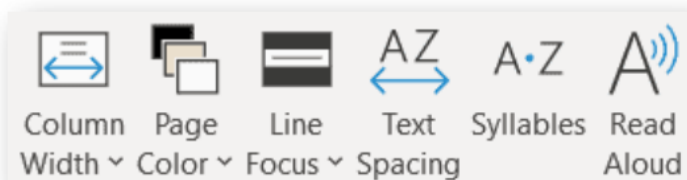
READ WORD BY WORD LOUDLY

Immersive Reader can **“read aloud word by word”** the documents content (in Word format, in other Microsoft native apps or other apps on the web) “aloud” to students using a simple “Play” button.

Example : Immersive Reader in Word: students can click on Immersive Reader button to read content loudly, can reduce spatial crowding, can change background color to help reduce eye strain, can increase or decrease text size, and can add a reading focus box to keep them focused as they progress through the reading.



Using **Line focus** in Immersive Reader for Office Online and OneNote help students to read one line at the time , or more as they feel it's more easy for them and they can change text or background colour, text size, etc.

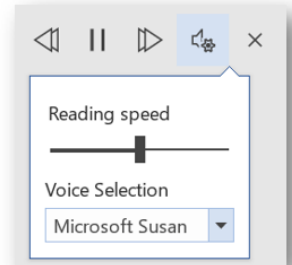
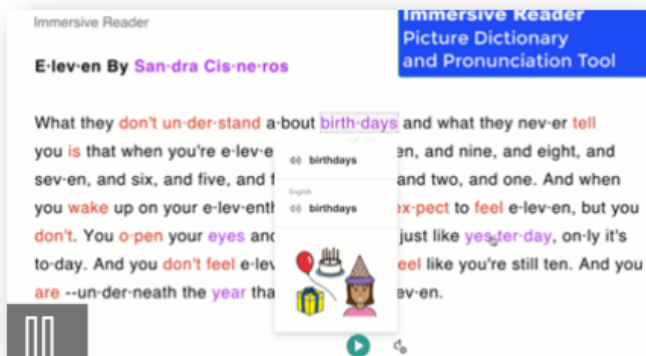


IMPROVE PRONUNCIATION AND GRAMMAR USING IMMERSIVE READER



PICTURE DICTIONARY & PRONUNCIATION

Immersive Reader can “read word by word” the documents content (in Word format, in other Microsoft native apps or other apps on the web) “aloud” to students using a simple “Play” button.

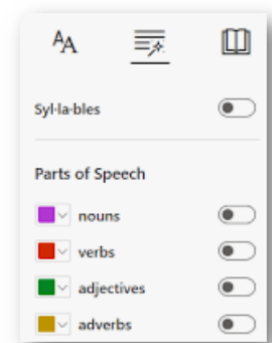


Students can see pictures for some words in text and they can listen to pronunciation. The ability to see a picture and see and hear the word simultaneously (multi-sensory processing) is a technique to aid reading and comprehension.

3. BUILT-IN GRAMMAR OPTION

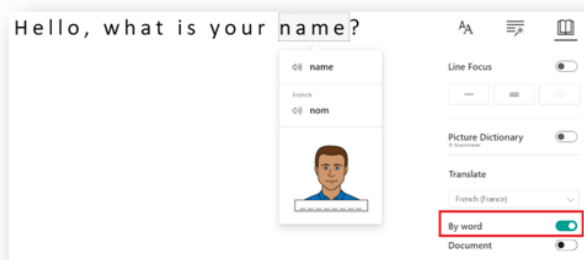
Immersive Reader offers also the ability to choose the colors used for nouns, verbs or adjectives.

This option gives color-blind students the ability to adjust to patterns that suit them best. This feature is available in Office 365 and OneNote.



4. TRANSLATE TEXT OPTION

Translating content helps learners to learn foreign languages in up to **sixty languages**. By default, "By word" will be selected. This will allow student to click an English word and see the translation for that word. If student will click on the translated word (in the picture, the word would be "nom"), it will be read in the language you selected. If the "Picture Dictionary" is enabled, you can see a picture to describe the word, too. If student will select "Document," the entire document will shift into the translated language. Once this is enabled, student can click on a word to see the English translation. To hear the entire, translated document be read in the language you selected, student can click the play button.



IMPROVE WEB NAVIGATION USING IMMERSIVE READER



READ & TRANSLATE CONTENT FROM WEB: GOOGLE CHROME

Immersive Reader can “read word by word” the documents content (in Word format, in other Microsoft native apps or other apps on the web) “aloud” to students using a simple “Play” button. Download [Immersion Reader extension for Chrome](#).



After installing the Chrome extension, students should select text, right-click, and Microsoft's Immersive Reader will help students read it. Immersion Reader allows choosing the font size, the spacing between lines of text, the font face, and the color of the background. Once a text is selected, students right-click on the text and can choose “Help me read this” to have IR read the selected text aloud. A male or female voice can be chosen, and how fast or slow the text is read.

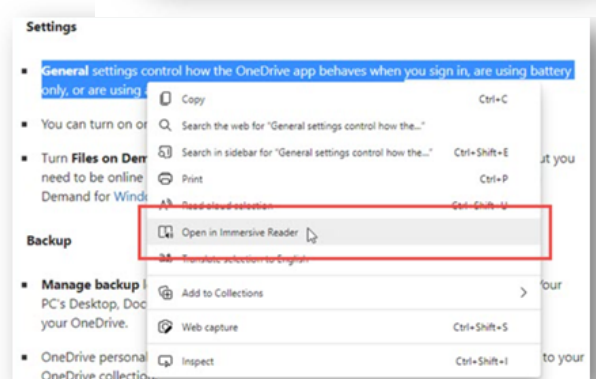
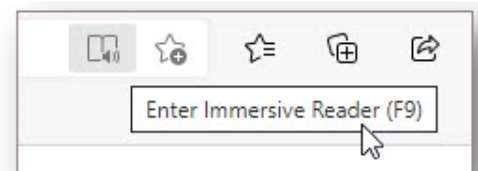
READ & TRANSLATE CONTENT FROM WEB: MICROSOFT EDGE

To **enable and disable** immersive reader:

- Open Microsoft Edge, Navigate to the website that you want to read.
- Click the immersive reader (book and speaker) button or press F9 or add `read:http://` in the address bar

To **customize the text size & background color**

- while viewing a website with the immersive reader click Text preference button and use Text size slider to make the text on page smaller/larger.
- Use Page theme option to change background color: White, Sepia (default), Gray, Dark.



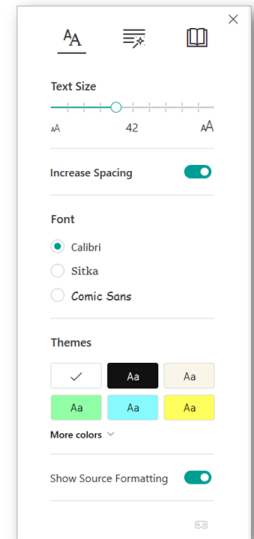
USING IMMERSIVE READER WITH MICROSOFT FORMS FOR TESTS



IMPROVE READING OF TESTS AND ASSIGNMENTS

Immersive Reader allows students to access text and math formulas in quizzes and assignments. They can read text loudly, change displaying of colours, increase font size, they can use line focus or picture dictionary. To access Immersive Reader in Forms, students have to:

- open any the test /assignment created in Microsoft Forms and select "..." then tap Enable Immersive Reader.
- hover over any portion of text in the form to bring up the Immersive Reader icon . and select the Immersive Reader icon. and customize the options to meet their reading needs.
- Select return to the form and select or enter their response.



USING IMMERSIVE READER WITH WHITEBOARD AND OFFICE LENS



SUPPORT FOR TEXT/IMAGE RECOGNITION

Microsoft Whiteboard provides an active, **free-form platform** for classroom collaboration for everyone, including students with reading challenges. Microsoft Whiteboard is designed for pen and touch, to let students write or draw as smoothly as they would with ink, while automatically recognizing and transforming shapes and tables as you draw. A sharing link makes access easy from any location.



Students can **launch the Immersive Reader directly from different text types in whiteboard**. they can even launch the immersive reader from an embedded pdf in whiteboard.

Microsoft Office Lens App is useful for students to **read and translate content from scanned text, images, whiteboards.**

They can take photos of words/content and either translate or send them to Immersive Reader on smartphone. Office Lens trims, enhances and makes pictures of whiteboards and documents readable. Office Lens can convert images to editable Word and PowerPoint files too.

USING IMMERSIVE READER WITH FOR MATH LESSONS



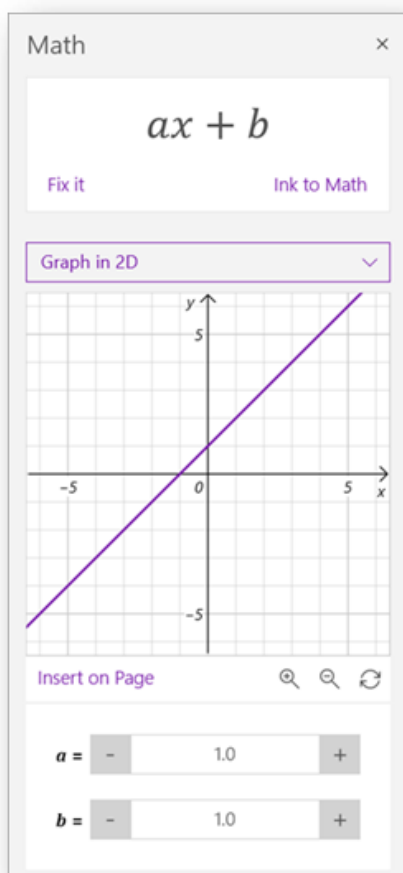
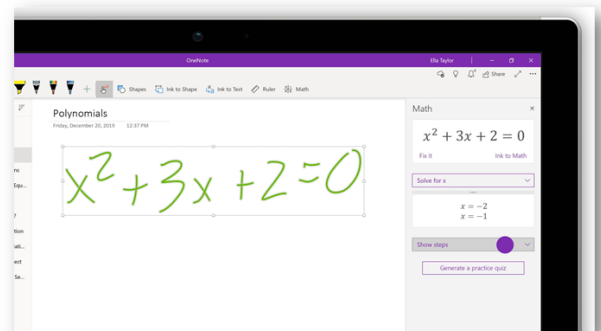
Some students with dyslexia struggle with math simply because they have difficulty reading math problems. Other students experience focus issues, or have **dyscalculia**, a specific learning disability in math. **Math assistant in OneNote** for Windows 10 and OneNote Online is a great tool that can be very useful to assist students with such learning difficulties better understand math problems.

SUPPORT FOR WRITING EQUATIONS

From basic math to calculus, teachers & students can :

- convert handwritten equations to text
- edit with Ink to math, or
- simply type equations as text and get them formatted using Text to Math.

Then the math solver provides step-by-step instructions to the solution. Breaking down a complex problem into steps allows students to build understanding of the solution process.



SUPPORT FOR SOLVING EQUATIONS

Students can hear math solver's step-by-step solutions for easier comprehension and they can see step by step the equation solving .

Steps to solve an equation:


- in the Draw tab, write or type your equation. and use the Lasso Select tool to draw a circle around the equation. Then select Math. This will open the Math Assistant panel
- to solve the current equation, students will click or tap the Select an action box and then choose the action from the choices in the drop-down menu .
- Generate a practice quiz to keep practicing this type of equation.

SUPPORT FOR DRAWING GRAPHICS

In One Note students can **graph the equation**, providing a visual reference of their work that can be directly inserted into the notebook page. This can help students make the link between the algebraic and graphical solutions to a problem – building a more holistic understanding of the problem and solution..

OTHER APPS INTEGRATING IMMERSIVE READER

These types of accessibility tools are designed for students with specific learning difficulties (eg. a student with dyslexia) but can help the entire classroom. They are built-in, mainstream, non-stigmatizing and FREE. Several apps used in education that offer support for Immersive reading are presented below:







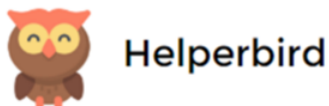












II. DICTATION TOOLS



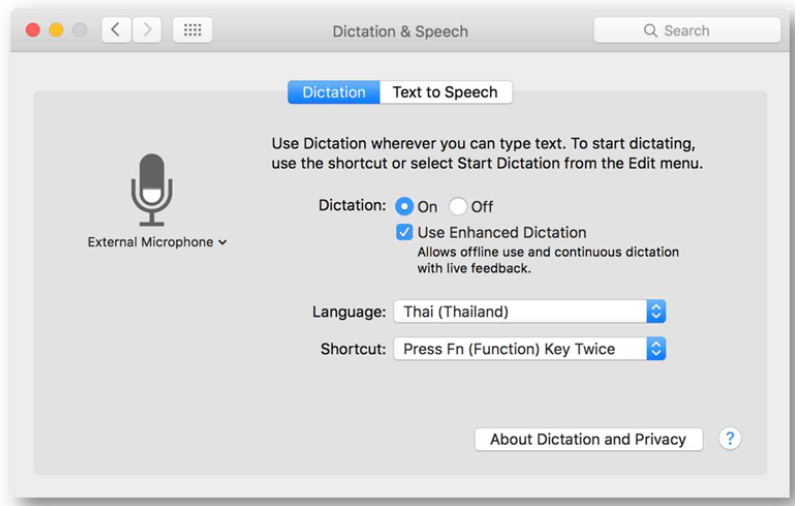
The terms **dictation software, speech-to-text, voice recognition, voice-to-text, and speech recognition** can all mean a program that converts your voice to text on a screen in real-time. There are several Artificial Intelligence assistants built into many of the devices we use each day: Apple's Siri, Amazon's Alexa, and Microsoft's Cortana. These are suitable for scheduling meetings, playing music, or searching the web, but they aren't designed to transcribe articles, meetings, and other documents. Dictation software provides accessibility to those with disabilities—both physical and language-based—to access technologies and be more productive. By using dictation software tools students can write papers and transcribe lectures into notes.



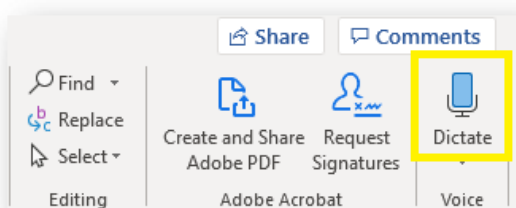
For example, if students are unable to use their hands, they can still operate a computer, create documents, and access the web with dictation technology. And those with chronic conditions such as carpal tunnel syndrome can prevent the repetitive stresses that come with typing, simply by using their voice.

APPLE DICTATION

Apple's default Dictation supports **31 languages:** Arabic, Catalan, Chinese, Croatian, Czech, Danish, Dutch, English, Finnish, French, German, Greek, Hebrew, Hungarian, Indonesian, Italian, Japanese, Korean, Malay, Norwegian, Polish, Portuguese, Romanian, Russian, Slovak, Spanish, Swedish, Thai, Turkish, Ukrainian, and Vietnamese.



WINDOWS DICTATION



Windows 10 includes Microsoft's Speech Recognition feature, no need for additional installing or download. It supports these languages: Mandarin (Chinese Simplified and Chinese Traditional), English, French, German, Italian (Italy), Japanese, Portuguese (Brazil), and Spanish



III. TRANSLATION TOOLS

There are many tools, software apps and resources that can be used for students to ease the translation and improve efficiency, consistency and quality regarding foreign languages. Some of them are simple on line services some belong to the computer-assisted translation (CAT) category . Using Translate option from Immersive Reader in different Office programs, One Note, or Teams is very efficient and easy, but there are also other tools that offer additional features like live translations for live conversation in foreign languages. The **Microsoft translator live tool** is a live feature built on top of Microsoft Translator's core speech and text translation services. It manages all the different elements necessary to enable these multi-person, multi-device scenarios:

- Creates and manages private conversation sessions, including the attendees list
- Manages audio and text flow from and to the speaker(s) and the translation APIs

MICROSOFT LIVE TRANSLATOR TOOL

Microsoft Translator live is a **free translation and transcription service** that let's you have translated conversations across multiple devices on iOS, Android, Windows, PowerPoint and web for 1:1 conversations or larger group interactions.

Teachers manage many types of learners, including students who are deaf or hard of hearing (DHH) who require assistive technology, and language learners (and their parents) who may not speak or understand the language of the classroom well. Microsoft Translator helps bridge these communication gaps, supporting accessible classroom learning with live captioning, cross-language understanding, and even multilingual casual conversations to help with student integration. It offers support for real time conversation for over 60 languages including Spanish, French, Chinese, Japanese and many more.

