

Reaching All Students Creating Inclusive Content

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SC Technical College System



UNIVERSITY OF
SOUTH CAROLINA

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Outcomes

- Identify ways to make documents and videos accessible
- Identify ways to Alt Text images in documents
- Discuss accessibility and virtual simulations
- Discuss online course design for accessibility

Today's Topics

- Practical accessibility tips for Microsoft software
- Video captioning and transcripts
- Online course layout design for accessibility
- Images and Alt Text
- Accessibility in virtual simulations

Inclusive Learning

e h o i c e



Universal Design for Learning Guidelines

AFFECTIVE NETWORKS:
THE **WHY** OF LEARNING



Engagement

For purposeful, motivated learners, stimulate interest and motivation for learning.

RECOGNITION NETWORKS:
THE **WHAT** OF LEARNING



Representation

For resourceful, knowledgeable learners, present information and content in different ways.

STRATEGIC NETWORKS:
THE **HOW** OF LEARNING



Action & Expression

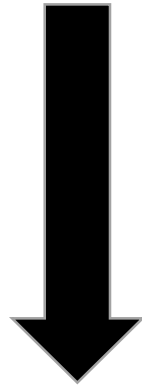
For strategic, goal-directed learners, differentiate the ways that students can express what they know.

CAST  YEARS OF
INNOVATION
1984-2009

Transforming education through Universal Design for Learning — <http://www.cast.org>

UDL at a glance

UDL Principle: Provide Multiple Means of Representation



Resourceful, knowledgeable learners

Provide options for Perception (guideline1)

- Offer ways of customizing the display of information (checkpoint 1.1)
- Offer alternatives for auditory information (checkpoint 1.2)
- Offer alternatives for visual information (checkpoint 1.3)

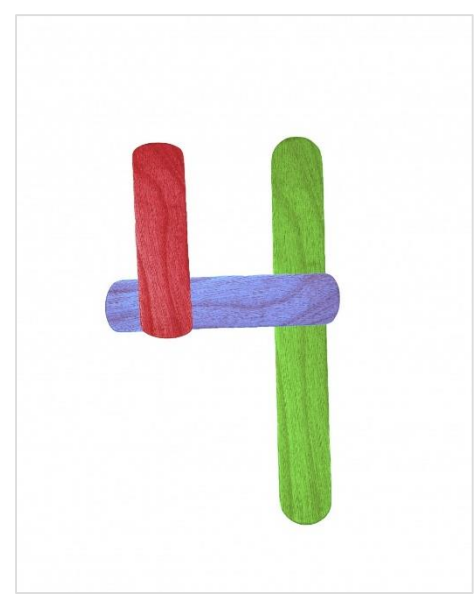
Provide options for Language & Symbols (guideline2)

- Clarify vocabulary and symbols (checkpoint 2.1)
- Clarify syntax and structure (checkpoint 2.2)
- Support decoding of text, mathematical notation, and symbols (checkpoint 2.3)
- Promote understanding across languages (checkpoint 2.4)
- Illustrate through multiple media (checkpoint 2.5)

Provide options for Comprehension (guideline3)

- Activate or supply background knowledge (checkpoint 3.1)
- Highlight patterns, critical features, big ideas, and relationships (checkpoint 3.2)
- Guide information processing and visualization (checkpoint 3.3)
- Maximize transfer and generalization (checkpoint 3.4)

Let's chat...



Share...

What alternative formats for your instructional content do you provide your students?

Practical Accessibility Tips for Microsoft Software

Document Accessibility - Word

Word

PowerPoint

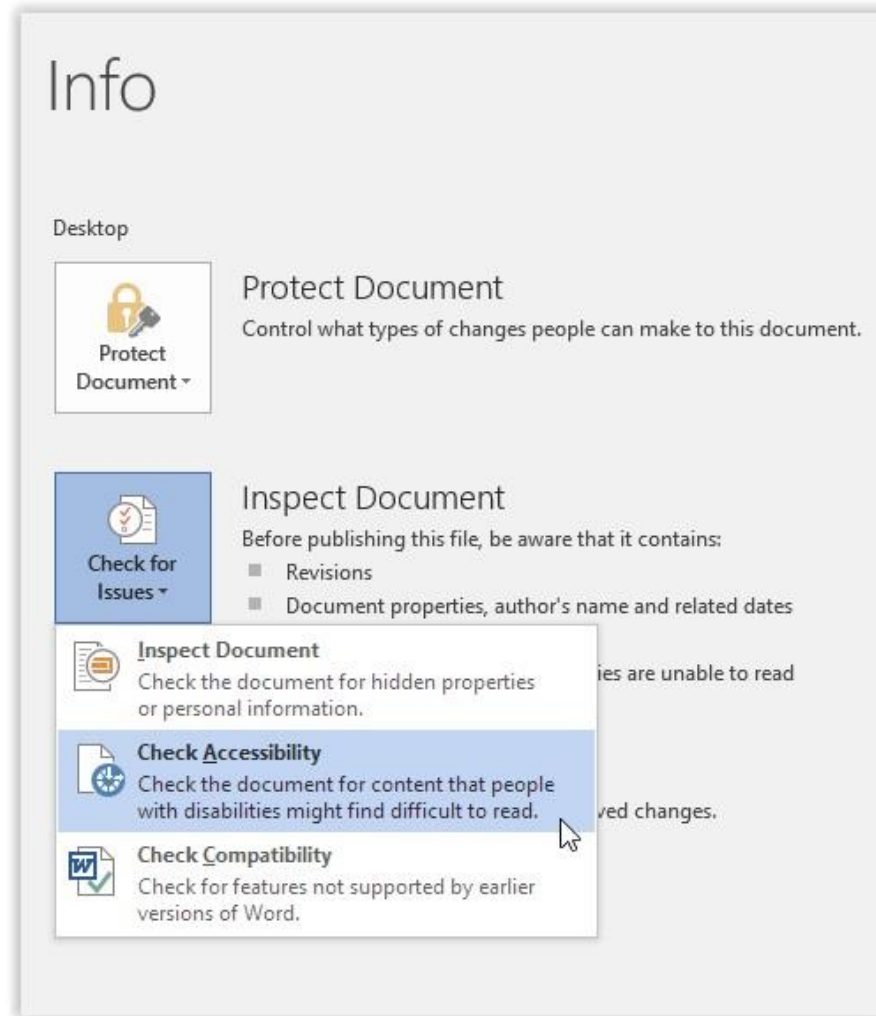
Images

PDFs



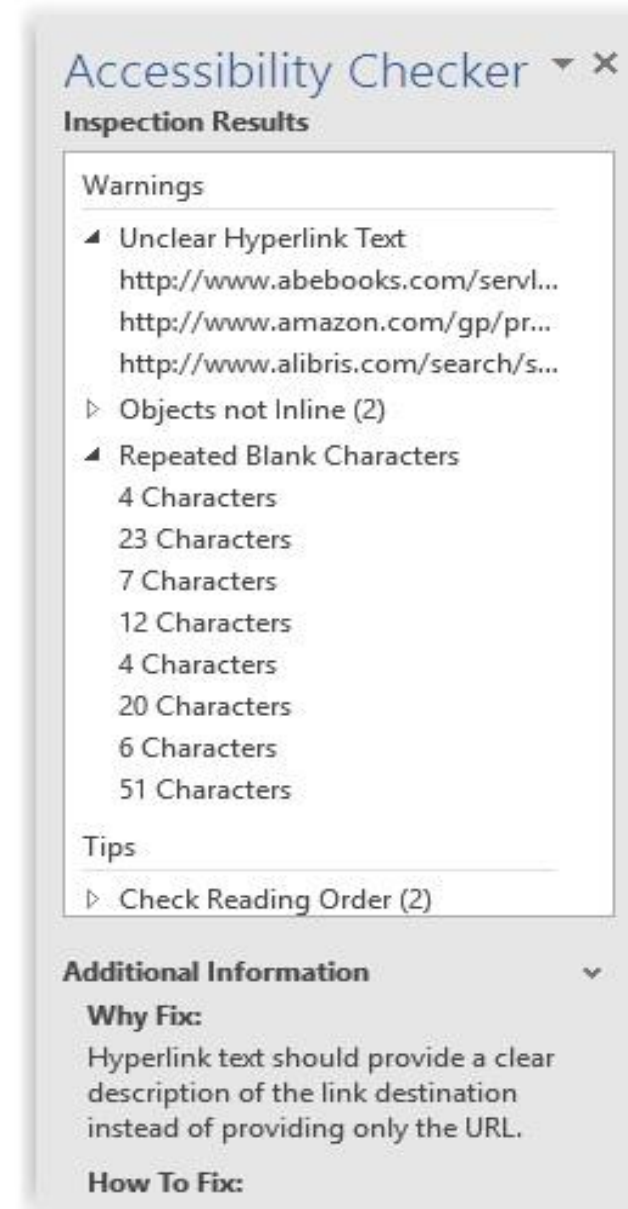
<http://askthegeekguy.com>

File -> Check for Issues -> Check Accessibility

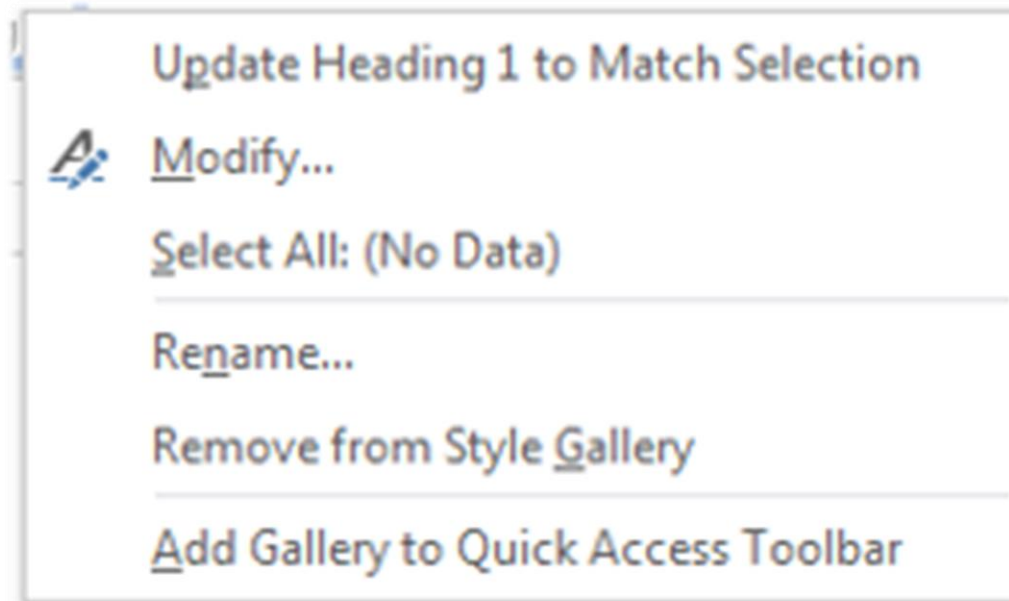
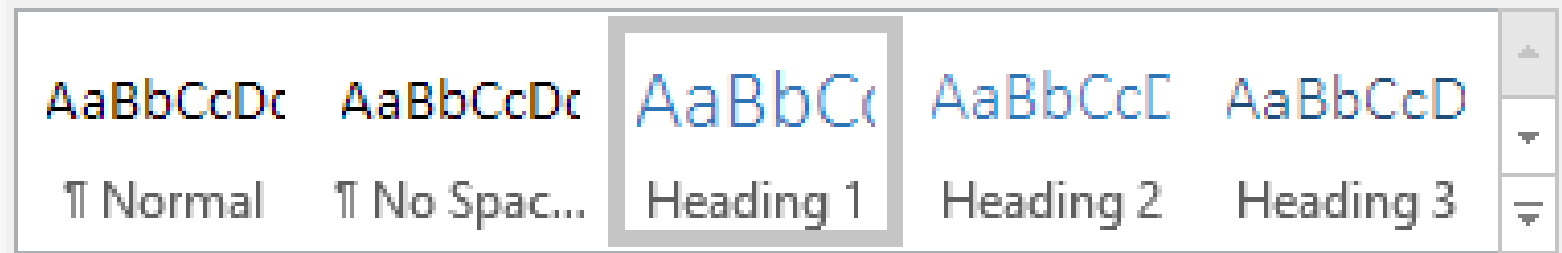


Inspection Results

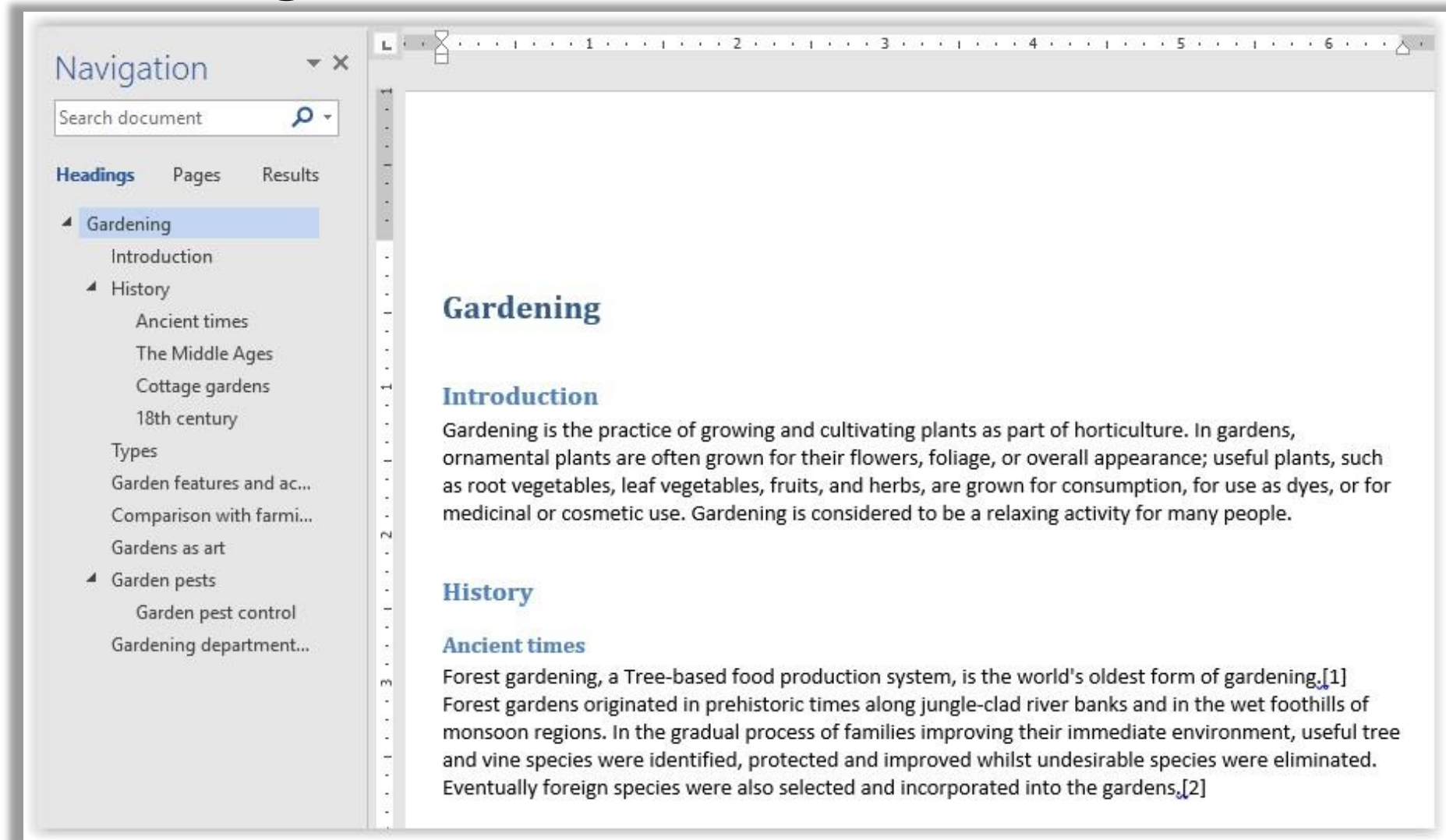
- Inspection Results
 - Errors
 - Warnings
 - Tips
- Additional Information
 - Why Fix
 - How to Fix



Word: Heading Level Styles



Bonus 1: Navigation Pane

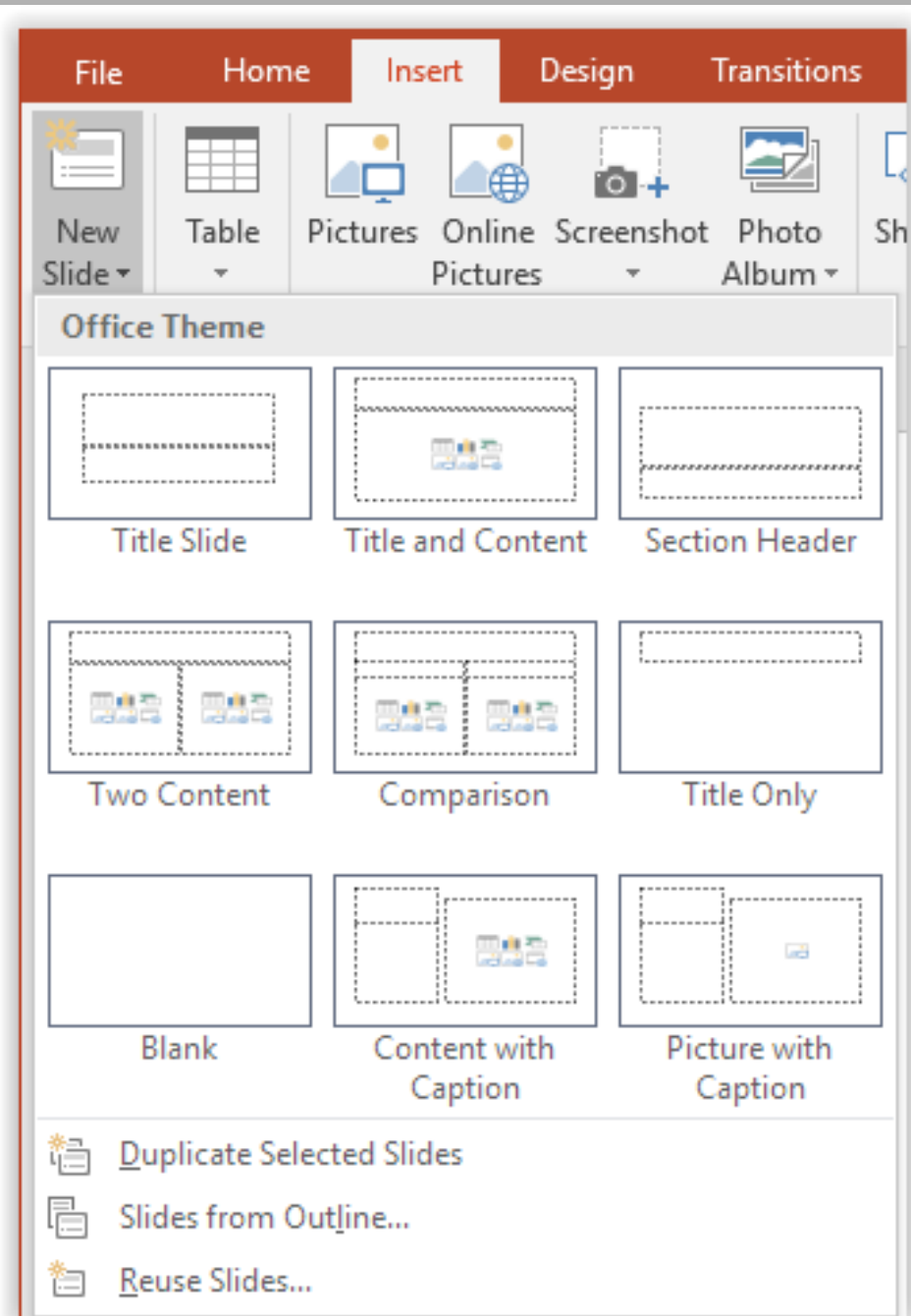


Bonus 2: Table of Contents

The screenshot shows the 'References' ribbon in Microsoft Word. The 'Table of Contents' button is selected, opening a dropdown menu. The menu is organized into sections:

- Built-In**
 - Automatic Table 1**
 - Contents
 - Heading 1.....1
 - Heading 2.....1
 - Heading 3.....1
 - Automatic Table 2**
 - Table of Contents
 - Heading 1.....1
 - Heading 2.....1
 - Heading 3.....1
 - Manual Table**
 - Table of Contents
 - Type chapter title (level 1).....1
 - Type chapter title (level 2).....2
 - Type chapter title (level 3).....3
 - Type chapter title (level 1).....4
 - Type chapter title (level 3).....c
- More Tables of Contents from Office.com** (with a right-pointing arrow)
- Custom Table of Contents...**
- Remove Table of Contents**
- Save Selection to Table of Contents Gallery...**

PPT Slide Titles



Reading Order

The screenshot displays a OneNote presentation slide titled "Class Notebook". The slide content includes:

- A blue "Class Notebook" icon.
- A "Welcome to the OneNote Class Notebook" screen with four options: "Create a new notebook", "Join an existing notebook", "Add a new section", and "Manage notebook".
- A yellow arrow pointing to a "Manage notebooks" screen.
- The "Manage notebooks" screen shows "Your notebooks" with "Blackboard Training Materials" and "Sample Class Outline". It also features a "Student sections" list (Class notes, Handouts, Homework, Quizzes) and a "Teacher sections" list (Enable Teacher-Only section group, Lock Collaboration Space, URL).

The "Selection" pane on the right lists the following elements:

- Slide Number Placeholder 8
- Right Arrow 7
- Picture 6
- Picture 5
- Picture 3
- Content Placeholder 2
- Title 1

37

Reading Order (close up)

A
Class Notebook

B **C** **D** **F** **E** **G**

37

Selection

Show All Hide All

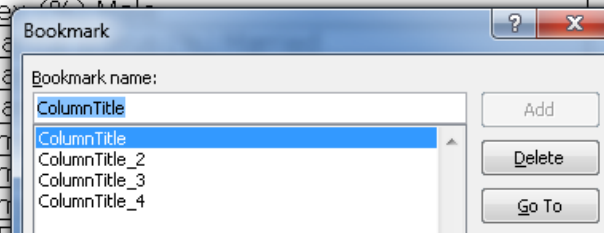
- Slide Number Placeholder 8
- Right Arrow 7
- Picture 6
- Picture 5
- Picture 3
- Content Placeholder 2
- Title 1

Accessibility Microsoft Word – Tables (1)

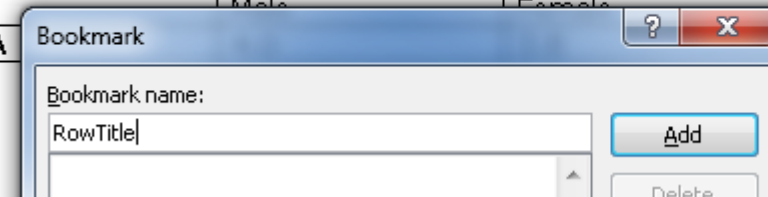
- If only **column headings**
 - Put cursor in column heading cell
 - **Insert → Bookmark**
 - Type “ColumnTitle”
 - Press [Enter]

- If only **row headings**
 - Put cursor in row heading cell
 - **Insert → Bookmark**
 - Type “RowTitle”
 - Press [Enter]

Demographic variable	Physically disabled. (n=566)	Comparison. (n=460)
Age, M (SD)	50.8 (13.8)	51.3 (13.6)
Years education, M (SD)	10.5 _a (3.0)	12.3 (3.5)
Sex (%) Female	45	47
Sex (%) Male	55	53
Married	70 _a	80
Married	18 _a	13
Married	11 _a	7
Employed	28 _a	66
Employed	14 _a	22
Employed	57 _a	12
Control	22	10



Name	Joe	Taylor	Ashley
Birthdate	1-12-76	7-31-80	12-7-80
Sex	Male	Female	Male
GPA			3.5



Bonus: Outline View (with titles)

7 What we see: Office 365

8 365 OneDrive

9 Waffle Menu / All Apps

10 Plan

- Summary of Tools
- OneDrive
- Other "Big Picture" Tools
 - One Note
 - Class Notebook
 - Teams
- Word / PowerPoint / Excel
 - Desktop v Cloud-based
 - Share / Collaborate

11 SUMMARY OF TOOLS

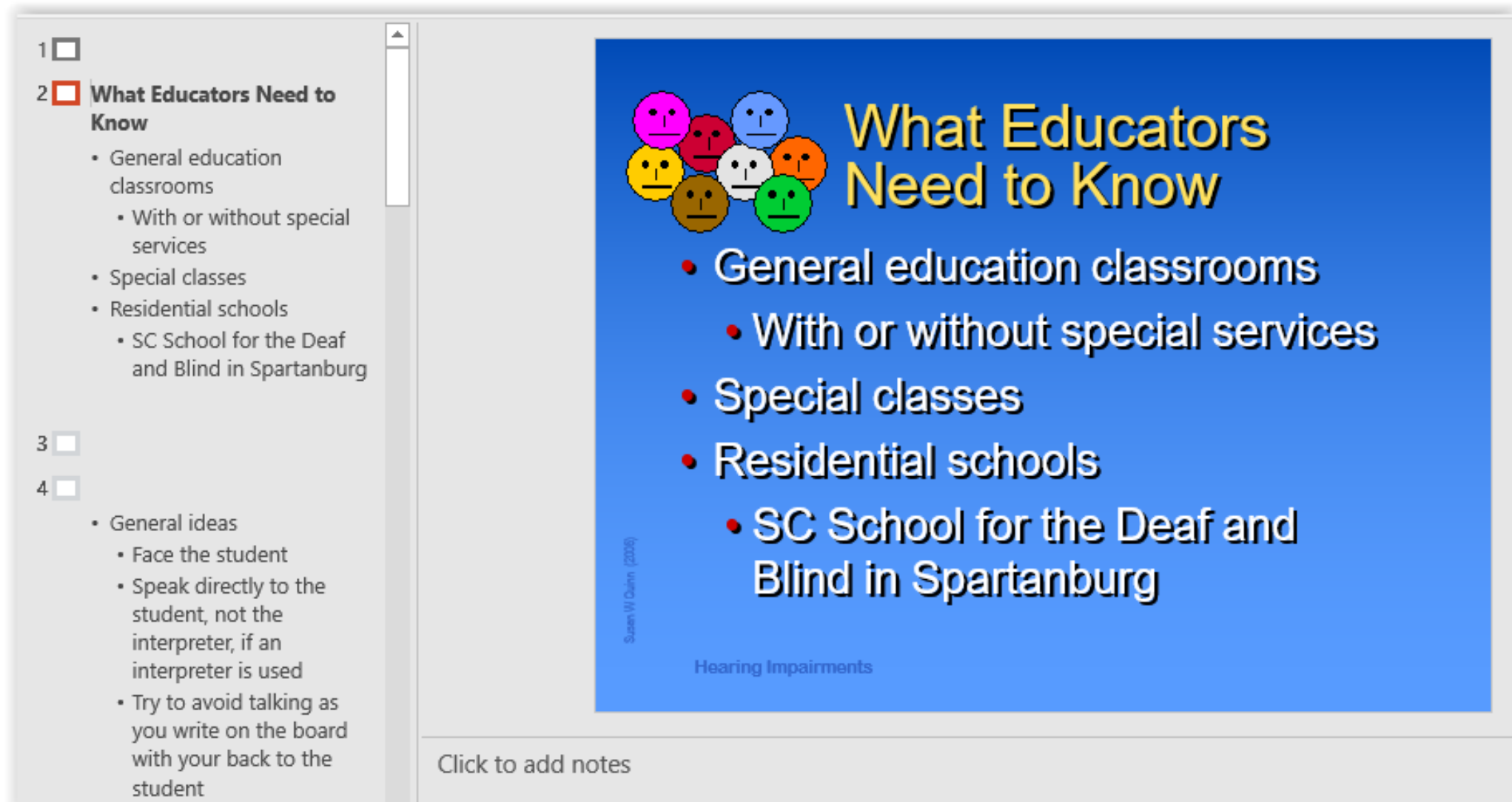
12 You have probably used these...

- Word
- PowerPoint
- Excel

What we see: Office 365



Bonus: Outline View (without titles)



The screenshot shows a presentation software interface. On the left is an outline view with a vertical scrollbar. The main area on the right displays a slide with a blue background. The slide features a cluster of colorful smiley faces in the top left corner. The title 'What Educators Need to Know' is written in large yellow text. Below the title is a bulleted list of topics. At the bottom of the slide, the text 'Hearing Impairments' is visible. A small vertical text 'Susan W. Quinn (2016)' is on the left side of the slide. At the bottom of the software window, there is a text box that says 'Click to add notes'.

1

2 **What Educators Need to Know**

- General education classrooms
 - With or without special services
- Special classes
- Residential schools
 - SC School for the Deaf and Blind in Spartanburg

3

4

- General ideas
 - Face the student
 - Speak directly to the student, not the interpreter, if an interpreter is used
 - Try to avoid talking as you write on the board with your back to the student

What Educators Need to Know

- General education classrooms
 - With or without special services
- Special classes
- Residential schools
 - SC School for the Deaf and Blind in Spartanburg

Susan W. Quinn (2016)

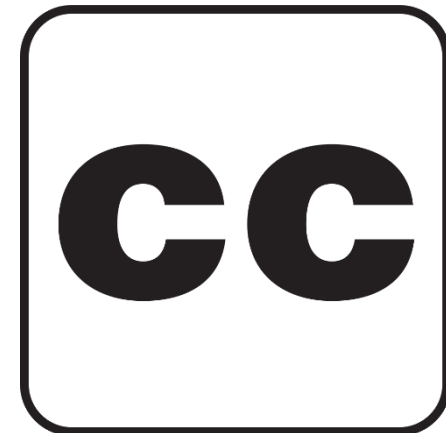
Hearing Impairments

Click to add notes

Video Captioning and Transcripts

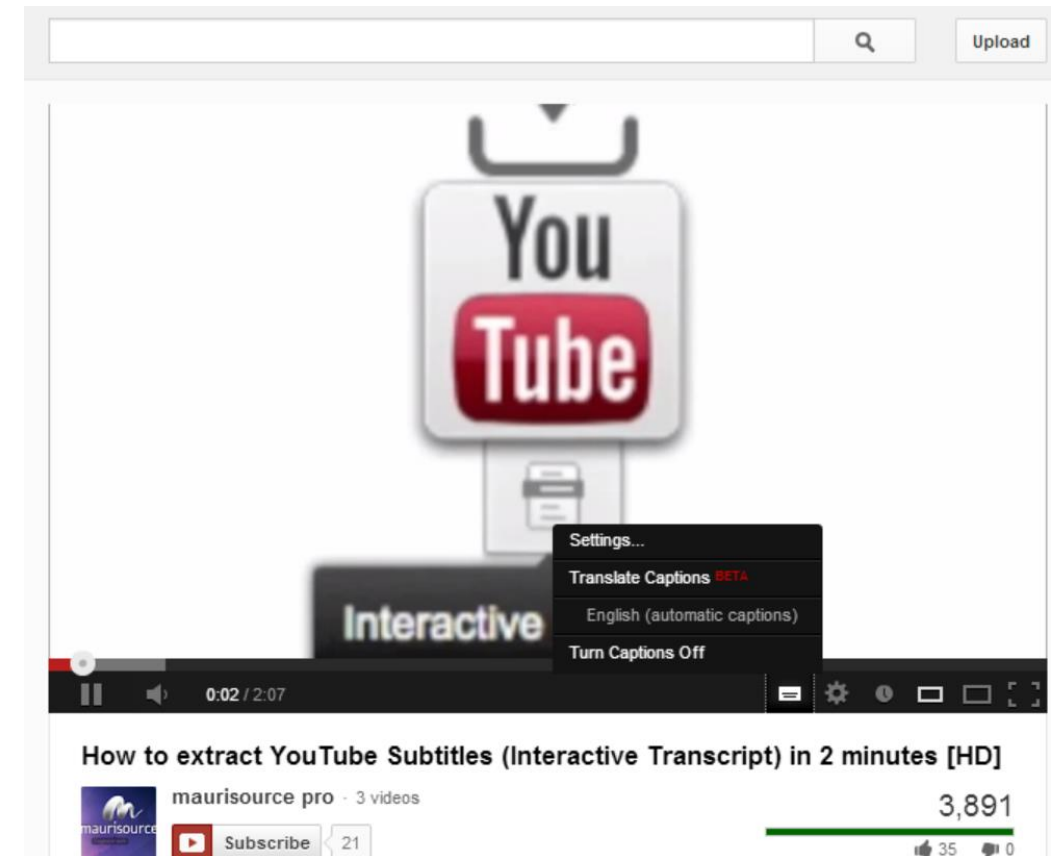
Captions

- **Goal is to provide equivalent experience**
- Audio only files = provide transcript
- Videos with audio = provide captions
- Transcripts provide searchable text
- Do not autostart media files; let user control the media
- **Best Practice:** write out your script in advance!

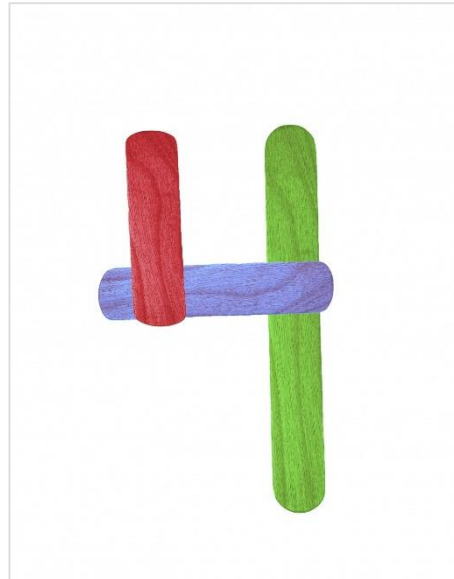


YouTube

1. Go to your Video Manager by clicking your account in the top right > Creator Studio > Video Manager > Videos.
2. Next to the video you want to add captions or subtitles to, click the drop-down menu next to the Edit button.
3. Select Subtitles/CC.
4. Click the Add new subtitles or CC button.
5. Choose how you want to add or edit subtitles or closed captions to your video



Let's chat...



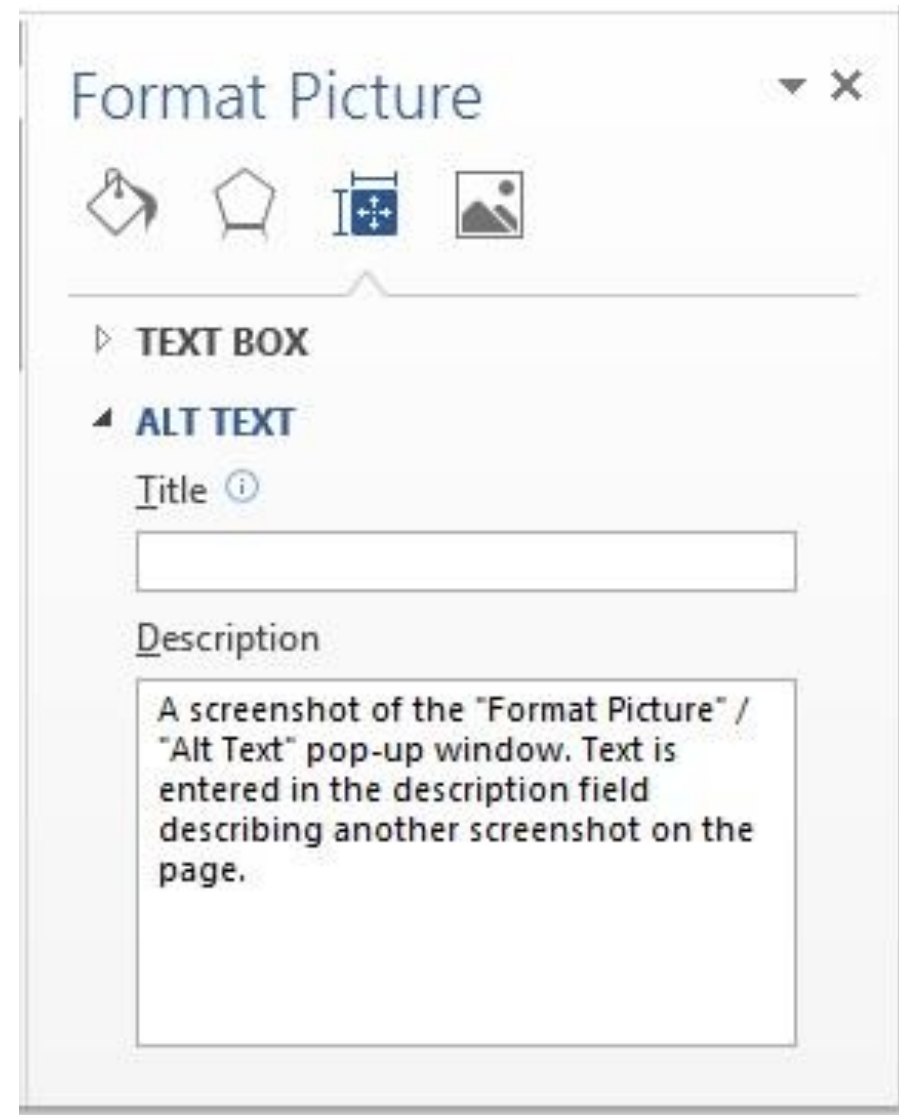
Share...

How do you use videos in your classes? Tell us about your captioning experiences.

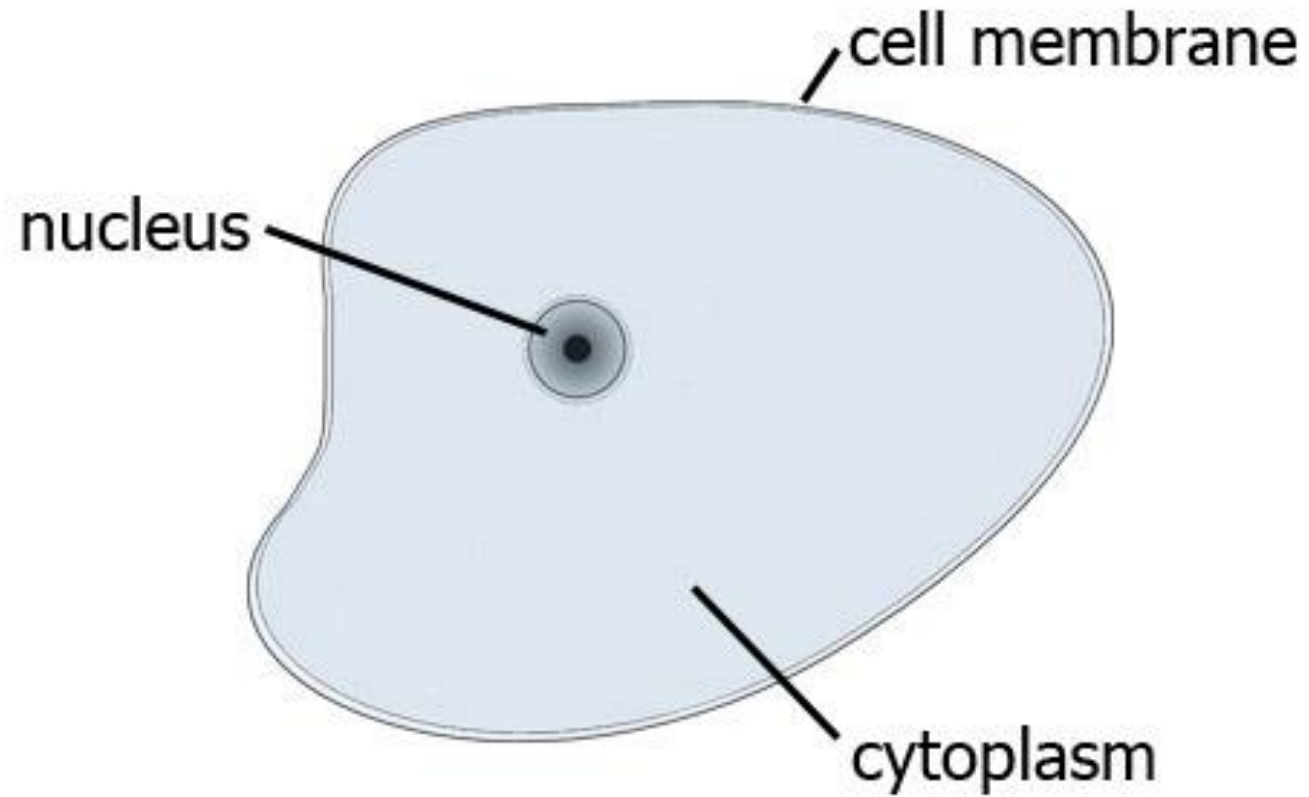
Images and Alt Text

Alternative text

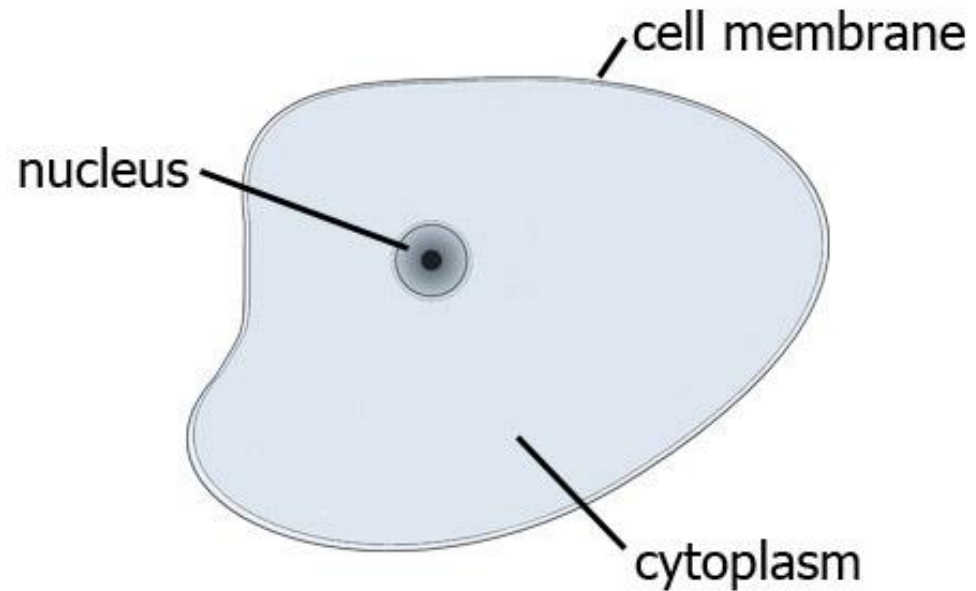
- Right-click the graphic
- Choose “Format Picture”
- Select “Alt Text” and add details in the Description textbox



Example 1: Image



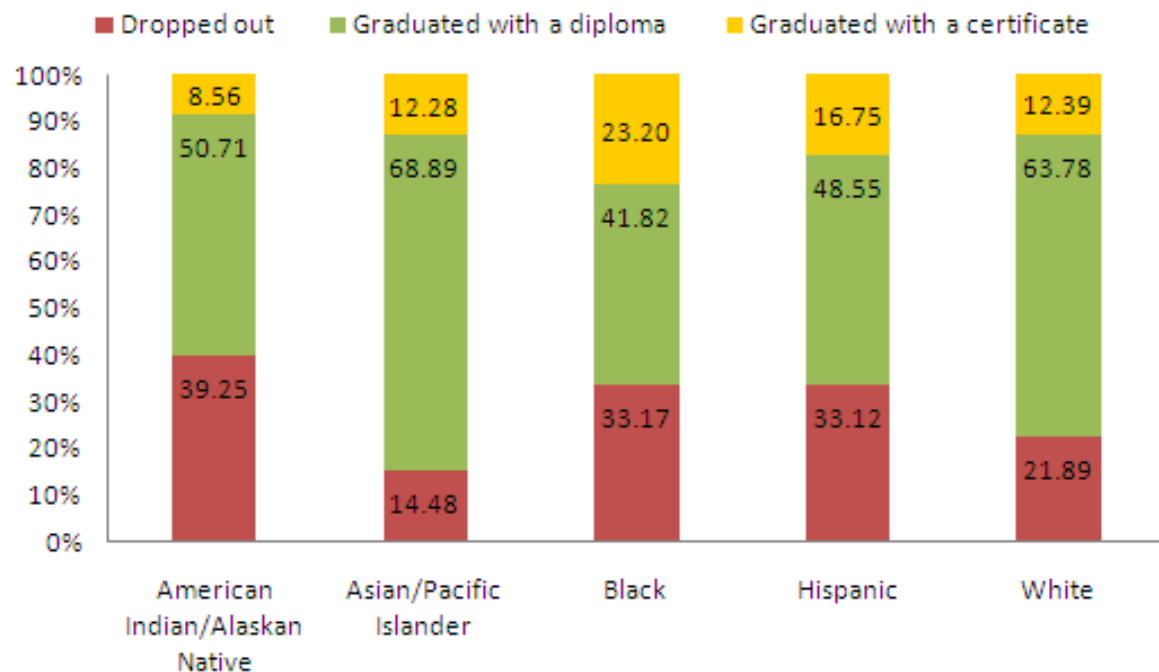
Example 1: Alt Text



“Animal cell diagram displaying its cell membrane, the nucleus, and cytoplasm.”

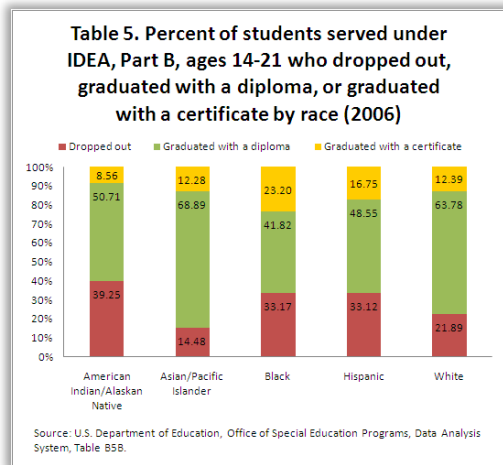
Example 2: Image

Table 5. Percent of students served under IDEA, Part B, ages 14-21 who dropped out, graduated with a diploma, or graduated with a certificate by race (2006)



Source: U.S. Department of Education, Office of Special Education Programs, Data Analysis System, Table B5B.

Example 2: Alt Text



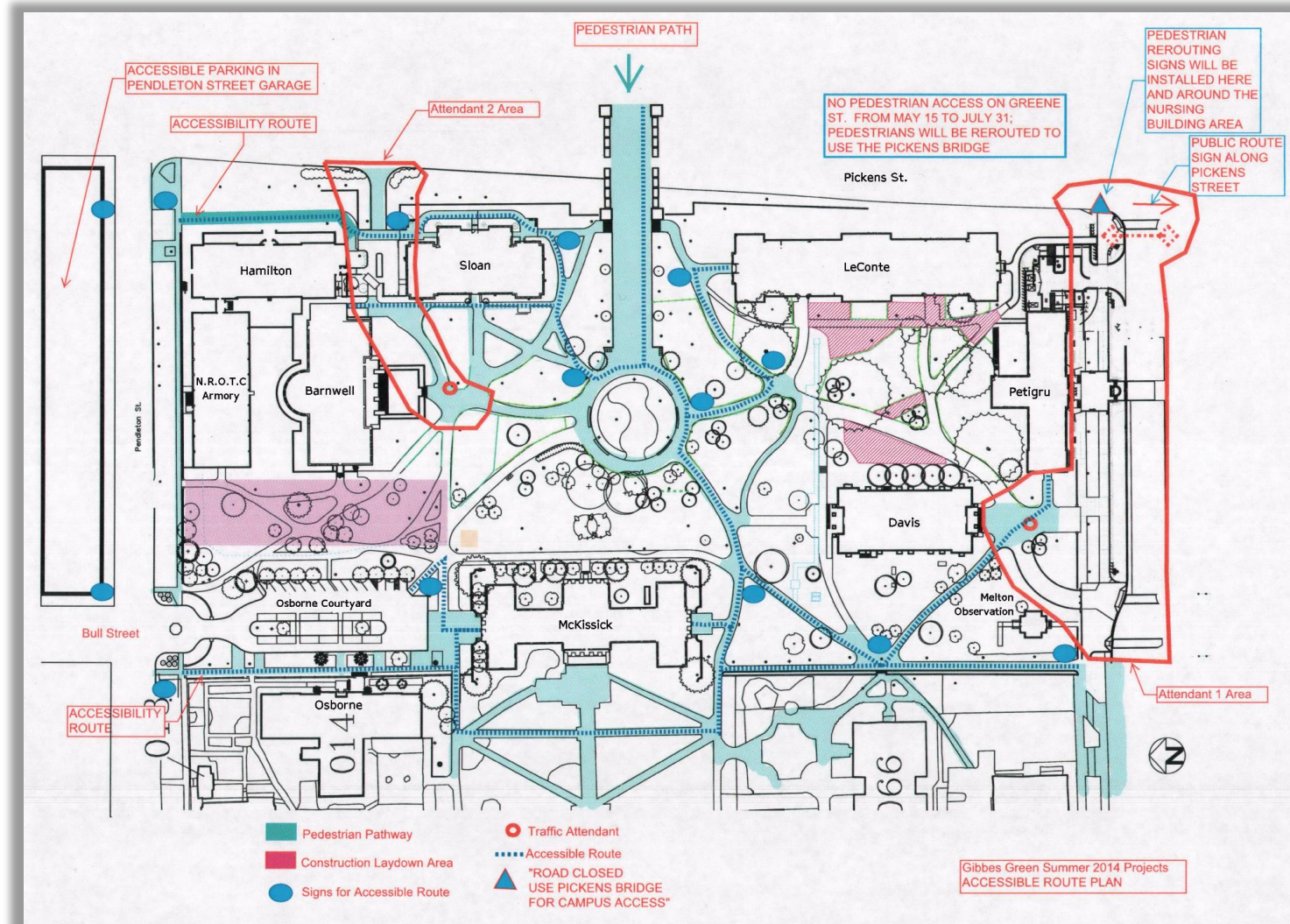
“Table 5. Percent of students served under IDEA, Part B, ages 14-21 who dropped out, graduated with a diploma, or graduated with a certificate by race (2006).

- American Indian/Alaskan Native, 39.25% dropped out, 50.71% graduated with diploma, 8.56% graduated with certificate.
- Asian/Pacific Islander, 14.48% dropped out, 68.89% graduated with diploma, 12.28 graduated with certificate.
- Black, 33.17% dropped out, 41.82% graduated with diploma, 23.20% graduated with certificate.
- Hispanic, 33.12% dropped out, 48.55% graduated with diploma, 16.75% graduated with certificate.
- White, 21.89% dropped out, 63.78% graduated with a diploma, 12.39% graduated with a certificate.

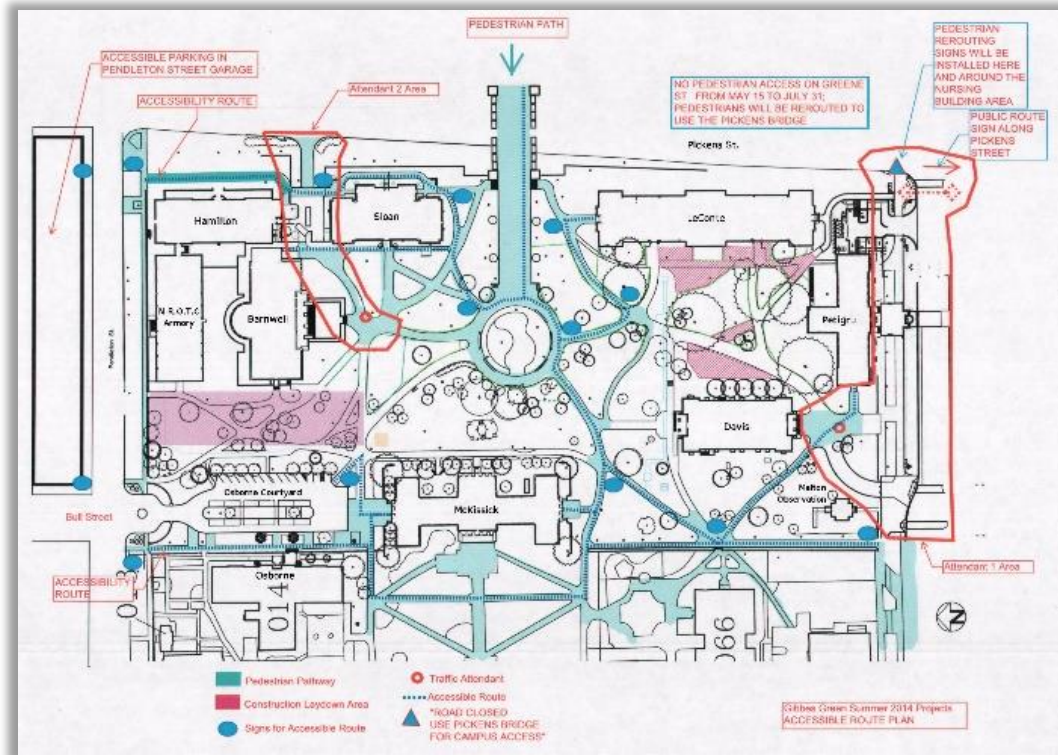
Another Option:
Create an accessible table with this data

Source: U.S. Department of Education, Office of Special Education Programs, Data Analysis System, Table B5B.”

Example 3: Image



Example 3: Alt Text



“Blueprint of eastside of campus showing accessible routes and construction.

Construction 1: Starting at Pickens/Greene Streets intersection extending along Greene Street in front of Petrigu College and stops at Greene/Bull Streets intersection.

Construction 2: Starts within the walkway from Pendleton/Pickens Streets between Hamilton and Sloan Colleges and ends in front of Barnwell College.

Accessibility in Virtual Simulations

Types of Virtual Technology

- 360 Video
- Augmented Reality
- Virtual Reality



Creating and Using Virtual Content

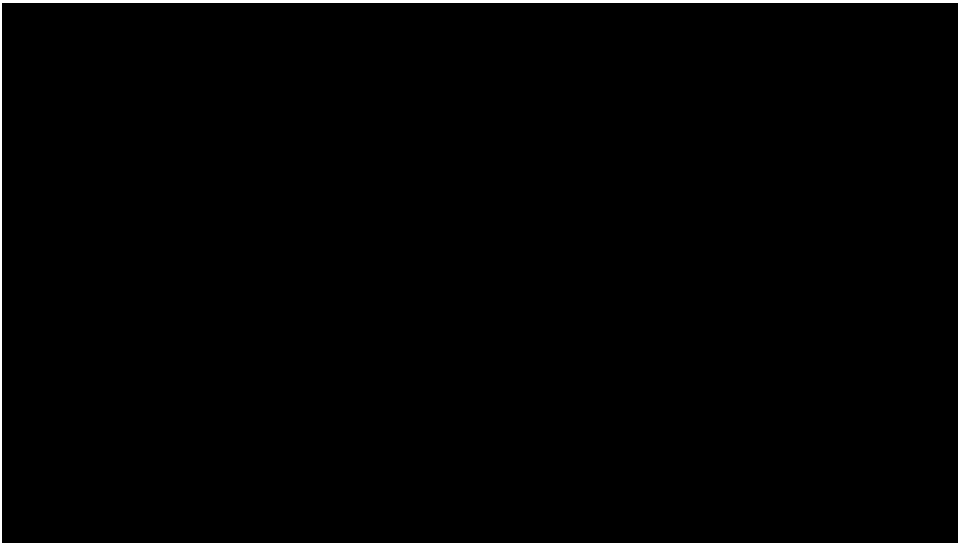
- Applications in healthcare, engineering, retail, public health, art, humanities, history....
- Challenges in academia
 - Programs that say they “won’t have disabled students”
 - Cost (\$\$ and time) to purchase and/or create (both faculty and students)
 - Alternative assignments for students with disabilities
- C

To help those with Disabilities (and those without)

- Virtual Reality, Disability and Rehabilitation
- Autism, PTSD, etc.
- Simulate disabilities for the non-disabled
- “Second Life”
- Teach empathy, cultural competencies, life skills, etc.

VR Simulation

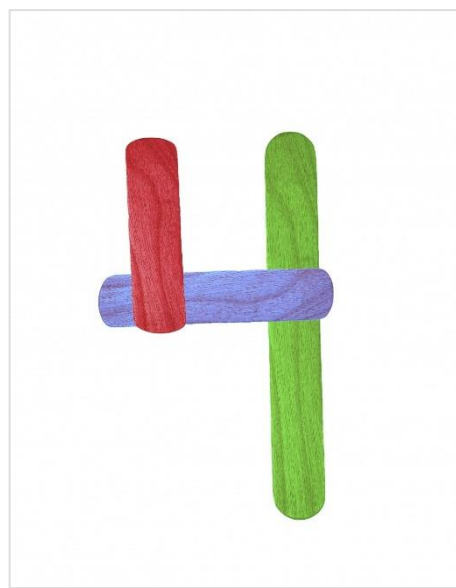
vSim for Nursing Fundamentals



Academic Classes & Training Examples

- Physics PHET
(<https://phet.colorado.edu/en/simulations/category/physics>)
- Double Spring
(<https://www.myphysicslab.com/springs/double-spring-en.html>)
- Dental training and simulation
(<https://polhemus.com/blog/entry/virtual-reality-in-dental-training-and-simulation>)
- Edutopia - Schools use games for learning and assessment
(<https://www.edutopia.org/video/schools-use-games-learning-and-assessment>)

Let's chat...





Contact Us

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Resources

- CAST (<http://www.cast.org/>)
- DO-IT (Disabilities, Opportunities, Internetworking, and Technology) (<https://www.washington.edu/doit/>)
- USC's Student Disability Resource Center ([https://sc.edu/about/offices and divisions/student disability resource center/](https://sc.edu/about/offices_and_divisions/student_disability_resource_center/))

Resources

- [CTE Accessibility](#)
- [USC Student Disability Resource Center](#)
- [Cast Universal Design for Learning: Multiple Means of Representation](#)