

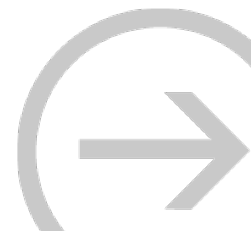
Accessibility in Education

WORKSHOP



Top 3 learning objectives

1. Every classroom has a student who can benefit from accessibility
2. Accessibility features in Windows and how to use
 - Personalization
 - Ease of Access Center
3. Where to find accessibility info for teachers
 - www.microsoft.com/education/enable/



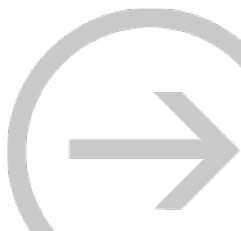


Every classroom has a student who can benefit from using accessibility

Every classroom has a student who:

- Has a hard time seeing the board and can benefit from making the PC easier to see.
- Finds concentrating difficult and can benefit from making the PC less cluttered.
- Experiences difficulty hearing the teacher speak and can benefit from making the PC easier to hear.

Accessibility empowers all students with accessible technology that enables personalized learning.





Impacts in the classroom

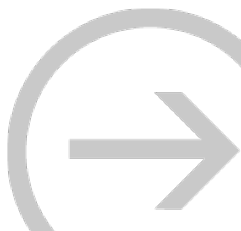


Personalized Learning and Accessibility

- Personalized learning shifts the focus from what is being taught to what is being learned—the student's needs and style become central to the learning process.
- Accessibility in the classroom enables students of all abilities, special needs, and disabilities, to have the same educational opportunities.

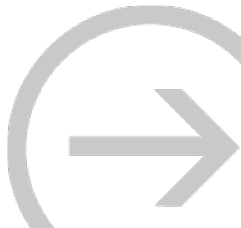
Personalize the PC for students to:

- Make it easier to see, hear, and use more comfortably
- Support learning style differences
- Assist special needs students
- Save teachers time and effort





What is accessibility?





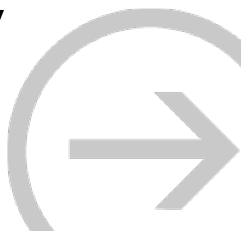
As school leaders, increase awareness of accessibility solutions

All teachers

- Help every teacher understand the basics of accessibility and how to recognize students who need to personalize their PCs to make them easier to see, hear, or use.

Special education teachers

- Ensure each special education teacher has *Accessibility: A Guide for Educators* (www.microsoft.com/education/enable/) to help students with accessibility needs personalize their PCs to make them easier to see, hear, and use.
- Recommend Microsoft Accessibility Update newsletter to stay up to date on features: www.microsoft.com/enable/





Overview of Accessibility Features





Accessibility in Windows



Personalization

- [Display](#)
- [Change colors](#)
- [Sounds](#)
- [Mouse pointers](#)

Ease of Access Center

- [Get recommendations](#)
- [Narrator](#)
- [Magnifier](#)
- [Zoom in Internet Explorer](#)
- [On-Screen Keyboard](#)
- [Speech Recognition](#)
- [Windows Touch](#)

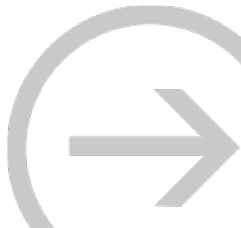


Personalization

- [Display](#)
- [Change colors](#)
- [Sounds](#)
- [Mouse pointers](#)

Ease of Access Center

- [Get recommendations](#)
- [Narrator](#)
- [Magnifier](#)
- [Zoom in Internet Explorer](#)
- [On-Screen Keyboard](#)
- [Speech Recognition](#)





Control Panel: Ease of Access Center

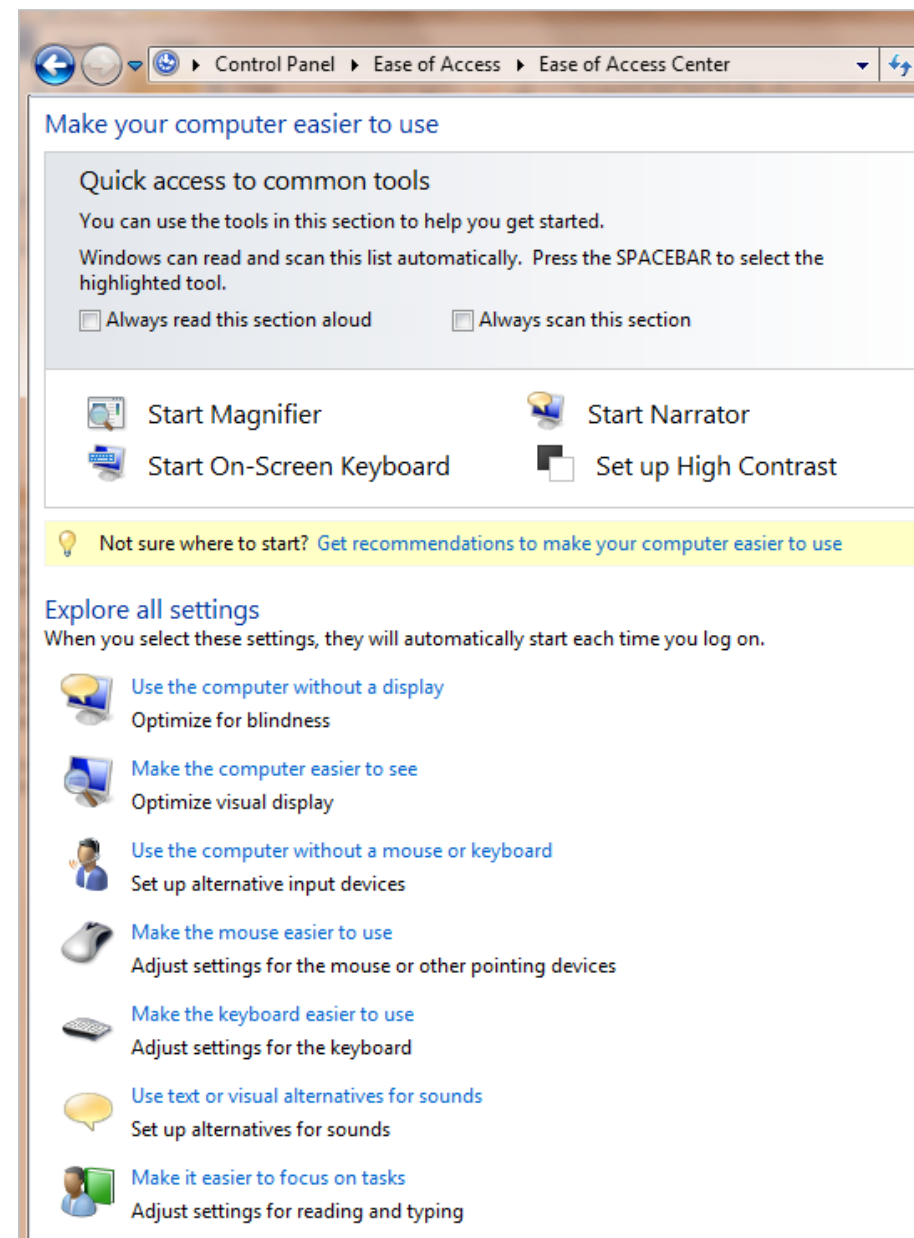
**Centralized location to find
accessibility options**

Quick start

- Magnifier
- On-Screen Keyboard
- Narrator
- High Contrast

**Questionnaire to
“get recommendations”**

Explore settings by categories

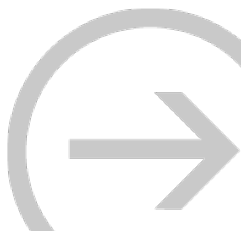
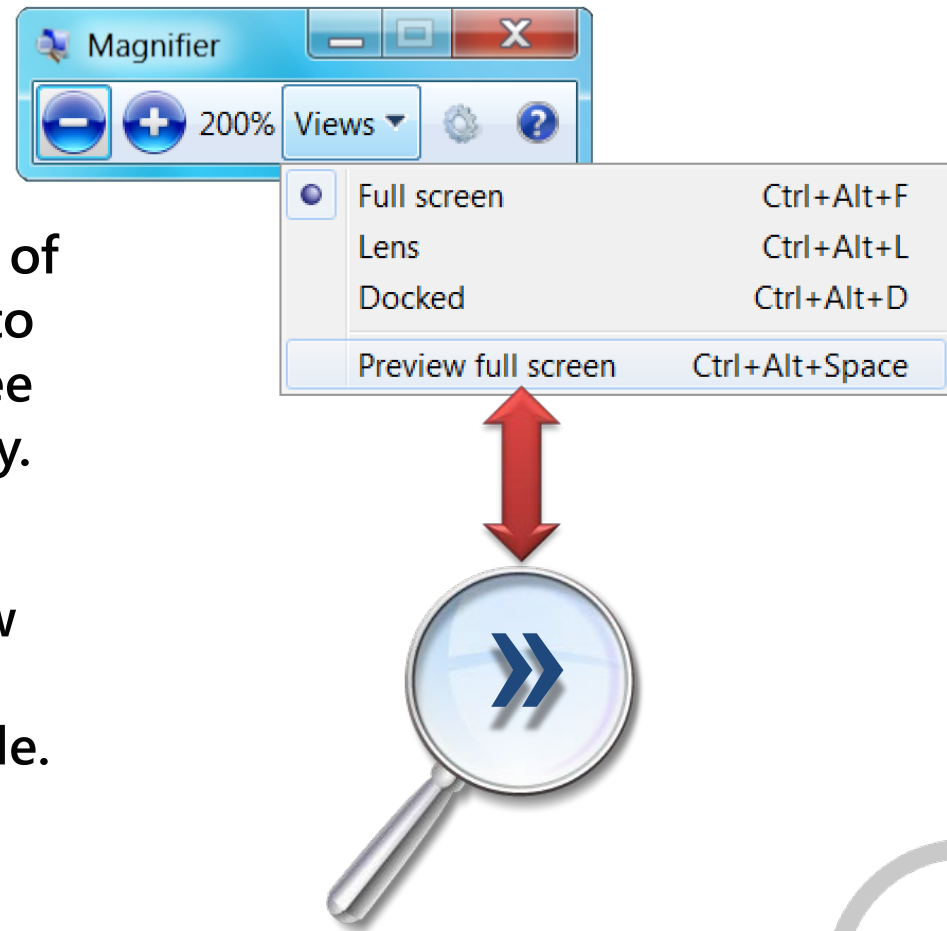




Magnifier in Windows 7

Magnifier enlarges portions of the screen making it easier to view text and images and see the whole screen more easily.

Magnifier in Windows 7 now includes full-screen mode, lens mode, and docked mode.





Try it out: On-Screen Keyboard

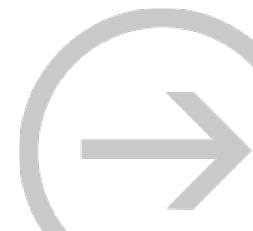
Try it out:

- Open Notepad then start On-Screen Keyboard and try typing the date



[Type using On-Screen Keyboard](#)

Find out more: demo





Speech Recognition



[Speech Recognition in Windows 7](#) allows you to command your PC with your voice. Dictate documents and email and surf the Web by saying what you see.





Windows Touch



Windows Touch works with touchscreens to enable students to tap the screen, scroll with a finger, and even finger-paint.

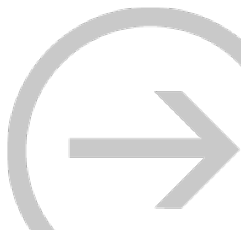
Students can interact with the computer in a direct and simple way, using their fingers, instead of struggling with the mouse or a mouse alternative.



Note: Touch capability is dependent on PC hardware capability

Windows Touch

Find out more: demo

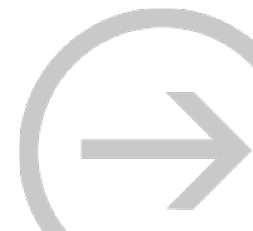




Accessibility in Internet Explorer

Accessibility features in Internet Explorer

- Zoom in on a webpage
- Select text and move around a webpage with a keyboard
- Change the font size, formatting, and screen colors
- Use the keyboard to surf the Web
- Keyboard shortcuts

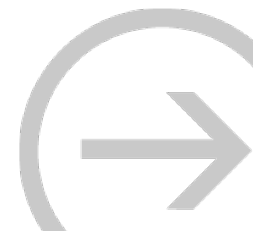
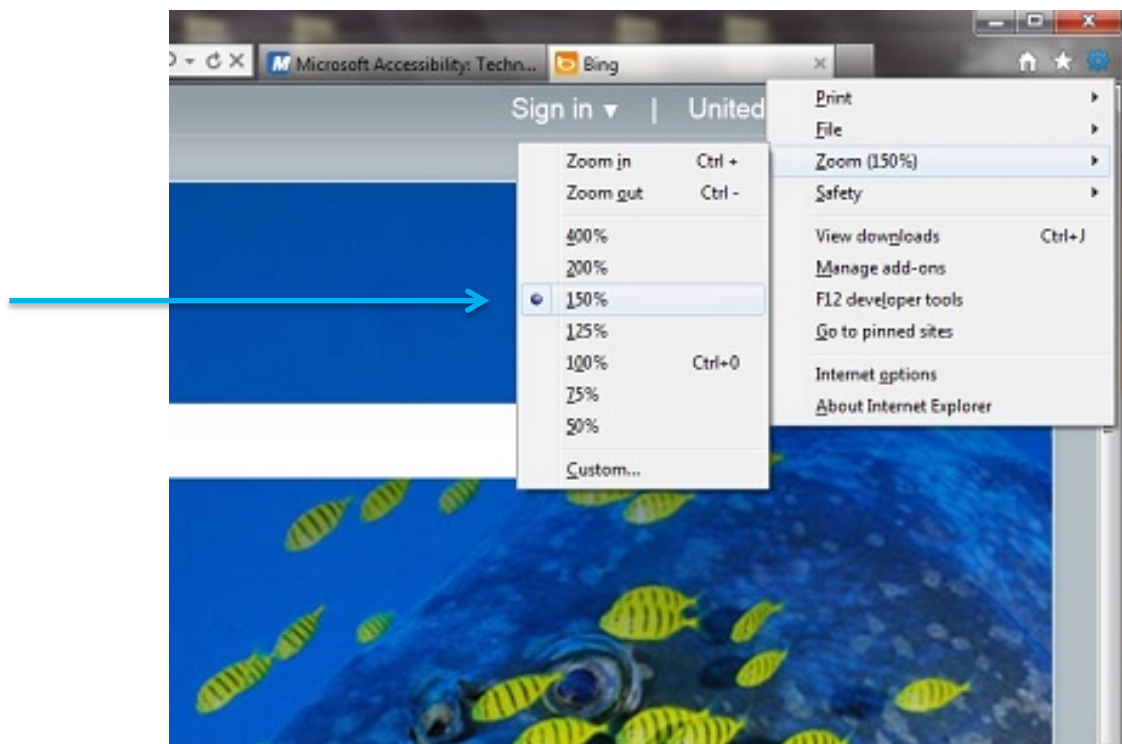




Internet Explorer: Zoom

Zoom in on a webpage

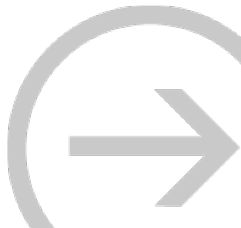
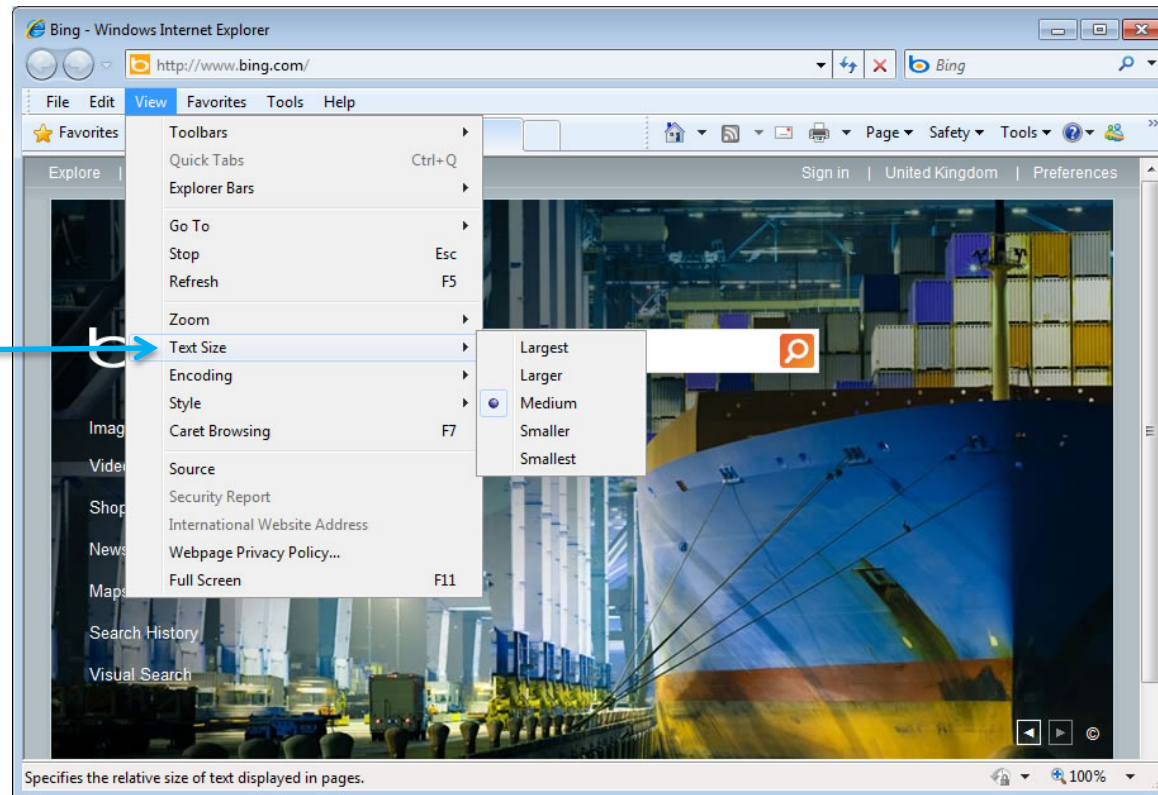
- To enlarge the view of a webpage. Unlike changing font size, zoom enlarges or reduces everything on the page, including text and images.





Internet Explorer: Change text size

Make webpages easier to read by [changing text size on webpages](#).





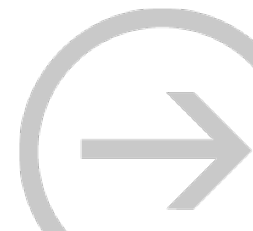
Try it Out: Internet Explorer

Try it out:

- Open Internet Explorer
- Go to www.bing.com
- Try zooming in on a webpage
- Try to change webpage text size

[Zoom in on a webpage](#)
[Change webpage text size](#)

Find out more: tutorials

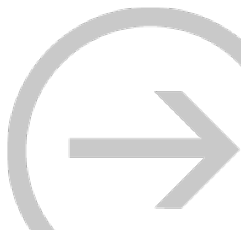




Accessibility in Office

Accessibility features in Office 2010

- [Accessibility Checker](#)
- Add captions, subtitles, and audio in slides with [Sub-Titling Add-in for Microsoft PowerPoint \(STAMP\)](#)
- [Use the Save as DAISY add-in for Word to convert files to an accessible format](#)
- [Create accessible web portals](#)
- [Use the Speak text-to-speech feature](#)
- [Customize the ribbon](#)
- [Use the keyboard to work with ribbon programs](#)
- [Create accessible PDFs](#)
- [Use Full Screen Reading view](#)





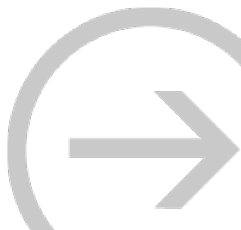
Microsoft Office:

Make sure your documents are accessible

[Accessibility Checker](#) in Word 2010, Excel 2010, and PowerPoint 2010 helps you identify and fix potential accessibility problems that would prevent people with disabilities from reading the file.

[Find and fix accessibility issues in Word 2010 documents](#)

Find out more: demo





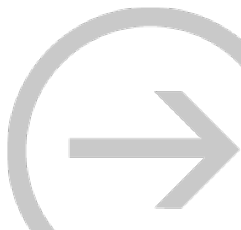
Microsoft Office:

Making presentations accessible

Add closed captions to video and audio files you include in your PowerPoint presentations. You are delivering a presentation and some individuals are not able to see details from the back of the room. You also want to be able to show certain students how to set up Internet Explorer to display larger text.

[Adding Subtitles to PowerPoint](#)

Find out more: demo





Working from anywhere: “cloud computing”

[Office 365 for education](#) gives educators and students access to world-class productivity solutions to help them succeed in school and beyond.

Includes:



Email & Calendar with Exchange Online



Office Web Apps with Office Professional Plus



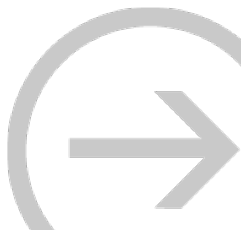
Websites and Collaboration with SharePoint Online



IM & Online Meetings with Microsoft Lync

[Office 365 and Live@EDU](#)
[Outlook Web Apps](#)

Find out more: tutorials





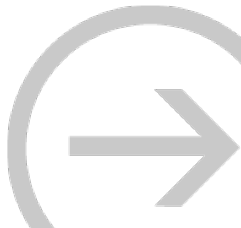
Impairments & Technology Solutions





Types of impairments/disabilities

- Vision
- Learning
- Mobility and dexterity
- Hearing and deafness
- Language and speech





Vision impairments

Includes

- Low vision
- Colorblindness
- Blindness

Accessibility features in Windows and Office

- Magnifier
- Make text larger
- Screen resolution
- High Contrast
- Narrator (blind)
- Audio descriptions
- Keyboard shortcuts
- Reading pane in Word

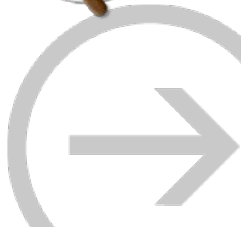
Assistive technology

- Screen magnifiers
- Screen readers
- Braille printers, displays, and note takers
- Book readers



[Five ways to make a PC easier for students to see](#)

How-to article





Learning style differences and impairments



Includes

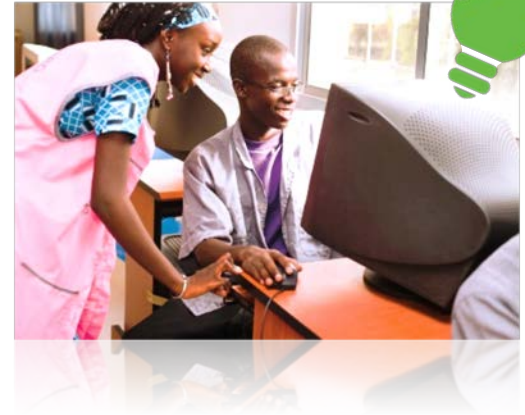
- Dyslexia
- Attention deficit disorders
- Learning style differences
- Learning a new language
- Developmental delays

Accessibility features in Windows and Office

- Eliminate distraction - make it easier to focus and concentrate
- Spelling and grammar checks
- OneNote for staying organized, researching, audio notes
- AutoComplete (word prediction)
- Speech Recognition

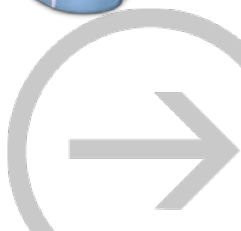
Assistive technology

- Word prediction – ClaroRead, TextHelp Read & Write
- Reading comprehension (Universal Reader)



[Six ways to adjust the PC to make it easier for students to concentrate](#)

How-to article





Mobility and dexterity impairments



Includes

- Dexterity impairments – hand, wrist, and arm pain, fine motor control
- Gross motor impairments (Cerebral palsy, multiple sclerosis, spinal cord injuries)

Accessibility features in Windows and Office

- Mouse settings – pointer size, speed, button configuration
- Keyboard settings – Mouse Keys, Sticky Keys, Filter Keys
- On-Screen Keyboard
- Keyboard shortcuts
- Speech Recognition
- Windows Touch

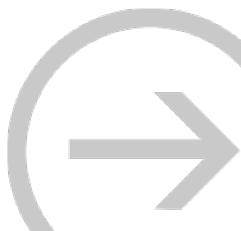
Assistive technology

- Ergonomic keyboards and mouse alternatives – joystick, trackball mouse
- Keyboard filters
- Alternative input – sip and puff, head mouse



[Four ways to help a student control the mouse](#)

How-to article





Hearing impairments

Includes

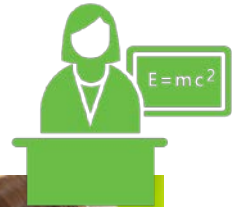
- Hearing loss and hard-of-hearing
- Deafness

Accessibility features in Windows

- Volume
- Computer sounds
- Text and visual alternatives for sounds – such as captions

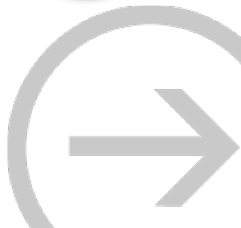
Assistive technology

- Personal listening device
- Headphones
- Sign language translator



[Four ways to make a PC easier for students to hear](#)

How-to article





Language/speech impairments

Includes

- Delayed speech or inability to speak
- Inability to comprehend words

Accessibility features in Windows

- Narrator
- Windows Touch

Assistive technology

- Augmentative communication devices
- Speech synthesizers
- Touchscreens with audio



[Five ways Microsoft OneNote can help students with dyslexia stay organized](#)

How-to article



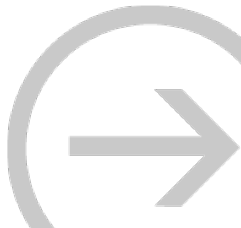
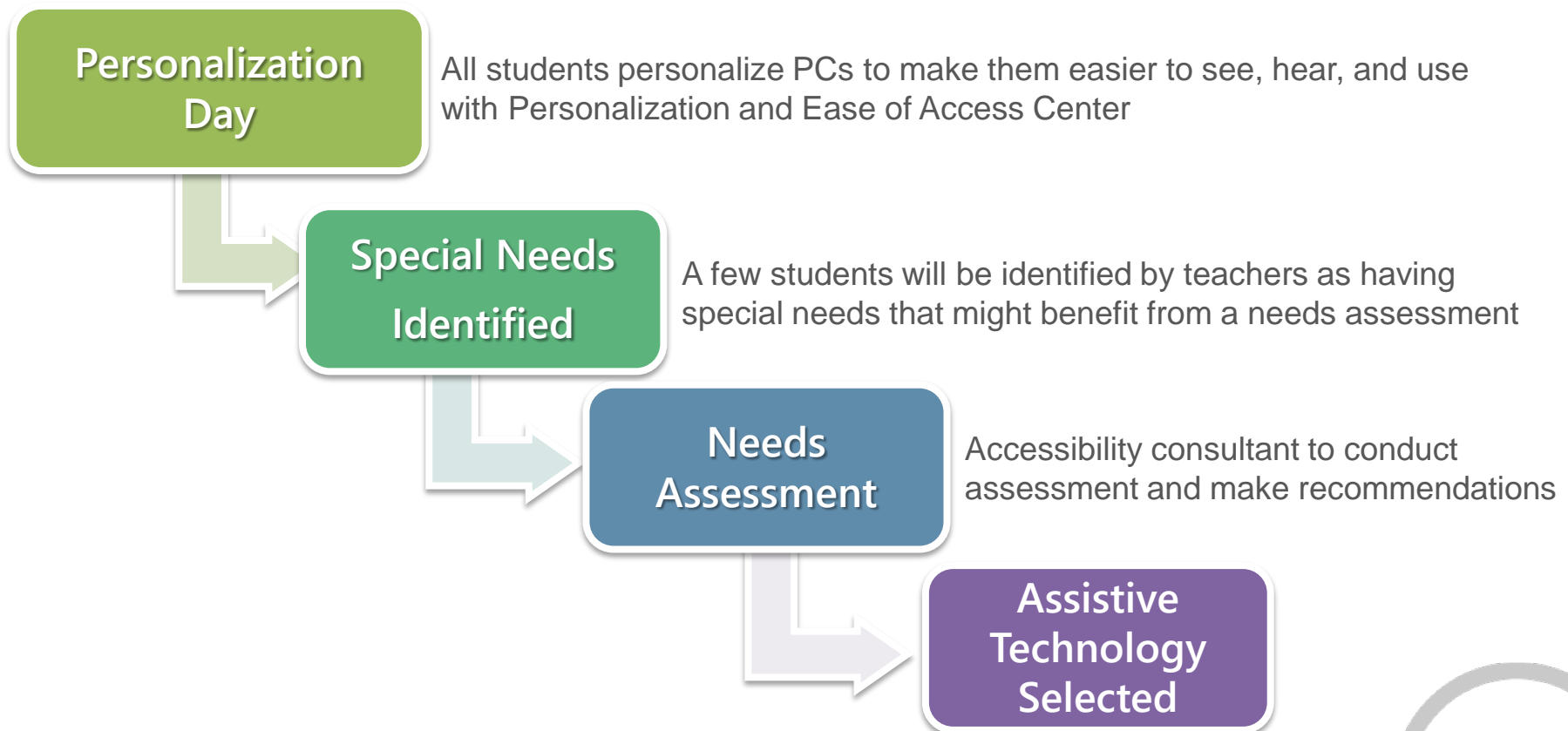


Selecting Accessible Technology





Identifying who needs assistive technology





Accessible technology for special needs students

Identifying the right mix of accessibility solutions

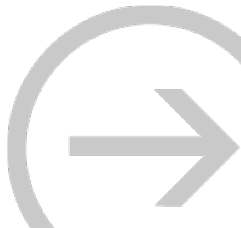
- Most students can benefit from using built-in accessibility features.
- For students with special needs or disabilities, each student may need to use a unique mix of accessibility features and assistive technology products.

Needs assessment

- Identifying the best accessibility solution often requires an in-depth assessment to understand how a difficulty or impairment impacts computer use.

Find an accessibility consultant

- Locate an accessibility expert in your school/district or local community (www.microsoft.com/enable/centers/)
- Many assistive technology centers and occupational therapists have accessibility consultants to help individuals identify the right mix of accessibility features and products.
- Resources available
 - » Assessment
 - » Product recommendation
 - » Lending libraries (try before you buy)
 - » Training





Questions for school leaders

Part 1

Do special needs teachers know who to go to for computer accessibility support for their students with special needs?

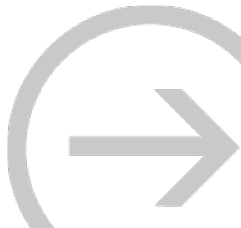


Microsoft offers resources at www.microsoft.com/education/

Does your school technology plan include accessibility?



See Considerations for IT Technicians



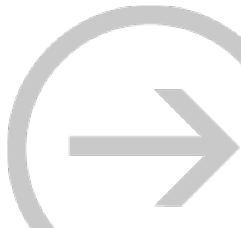


Questions for school leaders

Part 2

Helping Teachers

- Do your teachers know how to help students with mild special needs adjust their PCs to make them easier to see, hear, and use?
 - » Microsoft has [tutorials](#) that can help.
- Do teachers, IT technicians, and students have information about accessibility for the software they are using?
 - » Microsoft has accessibility information for schools at www.microsoft.com/education/enable/.
- Do students and staff have the opportunity to personalize their PCs to make them easier to see, hear, and use?
 - » Consider a Personalization Day to let students personalize their PCs and save their settings in unique profiles.



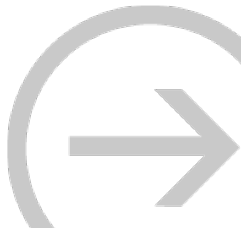


Good practice in schools



Create an accessibility team

- Assign accessibility responsibilities to interested teachers, special needs teachers, and an IT professional for technical issues.
- Ensure all teachers know who to go to if they notice a student who needs to make the PC easier to see, hear, and use.
- Distribute Microsoft's [Accessibility: A Guide for Educators](#)
- Identify an [assistive technology expert](#) in your community to help with [assistive technology](#) assessments for students with disabilities.

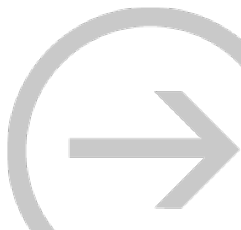




Considerations for special needs educators



- Can you advise and show others how to use the Personalization and the Ease of Access Center?
- Have you been trained on how to use assistive technologies like ergonomic keyboards and screen readers in the classroom?
- Do you have a copy of [Accessibility: A Guide for Educators](#) you can reference?
- Do you know who in your school or district to go to if you have a student who needs additional accessibility support?

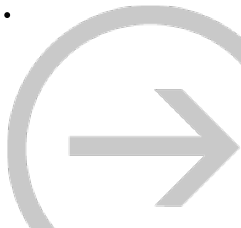




Considerations for IT technicians



- Ensure PCs are deployed so Ease of Access Center and Personalization are available to students.
- Consider allowing individuals to [create a user account](#) (rather than generic accounts) so their accessibility and personalization settings are saved and available when they log in with their user profile.
- Set up PCs with working speakers, volume controls, and [headsets](#) for student who have hearing impairments.
- Have a selection of [ergonomic, comfort keyboard and mice](#) available for students with dexterity impairments.
- Identify an [assistive technology expert](#) in your area to help with [assistive technology](#) assessments for students with disabilities.
- Implement web accessibility to ensure your school website is accessible.





Considerations for IT technicians



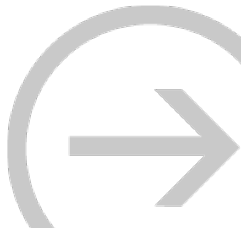
Scenario: IT technicians have many computers to manage and often lock Control Panel settings when creating group settings; however, this prevents teachers and students from adjusting accessibility and personalization settings in the Control Panel.

Solutions:

- Ensure PCs are deployed to allow Ease of Access Center and personalization settings to be adjusted.
- Set up profiles so each time the students log in, their accessibility and personalization settings are saved. For shared PCs, consider a standard set of profiles. Example:
 - » Profile name: LargeText
 - » Basic features are already set up like fonts that are 16-point rather than 10-point, larger icons, zoom in Internet Explorer set to 125%
- Depending on your Windows version, consider using 'Roaming Profiles' so user account profiles can be stored on a memory stick and transferred to any PC.

Resources:

- [User Configuration Group Policy Settings in Windows 7](#)
- Group Policy Settings for [Control Panel](#) | [Display in Control Panel](#) | [Action Center](#) | [Personalization](#)





Accessibility in Practice





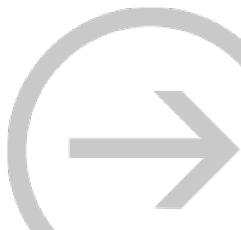
Scenarios for accessibility solutions

We'll explore four scenarios for accessibility solutions:

1. Alex has a visual impairment and is colorblind
2. Christina is hard-of-hearing
3. Sam has muscle fatigue and wrist pain
4. Mary has difficulty concentrating

Your task is to discuss and determine specific accessibility features that might help these students.

- Where would you look for more ideas and information?
- Who else might you seek help from to find accessibility solutions for these students?





#1: Student who has a visual impairment and is colorblind

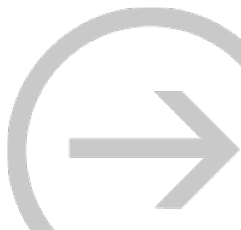


Student scenario: Alex has a visual impairment and is colorblind. He needs to have what he is reading on the computer enlarged or magnified, and he needs to rely on text, rather than color, for information.



Accessibility solutions:

- Try a [High Contrast color scheme](#) in Windows to make the PC easier to see
- [Make text larger](#)
- Try [Magnifier](#)
- Run the [Office 2010 Accessibility Checker](#) on Word files sent to Alex



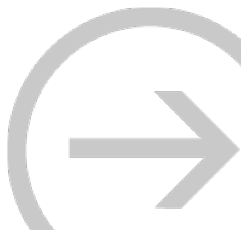


#2: Student who is hard-of-hearing

Student scenario: Christina is hard-of-hearing so she needs to be able to adjust the volume on her computer. She uses headphones to block out background noise and increases the volume without disrupting other learners in the classroom. She also may need to watch parts of videos more than once to make sure she doesn't miss anything that is being said.

Accessibility solutions:

- [Computer volume](#)
- [Change computer sounds](#)
- [Text and visual alternatives for sounds](#) – such as captions
- [Headsets](#)



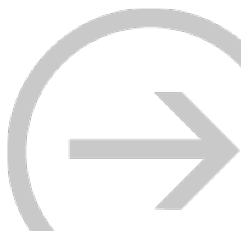


#3: Student who has muscle fatigue and wrist pain

Student scenario: Sam has dexterity difficulties, including muscle fatigue. He needs to be able to limit the amount of keyboard work he does. Sam benefits from using Windows Speech Recognition to dictate large amounts of text for reports and uses an ergonomic Microsoft Comfort keyboard and mouse.

Accessibility solutions:

- [Windows Speech Recognition](#)
- [Microsoft Comfort keyboard and mouse](#)



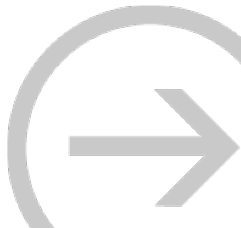


#4: Student who has difficulty concentrating

Student scenario: John has been diagnosed with attention deficit disorder (ADD) which makes it difficult for him to concentrate sometimes. He would benefit from reducing visual and auditory distractions while using the computer. He needs the computer to assist him in better focusing on reading and typing tasks.

Accessibility solutions:

- [Clean up and simplify the desktop](#)
- [Choose appropriate color schemes and themes](#)
- [Use the whole screen to read](#)
- [Review spelling, grammar, and word choices](#)
- [Use Speech Recognition](#)
- [Try Microsoft OneNote](#)

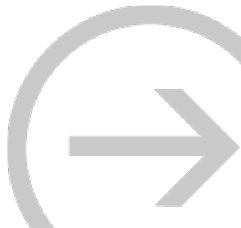




Review of students' solutions

Review [how-to articles and videos](#) to give you ideas of what to try

- [Five ways to make a PC easier to see](#)
- [Four ways to make a PC easier to hear](#)
- [Four ways to help a student control the mouse](#)
- [Six ways to help students stay focused](#)
- [Five ways to help dyslexic students get organized](#)



Resources





Accessibility in education

www.microsoft.com/education/enable/

Download the Microsoft guide

- [Accessibility: A Guide for Educators](#)

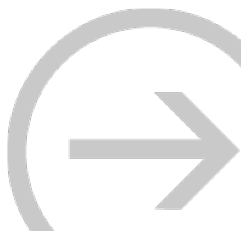
Download the Microsoft curriculum resources guide

- [Curriculum Resources for Special Education for Windows 7 and Office 2010](#)



Also find

- Success stories and videos
- How-to articles



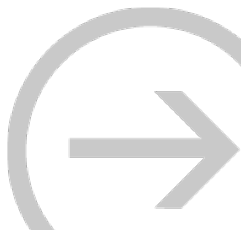


Microsoft Accessibility

www.microsoft.com/enable/



- Accessibility features in Microsoft Products
www.microsoft.com/enable/products/
- Accessibility demos
www.microsoft.com/enable/demos/
- Accessibility tutorials
www.microsoft.com/enable/tutorials/
- Assistive technology products
www.micorsoft.com/enable/at/
- Accessibility resources in 41 languages
www.microsoft.com/enable/worldwide/

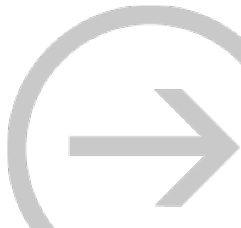




3 things to remember



1. Every classroom has a student who can benefit from accessibility
2. Accessibility features in Windows and how to use
 - Personalization
 - Ease of Access Center
3. Where to find accessibility info for teachers
 - www.microsoft.com/education/enable/



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Learning