

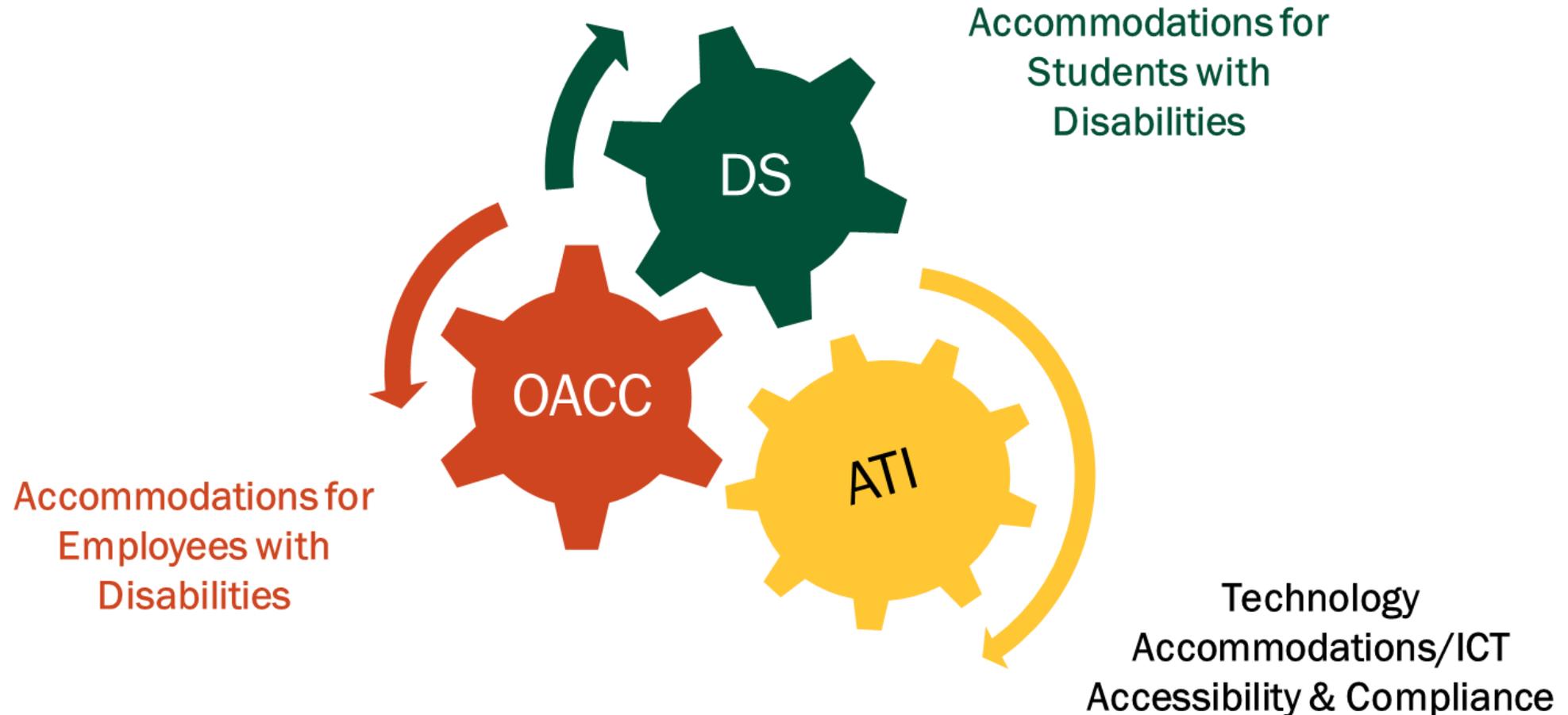


# Creating Accessible Documents

*Korey Singleton, Ph.D., ATP, RET  
Assistive Technology Initiative  
Office for Access, Compliance, and Community*

*CPH Adjunct Faculty Meeting  
March 16, 2026*

# George Mason Accessibility: *A Collaborative Partnership*



# Compliance Changes

*ADA Title II Updates, WCAG, DCAAP,  
Who Benefits*

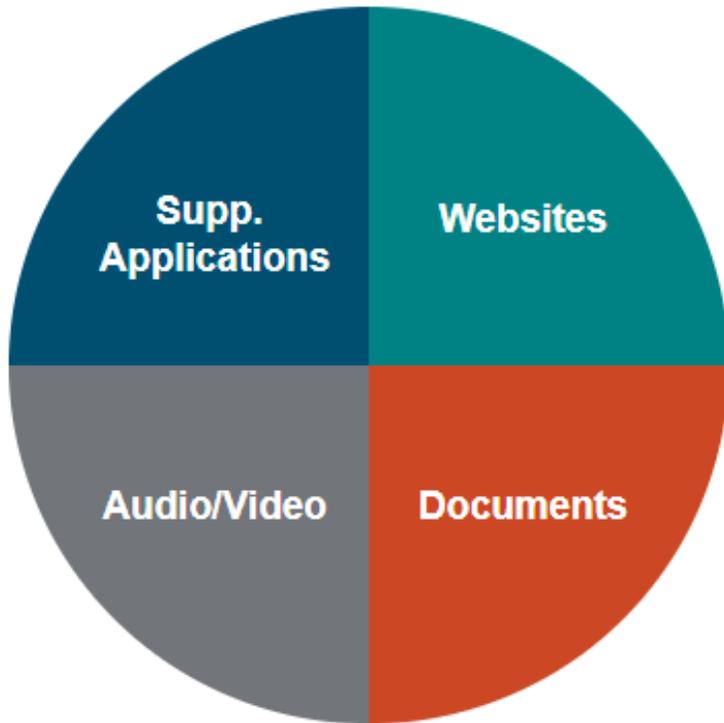
- Adopt Web Content Accessibility Guidelines (WCAG) v2.1, Level AA
- All websites and mobile apps, including digital platforms (e.g., LMS, CMS), would need to comply with the standard.
- **Compliance expected by large institutions (50k+) by April 24, 2026.**
- **Exemptions:**
  1. Archived web content
  2. Preexisting conventional electronic documents
  3. Content posted by a third-party
  4. Password-protected documents
  5. Preexisting social media posts
- **Considerations:**
  - There are exceptions to the exceptions!
  - See [DCAAP Exemptions Guide](#) for additional guidance.

## ADA Title II Updates

Signed on April 26, 2024, [recent updates](#) integrate requirements relating to digital accessibility (*websites and mobile apps*).

# Digital Content Accessibility Action Plan (DCAAP)

<https://accessibility.gmu.edu/DCAAP>



- **DCAAP Focus:**

- Emphasis on resources to support accessible *content creation* (documents, websites, audio/video, supplemental apps)

- **DCAAP Timeline:**

- PHASE 1: Fall 2024 – Pilot
- PHASE 2: Spring thru Fall 2025 – Public-Facing Websites (ONGOING)
- **PHASE 3: Fall 2025 thru Fall 2026 – Academic Courses**

- **DCAAP Objectives:**

- Auditing & Assessment
- Targeted Training & Consultation
- Remediation
- Ongoing Accessibility Monitoring

# Why is this Important?

*Assistive Technology Users, Universal  
Benefits*

# WCAG & Assistive Technology Users



[Voice Control on Mac and iOS](#) (YouTube)

# Who Else Benefits?

Digital accessibility benefits people with a wide variety of abilities and disabilities

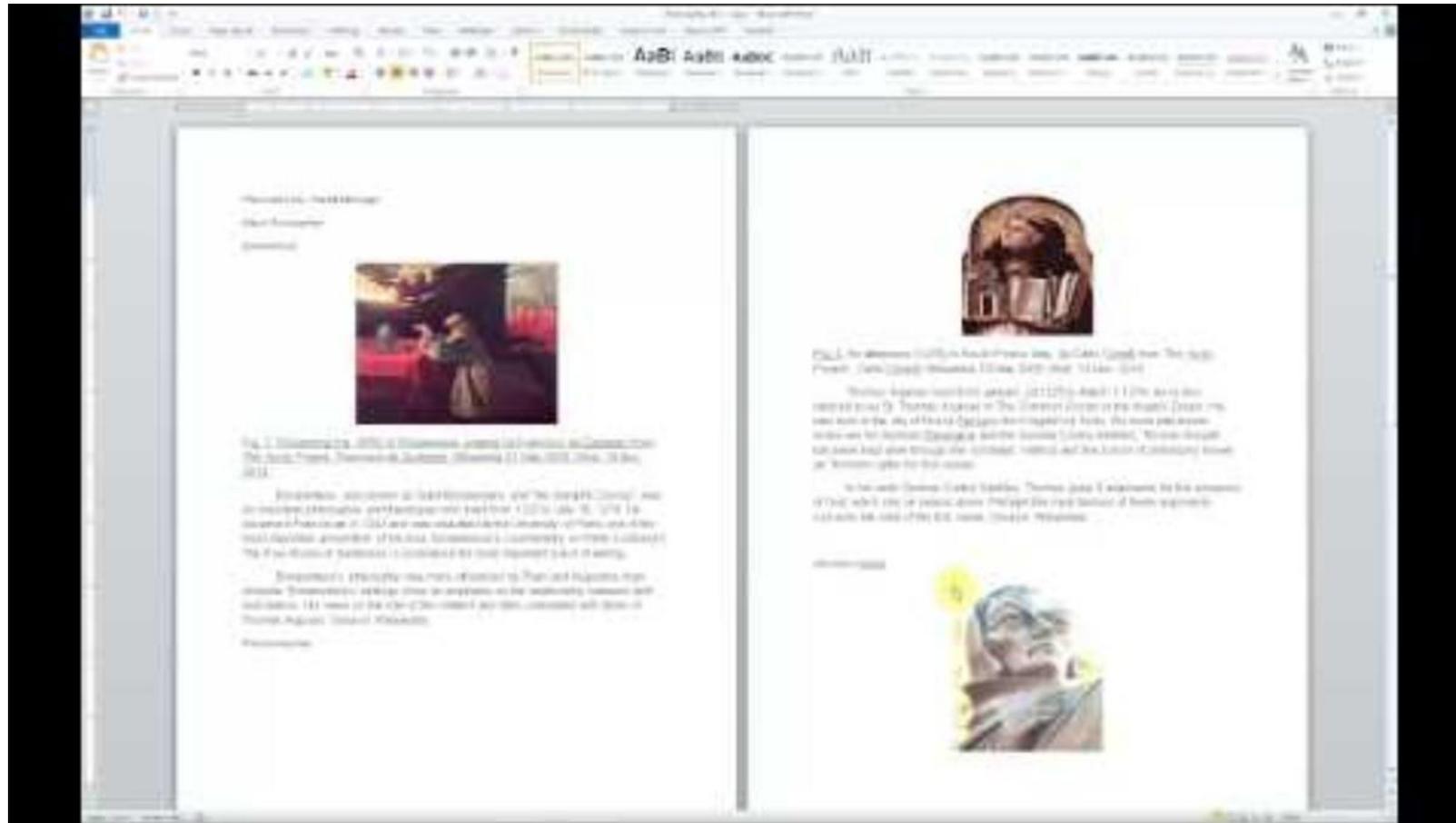
|       | Permanent  | Temporary  | Situational  |
|-------|--|--|--|
| Touch | <br>One arm     | <br>Arm injury    | <br>New parent        |
| See   | <br>Blind       | <br>Cataract      | <br>Distracted driver |
| Hear  | <br>Deaf        | <br>Ear infection | <br>Bartender         |
| Speak | <br>Non-verbal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

**Inclusive**  
A Microsoft Design Toolkit

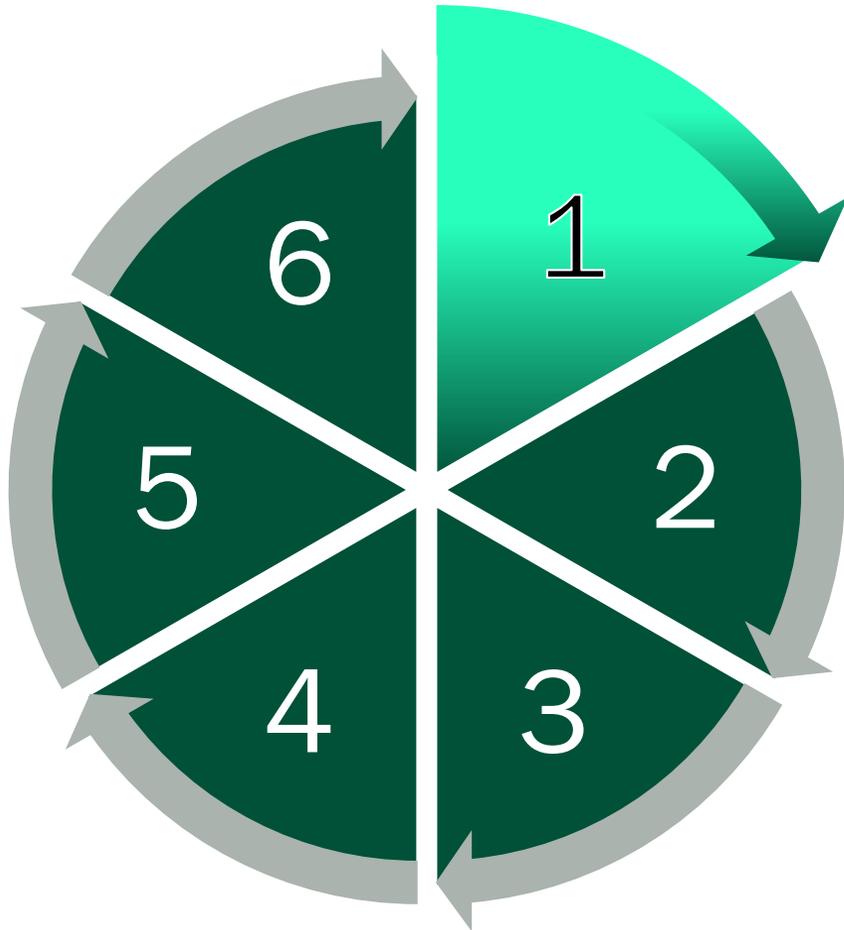
# Top 6 Tips for Creating Accessible Documents

*Alt Text, Color Contrast, Headings, Etc.*

# Screen Reader User's Experience and Microsoft Word



# Tip #1



## Add Headings Using Styles (Word)

Ensure your documents have easy-to-follow navigation, whitespace, and other structural elements like lists, easy-to-read fonts, etc.

# Anatomy of an Accessible Document

Documents should include the following:

- Easy-to-follow navigation
- Whitespace
- Lists
- Headings/Bookmarks
- Easy-to-read fonts

## The Anatomy of an Accessible Page

page 1/2

**Heading 1** → Syllabus

**Heading 2** → DL 101 - Introduction to Online Learning

**Heading 3** → **Course Information:**

- Course Title: Introduction to Online Learning
- CRN: 12345
- Credits: 3
- Term: Winter 2014

**Format lists as proper lists**

**Heading 3** → **Instructor Information:**

Hello! My name is John Doe, and I'll be your instructor for this course. I've taught this course online for the past two years. Each time I teach it, I learn something new.

**Add Alternative (Alt) text to images**



John Doe  
Instructor

**Heading 3** → **Assignments/Assessments:**

**Heading 4** → **Grading Scale**

| Grade     | Grading Scale by Points | Grading Scale by Percentages |
|-----------|-------------------------|------------------------------|
| A         | 202 - 225 +             | 90 - 100%                    |
| B         | 180 - 201               | 80 - 89%                     |
| C (or P)  | 157 - 179               | 70 - 79%                     |
| D         | 135 - 156               | 60 - 69%                     |
| F (or NP) | < 134                   | < 59%                        |

**Table Column Header**

**Table Row Header**

**Heading 4** → **Late Work & Make-up Policy**

Assignments must be completed on time in order to earn full credit.  
**(Late assignments will earn 50% credit.)**

**Sufficient Color Contrast**

page 2/2

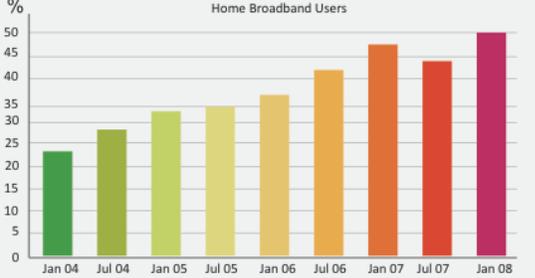
**Write meaningful link texts**

**Heading 3** → **Special Accommodations:**

Students who experience disability-related barriers should contact **Disability Services** ([www.pcc.edu/disability](http://www.pcc.edu/disability)). If students elect to use approved academic adjustments, they must provide in advance formal notification from Disability Services to the instructor.

**Heading 2** → **DL 101 - Online Learning Best Practices**

**Heading 3** → **Best Practices when using complex graphics:**



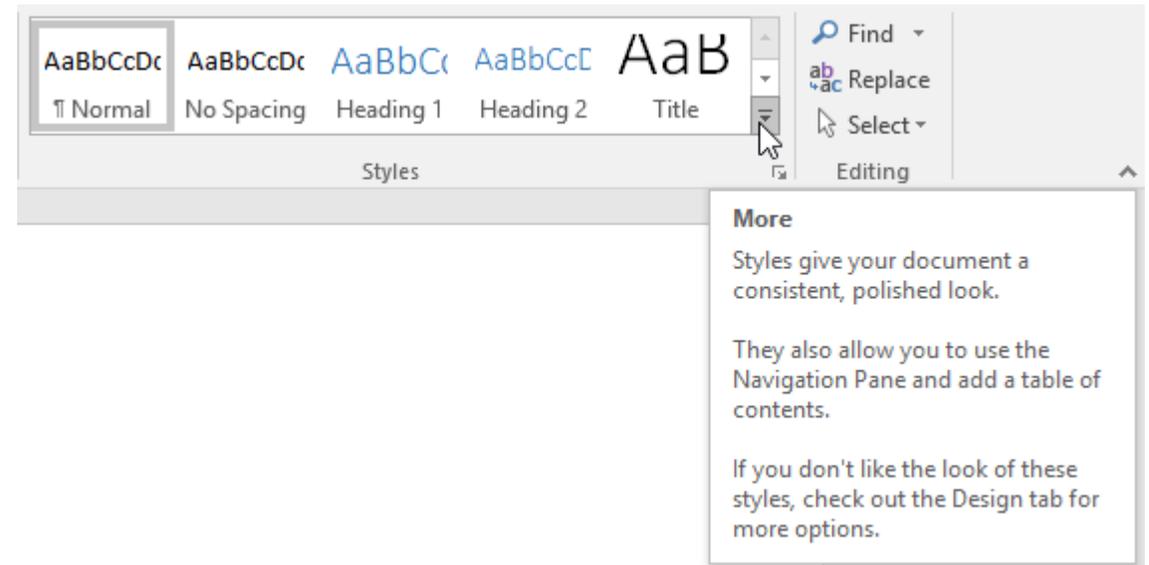
| Year   | Percentage |
|--------|------------|
| Jan 04 | 22%        |
| Jul 04 | 28%        |
| Jan 05 | 33%        |
| Jul 05 | 35%        |
| Jan 06 | 38%        |
| Jul 06 | 42%        |
| Jan 07 | 46%        |
| Jul 07 | 44%        |
| Jan 08 | 48%        |

This graph summarizes the growth of students using home broadband the period from January 2004 to 2008. The percentage increased from 22% in 2004 to 48% in 2008.

**When using complex images, include Alt text as you would for any other image but also include additional description as a caption. If more description is needed, include it in the content of the page.**

# Applying Styles in MS Word

- Changing Style Set:
  1. On the **Home** tab, click **Change Styles**.
  2. Point to Style Set, then hover the pointer over each style set to preview it.
  3. Click the Word style set to apply it to the document.



Resource: [Applying Styles in Microsoft Word](#)

# Viewing the Navigation Pane (Word)– DEMO

The screenshot displays the Microsoft Word interface. The ribbon includes tabs for File, Home, Insert, Design, Layout, References, Mailings, Review, View, MathType, Zotero, Help, and Acrobat. The Home tab is active, showing options for Clipboard, Font, Paragraph, and Styles. The Navigation Pane is open on the left, with a search bar and tabs for Headings, Pages, and Results. The Headings tab is selected, showing a list of document sections: EDIT 526, Assignment Guidelines, Hints, Midland's Operations, and Exploration & Production. The 'Exploration & Production' heading is highlighted in blue. Two arrows point from this heading to the corresponding text on the right. The document content on the right shows the heading 'Midland's Operations' followed by a paragraph of text, and then the heading 'Exploration & Production' followed by another paragraph of text.

**Midland's Operations**

Midland Energy Resources had been incorporated had more than 80,000 employees. Exhibits 1 and financial statements. Exhibit 3 presents selected

**Exploration & Production**

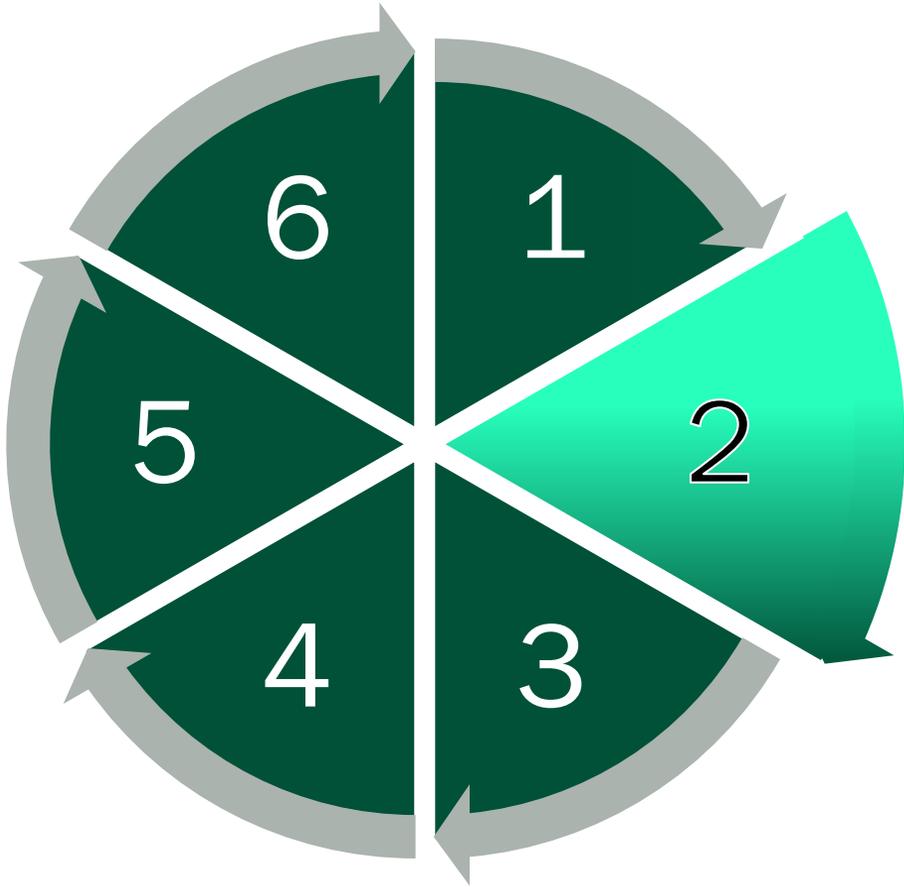
Midland engaged in all phases of exploration, and these, production, dominated the E&P division's Midland entrusted approximately 2.40 million to

# Adding Structure to your Presentations (PPT)- DEMO



Use the built-in placeholders for title, text, etc.

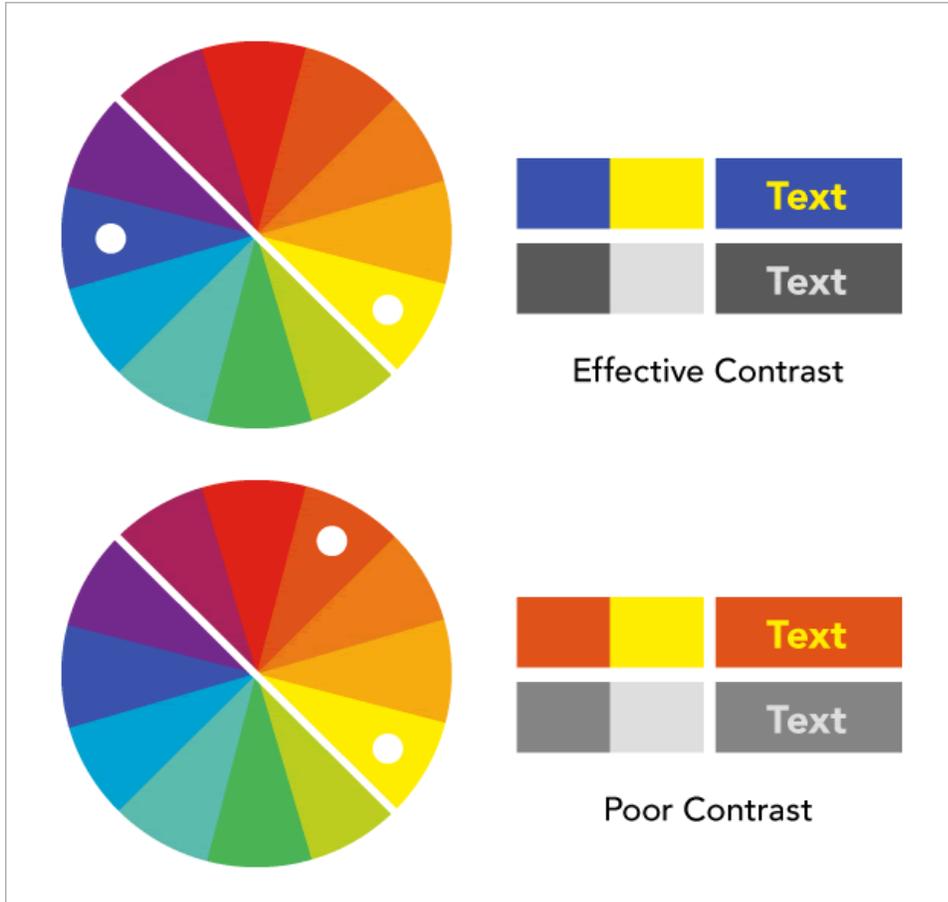
## Tip #2



Use good color contrast. Also avoid relying on color alone to convey important information.

# Example (Use Good Color Contrast):

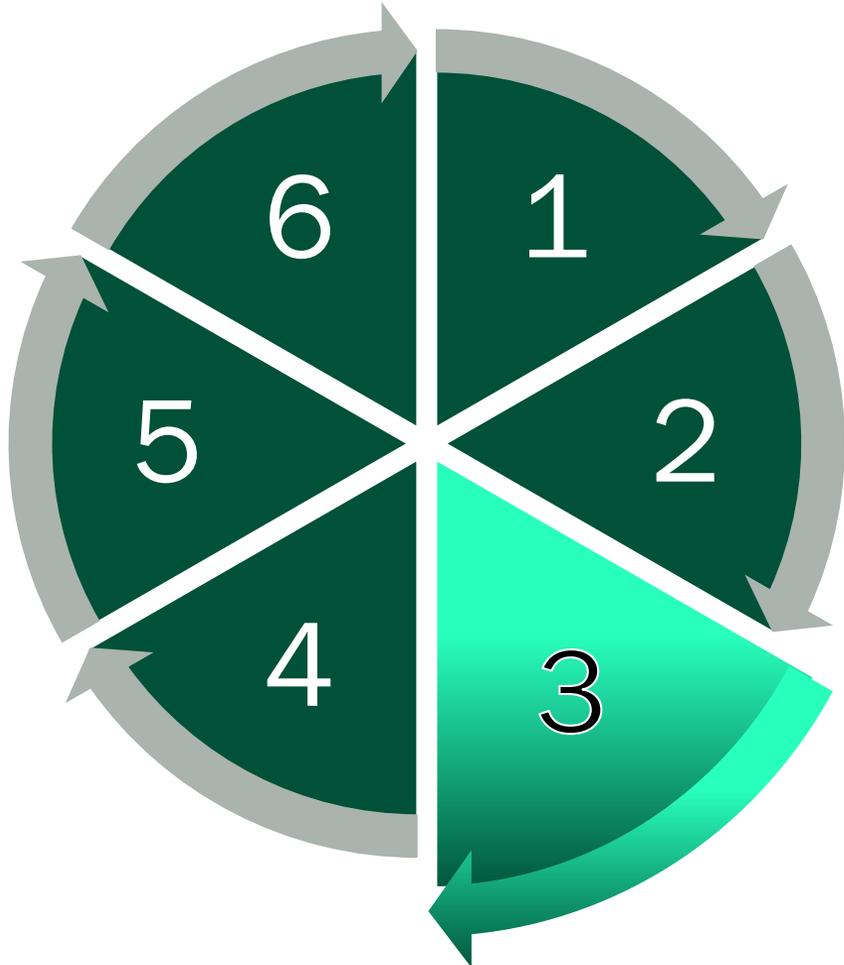
## Good Contrast vs. Poor Contrast



This benefits individuals who may have colorblindness or those with low vision. It is also beneficial for drawing interest to important content.

Try to pick colors that are in opposite quadrants of the color wheel.

# Tip #3

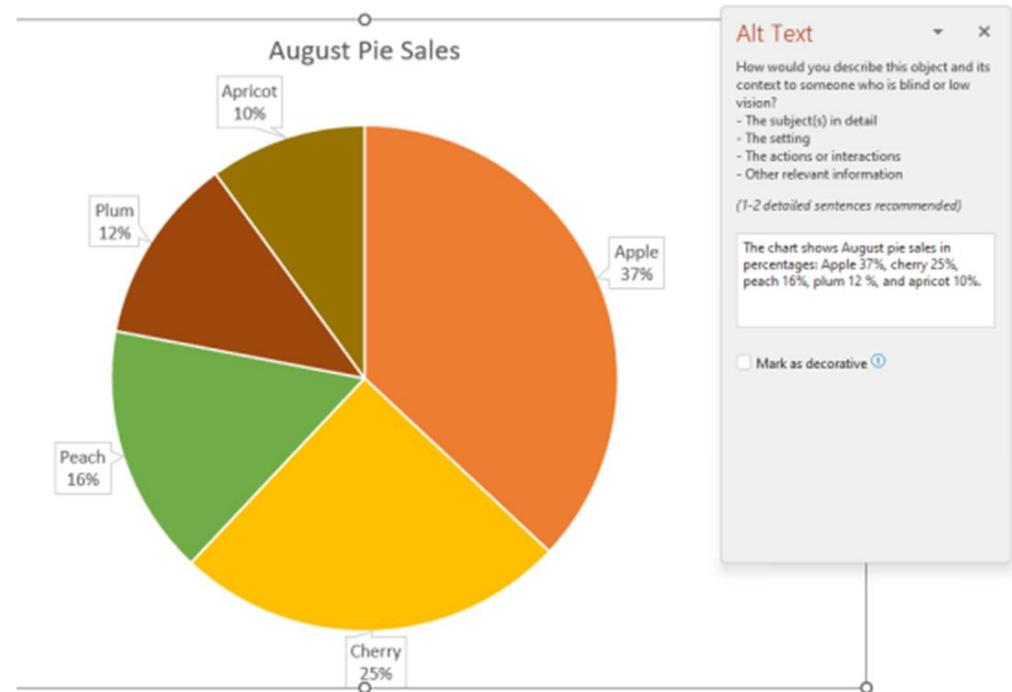


Provide alternative text descriptions for all *meaningful* images.

# Alt Text Descriptions

## E.g., Chart/Graph in Word or PPT

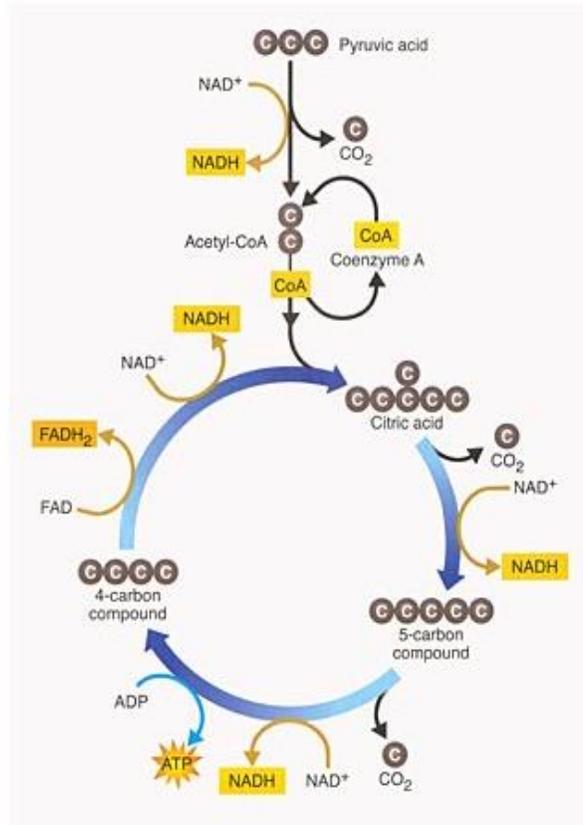
- Alternative text descriptions, or **alt text**, provide useful information for individuals who are unable to see the content.
- Keep it simple! Focus on what the user should take away from the image.
- If the image has no meaningful information, mark it as **decorative**.
- **Alt text** is supported by most word processing applications (i.e., Word, PPT, Acrobat, Outlook, etc.)



# Complex Image Descriptions

## E.g., *Krebs Cycle* Infographic

### Process Diagram as Flow Chart



### Description:

The Krebs Cycle is depicted as a linear reaction which leads downward into a cyclical reaction. Here, the steps of the reactions are presented as lists.

#### 1. Linear Reaction

- Pyruvic acid, a 3-carbon compound.
- One carbon molecule is lost as part of a CO<sub>2</sub> molecule.
- An NAD-positive molecule enters the reaction, then leaves as NADH.
- A 2-carbon acetyl group remains.
- Coenzyme A, or CoA, joins the 2-carbon acetyl group to form Acetyl CoA.
- CoA leaves the reaction as it delivers the acetyl group to the circular reaction.

#### 2. Circular Reaction

- The two-carbon acetyl group joins a four-carbon compound to form a 6-carbon compound, citric acid.
- A carbon is lost as CO<sub>2</sub>.
- NAD-positive enters, then leaves as NADH.
- A 5-carbon compound remains.
- another carbon is lost as CO<sub>2</sub>.
- NAD-positive comes in and leaves as NADH.
- ADP comes in and leaves as ATP.
- A four-carbon compound remains.
- FAD comes in and leaves as FADH<sub>2</sub>.
- NAD-positive comes in and leaves as NADH.
- Back again at the top of the circular reaction, a two-carbon acetyl group from the linear reaction enters, forming the 6-carbon citric acid at the beginning of the cycle.

# Tip #4



When using tables, keep it simple!

# Consider the following when using tables...

- Table headers must be identified
- Make data predictable and easy to navigate (i.e., one column row header, one row for column headers)
- When possible, avoid using split or merged cells

*Example of simple table*

| Name | Date of Birth    | Birthplace |
|------|------------------|------------|
| Jane | July 20, 2006    | Nevada     |
| Joe  | February 5, 2001 | Minnesota  |

*Example of table with merged/split cells*

| Name | Date of Birth |      | Birthplace |
|------|---------------|------|------------|
|      | Month         | Year |            |
| Jane | July          | 2006 | Nevada     |
| Joe  | February      | 2001 | Minnesota  |

# Screen readers and tables

| Dept. Code | Course # | Section | Max. Enrollment | Current Enrollment | Room Number | Days          |
|------------|----------|---------|-----------------|--------------------|-------------|---------------|
| BIO        | 100      | 1       | 15              | 13                 | 5           | Mon, Wed, Fri |
| ENGL       | 200      | 2       | 15              | 7                  | 8           | Tues, Thurs   |
| PSYCH      | 100      | 1       | 15              | 15                 | 13          | Wed           |

## Table Without Markup (Read Left-to-Right, Top-to-Bottom)

Department Code, Course Number, Section, Max Enrollment, Current Enrollment, Room Number, Days, BIO, 100, 1, 15, 13, 5, Mon, Wed, Fri, ENGL, 200, 2, 15, 7, 8, Tues, Thurs, PSYCH, 100, 1, 15, 15, 13, Wed

# What the screen reader “sees” (*without* headers identified)

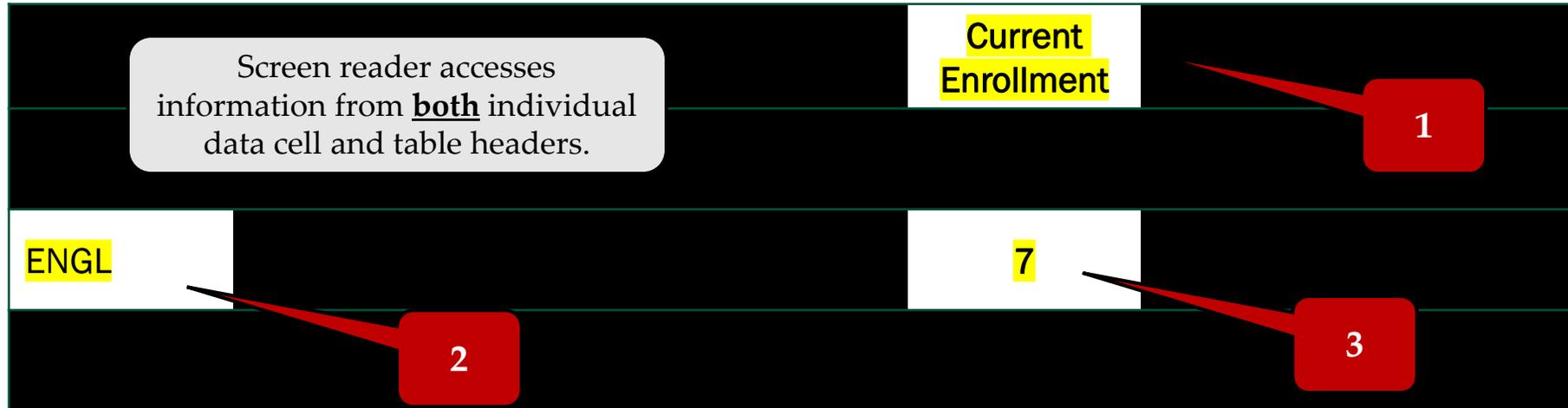
Screen reader only accesses  
information from  
individual data cell

7

## Table Without Markup (Read Left-to-Right, Top-to-Bottom)

Department Code, Class Number, Section, Max Enrollment, Current Enrollment,  
Room Number, Days, BIO, 100, 1, 15, 13, 5, Mon, Wed, Fri, ENGL, 200, 2, 15, 7, 8,  
Tues, Thurs, PSYCH, 100, 1, 15, 15, 13, Wed

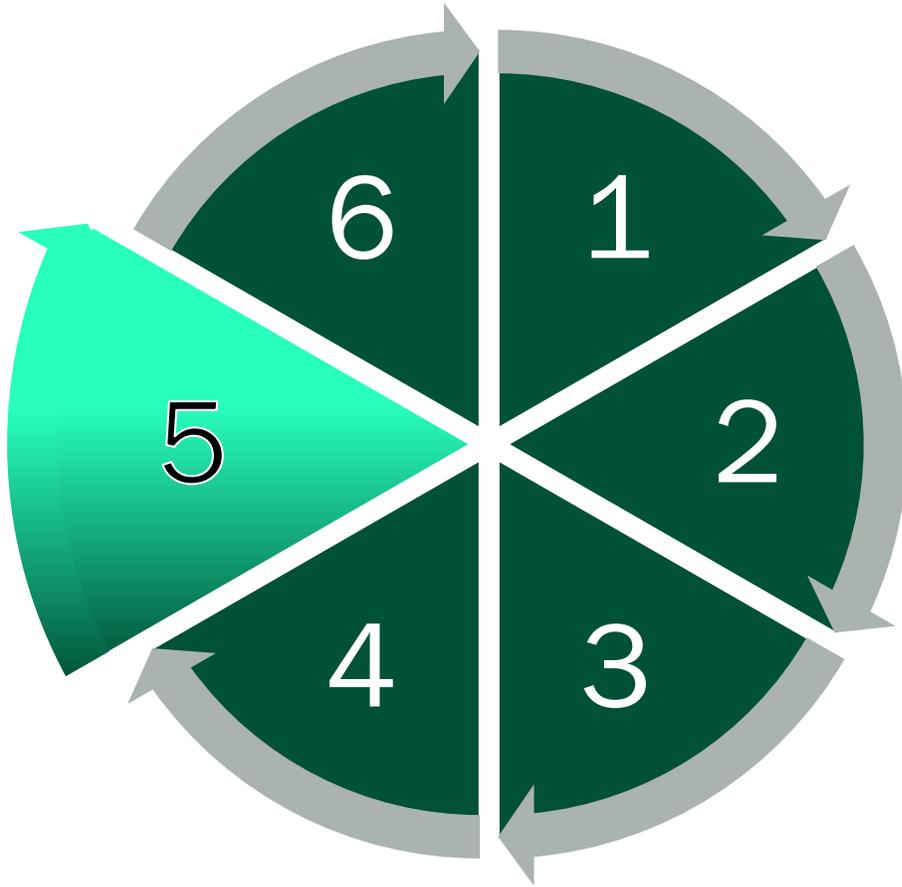
# What the screen reader “sees” (with headers identified)



## Table With <th> tags and scope attributes

Department Code, Class Number, Section, Max Enrollment, **Current Enrollment**,  
Room Number, Days, BIO, 100, 1, 15, 13, 5, Mon, Wed, Fri, **ENGL**, 200, 2, 15, **7**, 8,  
Tues, Thurs, PSYCH, 100, 1, 15, 15, 13, Wed

# Tip #5



**Use meaningful hyperlink text.**  
Text should indicate where user will go if they click on the link.

# Use Meaningful Hyperlink Text

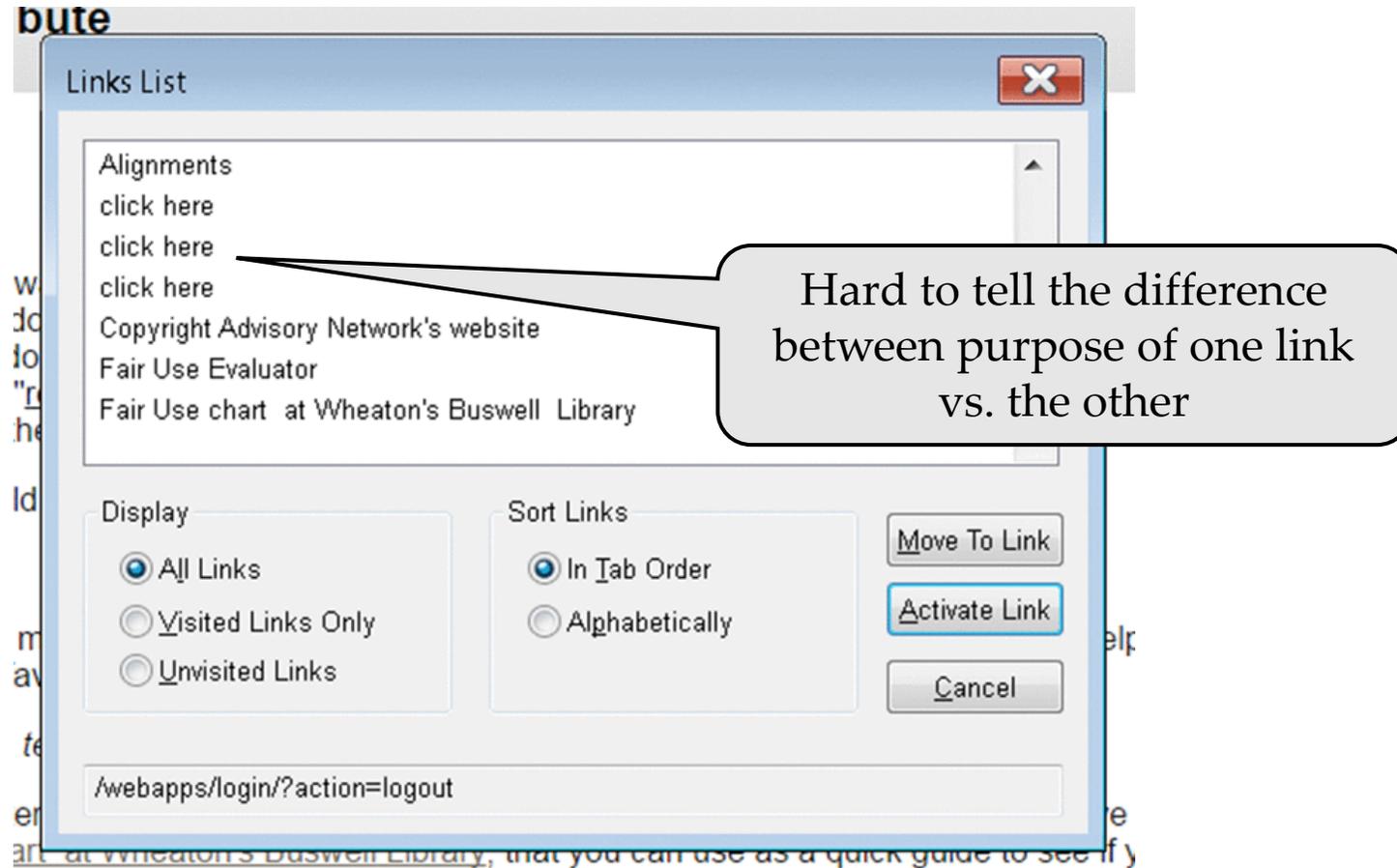
E.g., Using descriptive links, not URLs or text like “***click here***”, or “***read more***”

- E.g., Use [George Mason University Home Page](#) as opposed to <http://www.gmu.edu>



Image taken from <https://www.shutterstock.com/search/click+here+button>

# How screen reading apps “see” hyperlinks



# How screen reading apps “read” hyperlinks

## *Poor Design*

Try reading this article about a Mason alum: <https://www2.gmu.edu/focused-your-future/lights-camera-action-mason-alum-creates-own-film-festival>.

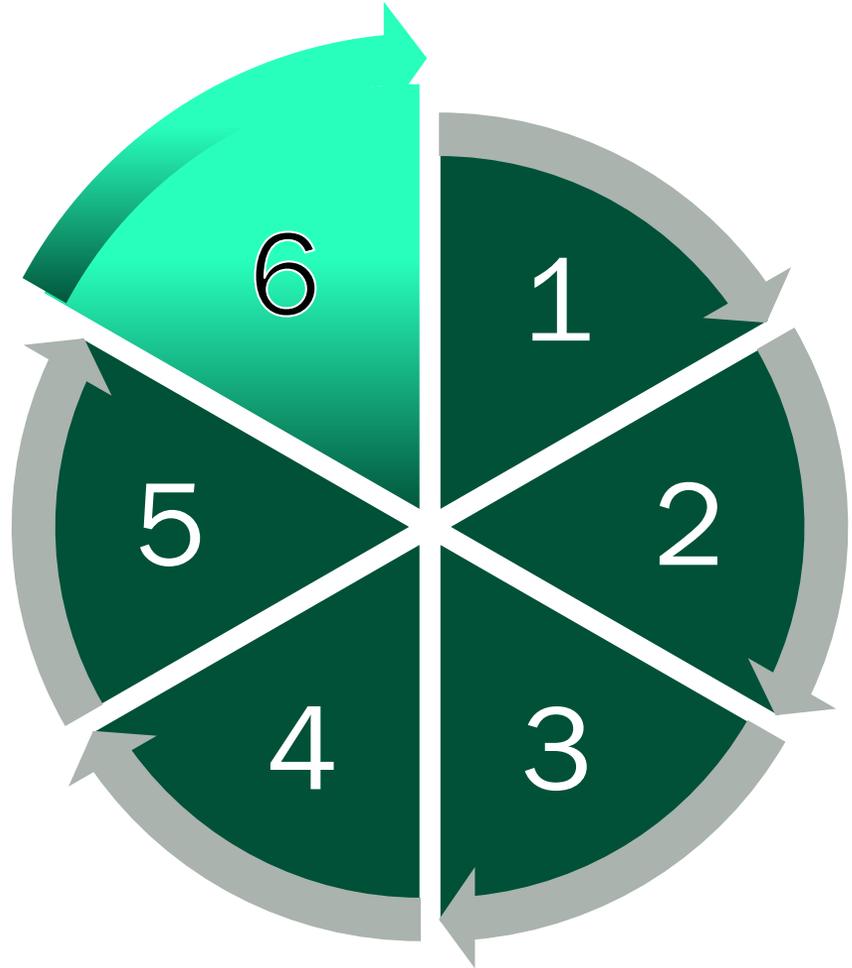


## *Better Design*

Try reading this article about a Mason alum: [Lights! Camera! Action! Mason Alum Creates Own Film Festival](#).



# Tip #6



**Use an accessibility checker!**

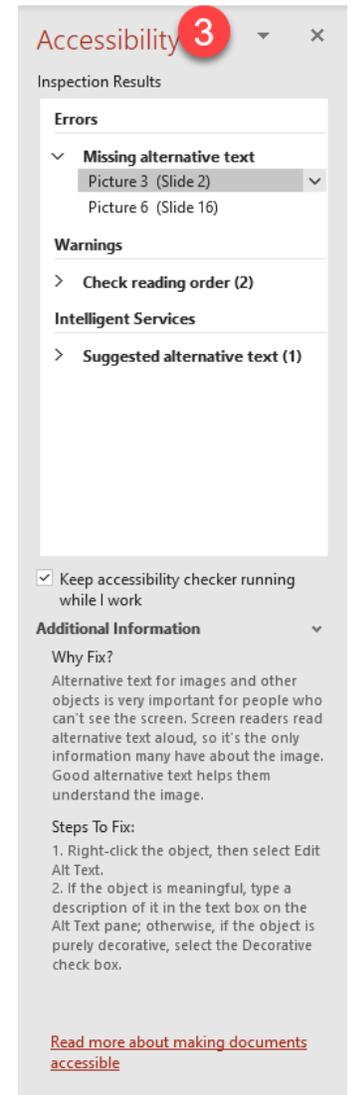
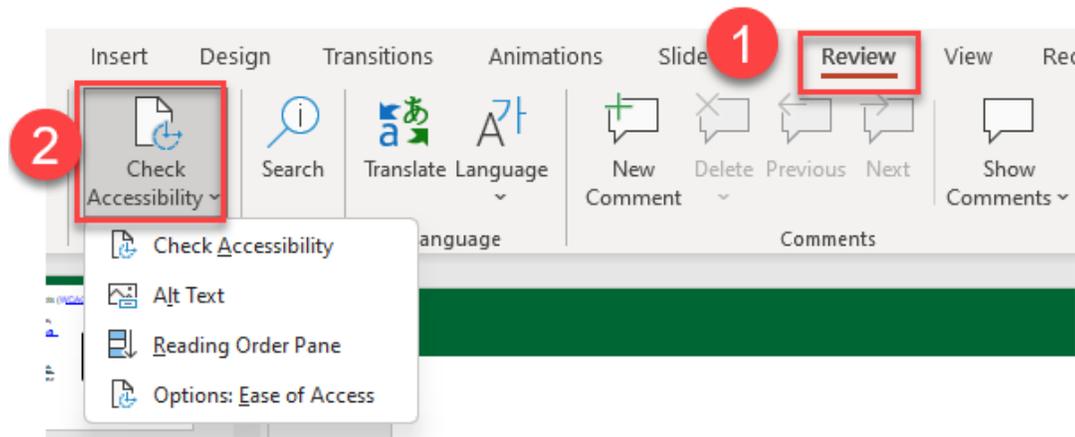
Accessibility checkers review many of the design elements covered in this presentation.

# Microsoft's Built-In Accessibility Checker

- Microsoft's built-in accessibility checker reviews the accessibility of Word, PowerPoint, Excel documents. It also reviews messages being composed in Outlook.
- Has improved considerably in recent years and addresses accessibility concerns for most users.
- **Resources:** [Creating Accessible Word Documents](#) (Microsoft); [Creating Accessible PowerPoint Presentations](#) (Microsoft)

In Word, PPT, Excel, Outlook (*when composing message*)...

- Select *Review* tab.
- Select **Check Accessibility**.



# Panorama (Canvas)

## Faculty Supports

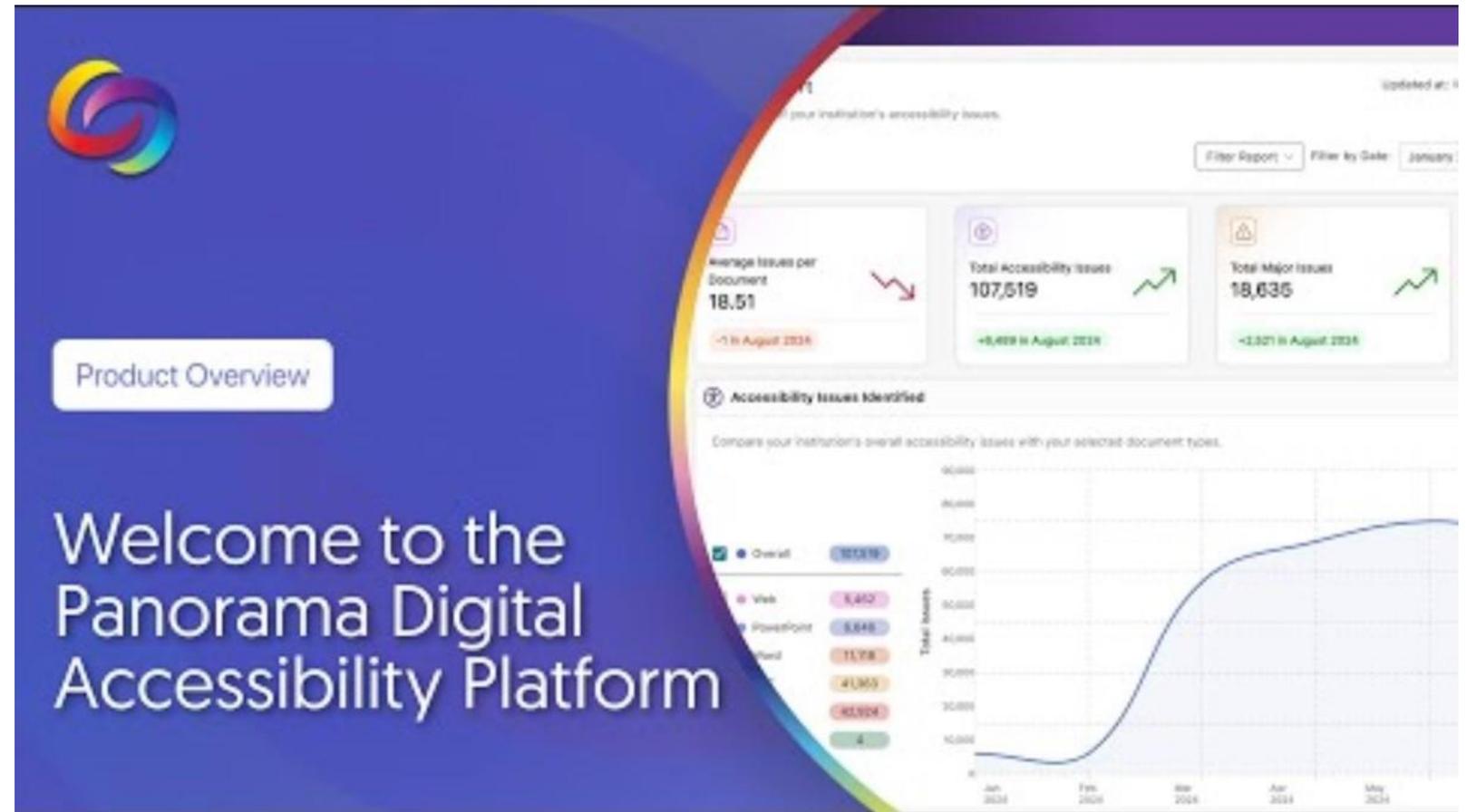
- Help faculty members identify course content that does not meet minimum accessibility standards.
- Prioritize content flagged with **RED** or **ORANGE** accessibility score icons.
- *Document Remediation Responsibilities: Word/PPT (Faculty), PDFs (ATI)*
- Aiming for all active courses to report a baseline accessibility score of 70 by end of Spring 2026

## Student Supports

- Access to alternative formats

## Institutional Supports

- Institutional/Dept/Course Dashboards



# Additional Considerations

*Math/STEM Content*

# Accessible Math Authoring Tools

## Equation Editor

- Author content in Microsoft 365 (Word, PPT)

## MathType (Third-party)

- Microsoft 365 plug-in (Word, PPT)

## Mathpix (Third-party)

- Web-based solution. Allows end users to convert snips into accessible digital math

## Canvas Math Editor

- Author LaTeX and MathML content directly in LMS

## Benefits

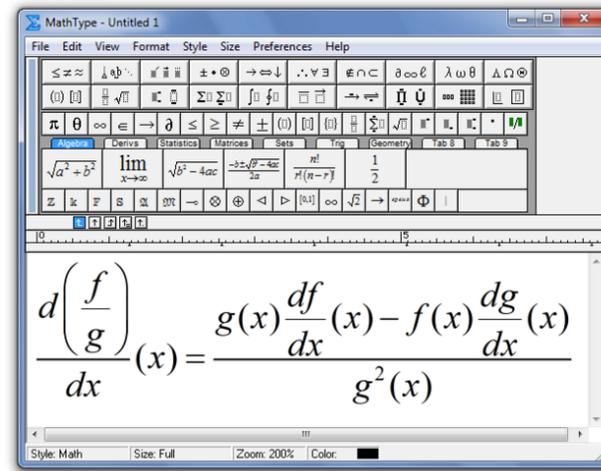
- Help faculty members create accessible STEM content that meets ADA Title II compliance standards.
- Supports students' ability to access STEM in alternative formats like MathML and Braille (i.e., Mathpix, MathType)



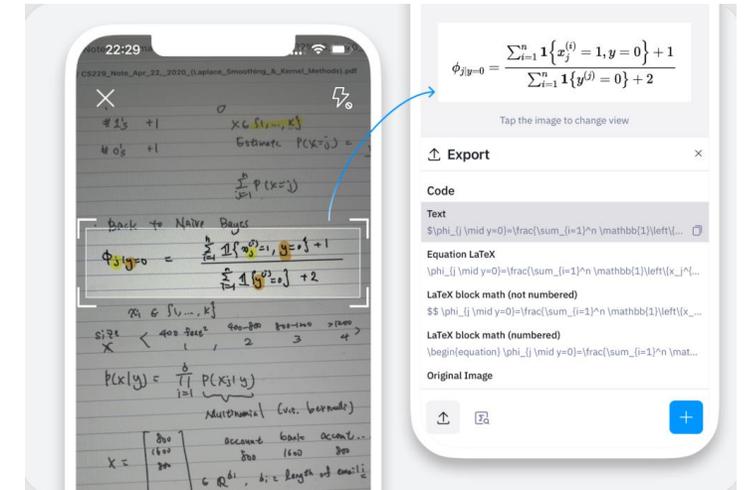
[Microsoft 365 Equation Editor](#)



[Canvas Math Editor](#)



[MathType](#)  
(3<sup>rd</sup>-party)



[Mathpix](#)  
(3<sup>rd</sup>-party)

# Mathkicker.ai

## Benefits

- Introduced in the last year or so.
- Does a pretty good job scanning and converting full pages of content as opposed to just snippets.
- Handles handwritten math well.
- Low cost

## Drawbacks

- Still requires some editing to make the content fully accessible

Vertex form:  $a(x-h)^2+k$   
Vertex:  $(h,k)$

- Find the vertex of  $f(x) = (-3x^2 + 9x) - 10$   
 $= -2(x^2 - 3x) - 10$

---

- Find the vertex of  $f(x) = (-3x + 1x) - 10$   
 $= -3(x^2 - 3x) - 10$   
 $= -3\left(x - \frac{3}{2}\right)^2 - \left(\frac{3}{2}\right)^2 - 10$   
 $= -3\left(x - \frac{3}{2}\right)^2 - 10 - \frac{9}{4}$

PDF-version

HTML-version

Vertex form:  $a(x-h)^2+k$   
Vertex:  $(h,k)$

- Find the vertex of  $f(x) = (-3x^2 + 9x) - 10$   
 $= -2(x^2 - 3x) - 10$
- Find the vertex of  $f(x) = (-3x + 1x) - 10$   
 $= -3(x^2 - 3x) - 10$   
 $= -3\left(x - \frac{3}{2}\right)^2 - \left(\frac{3}{2}\right)^2 - 10$   
 $= -3\left(x - \frac{3}{2}\right)^2 + 3\left(\frac{3}{2}\right)^2 - 10$   
 $\left(\frac{3}{2}, 3\left(\frac{3}{2}\right)^2 - 10\right)$   
 $x^2 + 8x = (x+4)^2 - 16$   
 $(x+a)^2 = x^2 + ax + ax + a^2$   
 $= x^2 + 2ax + a^2$

# Resources

*ATI Website, Panorama, Training,  
DCAAP*

# ATI Website:

## *Request Support Services*

### Request AT & ICT Accessibility Support Services

To request supports and services, please use one of the following links :

- + Request Captions, Transcripts, or Audio Descriptions for My Media Content
- + Request Support with Testing Websites and/or Apps for Accessibility
- + Request a Document Accessibility Review
- + Request Accessible Textbooks, Exams, and Quizzes
- + Request an Assistive Technology Assessment
- + I Would Like Training on Assistive Technology and/or Digital Accessibility

URL: <https://ati.gmu.edu/welcome/requesting-services/>

# Canvas: Use *Panorama's DocHub*

The screenshot displays the Panorama DocHub interface. On the left, a sidebar shows navigation options like Home, Analytics, Pages, Assignments, and Discussions. A modal window titled "Panorama Can Help Solve This Issue" is open, explaining that images need alternative descriptions and providing a text input field. The main content area shows a document titled "The Future of Transportation" with an illustration of various transport modes. A "Severe" issue notification is overlaid on the image, stating "The item does not have an alternative description". On the right, an "Accessibility Report" panel shows a 57% score, 1 minor issue, 2 major issues, 1 severe issue, and 4 total issues. The report lists three specific issues: missing title, image not in line with text, and missing alternative description. At the bottom, there is an "Update Document" section with an "Upload" button and a "Replace" option.

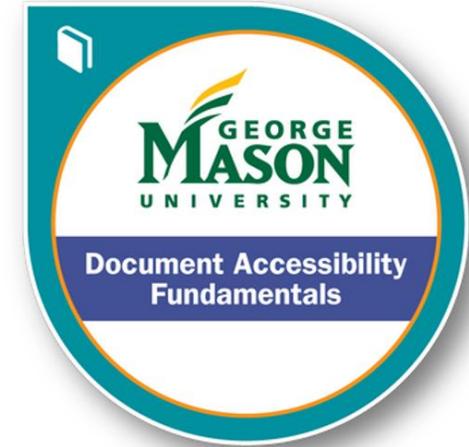


URL: <https://ati.gmu.edu/caresguide/panorama/>

DocHub (non-Canvas users): <https://gmu.panorama.yuja.com/>

# Training Options

- Short resources: [Word and PowerPoint Accessibility Quicksheets](#)
- [Self-guided Courses](#)
  - **Document Accessibility Fundamentals**
    - Focuses on **Word, PowerPoint, and PDF**
    - Participants earn digital badge, \$\$ HR Impact Award
  - **Mini-Courses (NEW!):**
    - Self-enroll, self-guided courses focused on creating accessible Word documents and PowerPoint presentations (**Target:** Instructional faculty, content creators)
    - **Course length:** ~2-3 hours
- Customized Workshops



# Contact Us

***Assistive Technology Initiative***  
**Office of Access, Compliance, and Community**  
**George Mason University**

Location: Aquia Building, Room 238  
MSN: 6A11  
Phone: 703-993-4329  
Email: [ati@gmu.edu](mailto:ati@gmu.edu)

To learn more about DCAAP, visit:

- <https://ati.gmu.edu>
- <https://accessibility.gmu.edu>

