

Making Learning Accessible for All: An Educator's Guide

A guide to using technology to create more inclusive and accessible learning experiences for all students.



AN INITIATIVE OF



MADE POSSIBLE BY



Our partnership with Microsoft strengthens our commitment to making the world a better place. Microsoft's mission is to empower every person and every organization on the planet to achieve more. With roughly more than one billion people with disabilities in the world, Microsoft is passionate about ensuring technology (including its own products) is accessible and functional for everyone. They are working across the company and with others around the world to push the boundaries of what technology can do to empower people, especially young people.

Microsoft and WE Schools have partnered to give teachers and students the tools to create more inclusive and accessible schools and communities. Together, we're empowering young people to create greater opportunities. With the help of technology, students can turn their inclusion and accessibility ideas into reality.

Who should use this resource: Educators who are committed to creating inclusive and accessible learning environments for all students.

How to use this guide: This guide will help you explore how to use technology to bring accessibility to your classroom. It is designed as an educator resource; however, many of the tips and tools in this resource can be used by students as well.

Learning objectives:

- To develop an understanding of inclusion and accessibility
- To explore resources and technologies that create inclusive and accessible experiences for all
- To explore how custom technology solutions can promote accessibility and inclusion

Why accessibility? You have students of all different abilities in your school and classroom. This presents unique opportunities and challenges when creating a learning environment that meets the needs of each student. What you may not realize is that you already have many tools at your disposal to make your classroom more accessible and inclusive, including technology tools that may already be in your classroom.

Consider the following questions:

- How accessible is your classroom for students with disabilities? What would make it more accessible?
- How might accessibility changes benefit all students?

	Definitions
Accessible	The state of a place, object or resource being available to all people with or without disabilities.
Disability	Occurs when there is a mismatch in the interaction between the features of a person's body and features of the society in which they live. Disability can come in a variety of forms.
Inclusive	An intention or policy of including people who might otherwise be unfairly or unjustly excluded* or marginalized, such as people with different abilities, ethnicity, national origin, gender, sexual orientation or color. (*Some people are intentionally excluded from experiences within society due to their age or criminal record, for example.)

Source: World Health Organization www.who.int/topics/disabilities/en
Oxford English Dictionary en.oxforddictionaries.com

Expanding Our Understanding of Disability

Disability is defined as the mismatch in the interaction between the features of a person's body and the features of the society in which they live. Disability can come in a variety of forms, illustrated by the Persona Spectrum. This tool provides a more functional and empathetic approach to designing for accessibility and inclusion. By being aware of the spectrum of permanent, temporary or situational disabilities, you as the educator can source tech tools to make your spaces and interactions inclusive and accessible.

	Permanent	Temporary	Situational
Touch	 One arm	 Arm injury	 New parent
See	 Blind	 Cataract	 Distracted driver
Hear	 Deaf	 Ear infection	 Bartender
Speak	 Non-verbal	 Laryngitis	 Heavy accent

Inclusive design principles

There are eight principles of inclusive design that enable you, as the educator, to assess the inclusiveness and accessibility of your classroom space. When you design inclusively, you are designing a diversity of ways for everyone to participate in an experience with a sense of belonging.

Refer to the following websites to learn more about the eight principles:

Microsoft Inclusive Design Toolkit

www.microsoft.com/design/inclusive,

Principles of Inclusive Design [www.](http://www.designcouncil.org.uk/resources/guide/principles-inclusive-design)

[designcouncil.org.uk/resources/guide/principles-inclusive-design](http://www.designcouncil.org.uk/resources/guide/principles-inclusive-design)

Source: Microsoft Inclusive Design Toolkit
www.microsoft.com/design/inclusive

Creating an Accessible Classroom

How can learning experiences be made more accessible through technology?

1) Using Technology to Create Accessible Content:

When creating content in the classroom, it is important to consider whether the content is accessible for all students.

Guidelines for Accessible Content:

- Use alternative-text to describe what is happening in any images you use. Alt-text gives description to images so they can be accessible to people with blindness or with low vision. [Here's how you can add alt text to an image in any Microsoft Office product.](#)
- Make sure text is broken up by visual images, text boxes, links and videos. This is to ensure that text is not the only method of conveying meaning.
- Ensure that the window or page has a clear visual hierarchy that indicates the relationship and priority of the information. The content should have focus, reading flow and grouping mechanisms.
- Avoid the use of **serif fonts** as they are considered hard to read, due to their narrow and decorative nature. Using **san-serif fonts** such as Arial or Verdana that are considered more legible.
- Use a simple structure and column header information so screen readers can identify information clearly. Ensuring that the text is true text and not a scanned image to ensure that that screen readers can identify the words.
- Use proper color-contrast ratios to your designed content, so more people can see and use the content. The web accessibility standard indicates that a contrast ratio of 4:5:1 should exist between text (images of text) and the background behind the text. Use an online color contrast analyzer tool, such as the **Colour Contrast Analyzer** www.developer.paciellogroup.com/resources/contrastanalyser, to check foreground text and background colors to determine legibility. This tool can work with an image file, program window or the entire screen.
- Provide a way for users to adjust or mute all audio and turn on captions and audio descriptions with video or audio sources.
- Use meaningful hyperlinks with the name of the website or resource when linking to other parts within a document or external websites. Sighted users can visually scan pages for links and those using screen readers will hear more meaningful links read aloud instead of "click here." Think about what information would be most useful when creating a link.

2) Using the Tools You Already Have to Increase Accessibility

Use an accessibility checker to help flag possible accessibility issues: The Microsoft Office built-in Accessibility Checker helps to check your content or document against common accessibility issues, like many of those listed in section one. It will provide you with a list of errors, warnings and tips with how to fix each issue.

Accessibility Checker support.office.com/en-us/article/use-the-accessibility-checker-to-find-accessibility-issues-a16f6de0-2f39-4a2b-8bd8-5ad801426c7f.

Use accessibility tools built into your devices: Review the built in accessibility tools on computers, tablets and smartphones, and how they may help students with different abilities, keeping in mind that some tools benefit us all, not just those with disabilities.

For example, if you have a smartphone or tablet, go to the “settings” menu and search through the options listed under “Accessibility” or “ease of access.” Consider how these tools can assist students with disabilities, or even help you when you are driving or working with one hand.

Tools such as:

- Screen magnifiers: that make text easier to read;
- Screenreaders: that can read text aloud;
- High-contrast settings: that can help those with low vision;
- Captions or speech-to-text tools: that can assist those with hearing impairments;
- Alternative input methods or devices: that can help those with mobility challenges

Use templates to ensure sufficient font size and color contrast: Consider using existing accessible Microsoft templates when creating classroom content. These templates have the proper color contrast ratios and font style and size incorporated into the layout to ensure that content meets accessibility guidelines.

Get Accessible Templates for Office www.support.office.com/en-us/article/Get-accessible-templates-for-Office-ca086caa-2bd2-4ac8-8c12-4cd495bd4d76.

Make Microsoft PowerPoint slides easy to navigate: PowerPoint is a great tool for presentations, but how can the content in the slides be accessible for all people? Use the designer feature to clearly format your slides, and use alt-text and the accessibility checker to ensure that all visuals are accessible. Accommodate students with a range of vision, hearing, mobility and cognitive abilities by including videos, captions, graphics with sufficient color contrast and font sizes in the slide deck.

3) Taking It to the Next Level

In section one and two, you learned how to make content more accessible and inclusive, and explored examples of simple tech tools that make learning more accessible for all students. This section provides further examples of technology solutions that were created to address an accessibility issue, and that benefit us all. The tools in this section are more sophisticated examples of technology for accessibility, but can be easily embedded into your current classroom practice.

Make content easier to consume with Microsoft OneNote with Immersive Reader:

OneNote provides educators and students with a paperless platform to collaborate and learn. The **Immersive Reader**, originally designed to help students with dyslexia to read with greater success and confidence, provides students the opportunity to change text to suit their own needs and use reading features that make it easier for them to focus and succeed.

Microsoft OneNote www.microsoft.com/en-ca/education/products/onenote/default.aspx.

Microsoft Translator: Microsoft Translator helps bridge communication gaps and supports accessible learning in the classroom with live captioning of lessons for students with deafness or hearing loss, or those learning in a different language. Translator can help boost cross-language understanding and even multilingual casual conversations to help with student and parent integration.

Microsoft Translator for Education: translator.microsoft.com/help/education/.

youBelong: A free social networking application for people with disabilities and their families. This application creates an inclusive online space for people with disabilities to stay connected with others. The application allows users to share videos and photos, post status updates, search for friends and chat, all in a safe space that encourages community building for people who sometimes find it challenging to connect with others.

youBelong itunes.apple.com/ca/app/youbelong/id1209864878?mt=8

"The friendship code," WE Stories www.WE.org/stories/teen-inventor-creates-app-for-brother-with-special-needs-and-shares-with-audience-at-we-day-california

Soundscape: Microsoft Soundscape is an app that uses innovative audio-based technology to enable people, particularly those with blindness or low vision, to build a richer awareness of their surroundings. This program uses 3D audio cues to enrich ambient awareness and provides new ways for people with blindness or low-vision to relate to the environment. It allows people to build a mental map and make personal route choices while being comfortable within unfamiliar spaces.

Microsoft Soundscape: www.microsoft.com/en-us/research/product/soundscape

Accessnow: Through Accessnow, everyone around the world can share accessibility information about common spaces like coffee shops, restaurants, and more to ensure people with disabilities fully understand the level of accessibility before travelling to a location. This helps to create a worldwide community that is passionate about change, to empower each other to have access to all spaces. Check local favourite places in your town or community on the map to see how they rate in terms of their accessibility using the AccessNow Map. accessnow.me.

Source: educationblog.microsoft.com/2017/05/10-tips-for-creating-an-inclusive-classroom-today

Next Steps to Take Action

1) Explore the following links to learn more about inclusion and accessibility:

- a. Microsoft Inclusive Design Toolkit www.microsoft.com/design/inclusive/, Principles of inclusive Design www.designcouncil.org.uk/resources/guide/principles-inclusive-design
- b. Microsoft Educator Community education.microsoft.com

The following short courses provide additional information for you to continue your learning:

- Accessibility tools: Meeting the needs of diverse learners education education.microsoft.com/gettrained/accessibility
- Empower every student with an inclusive classroom education.microsoft.com/gettrained/accessibility

2) Watch the short film *Inclusive* to understand how inclusion and accessibility can impact your lives: www.microsoft.com/design/inclusive.

3) Start reviewing your current classroom practice and begin following accessible content guidelines when you create resources.

4) Participate in the WE Are One campaign www.WE.org/we-schools/program/campaigns/we-are-one/ and use the Creating An Inclusive World classroom resource in your classroom www.WE.org/we-schools/program/educator-resources/library/#search_target.

5) If you require an accessible format of the Educator Resource, please reach out to your WE Schools Program Manager and they will be able to provide you with one.

