

SKILLSCOMMONS ACCESSIBILITY CHECKPOINTS

METHODS FOR PDF FORMATS
(ASSISTIVE TECHNOLOGIES)

Evaluation time

Estimate evaluation time per book:

- Novice rater: Approx. 2 hours
- Experienced rater: 1 ~ 1.5 hours

Depending on book content and amount of material,

- STEM books
- Books with more pages
- Books with lots of images

Takes longer to evaluate

Accessibility Checkpoints

1. Accessibility Documentation
2. Text Access
3. Text Adjustment
4. Reading Layout
5. Reading Order
6. Structural Markup/Navigation
7. Tables
8. Hyperlinks
9. Color and Contrast
10. Language
11. Images
12. Multimedia
13. Flickering
14. STEM
15. Interactive Elements

How to access texts

STEPS:

1. Visit Cool4Ed eTextbook Reviews site @ <http://www.cool4ed.org/reviews.html>



How to access texts


STEPS:

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<http://www.cool4ed.org/reviews.html>
2. Select desired titles
3. Search for preferred formats
4. Download text

How to access texts

STEPS:

2. Select desired titles

Introduction to Statistics		
		
MATH 110		
eTextbook	eTextbook Reviews	
<i>Introductory Statistics From BC Campus</i>	Tami Matsumoto, CCC Faculty Andrew Noymer, UC Faculty Hasan Rahim, CCC Faculty	
<i>Introductory Statistics From Open Stax College</i>	Tami Matsumoto, CCC Faculty Andrew Noymer, UC Faculty Hasan Rahim, CCC Faculty	
<i>Online Statistics Education: An Interactive Multimedia Course of</i>	Tami Matsumoto, CCC	

How to access texts

3. Search for preferred format and download text



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Formats

Online texts are available in various formats and should be evaluated based on the following rankings:

1. EPUB3
2. HTML
3. Microsoft Word
4. PDF

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Formats

In other words, EPUB3 is ideal, but if it is not available, we move down the list and search for the next available format

4. Download textbook or open link (if applicable)

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Formats

Note: This is an OpenStax text. Although EPUB3 isn't listed, it is available!

To determine if there is an EPUB3 format for OpenStax texts, additional navigation is required.

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Introductory Statistics

Book by: OpenStax College

 Contents +  Metadata +  Tools +

 Back  Next 

ASK US

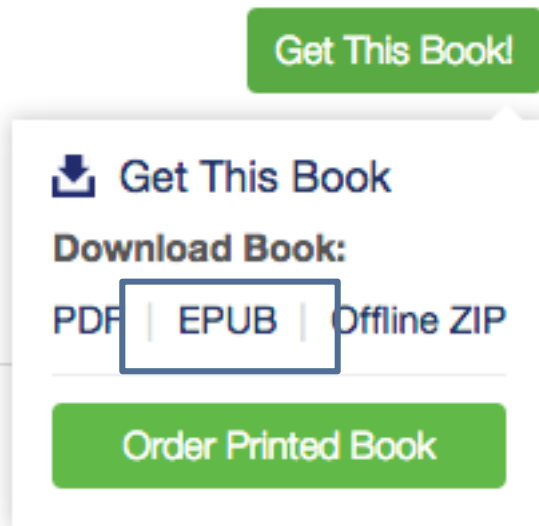
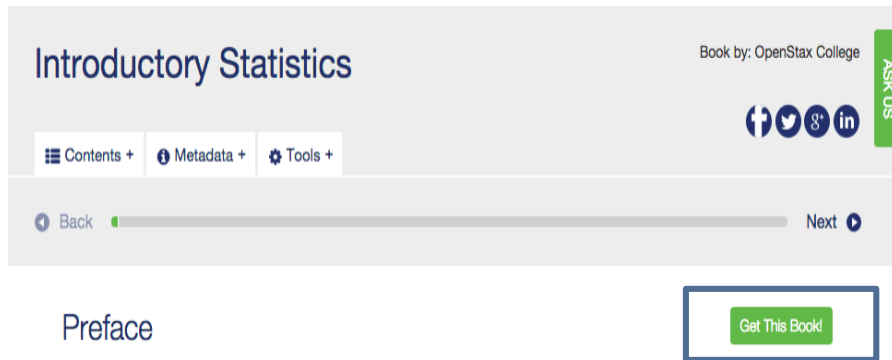
Preface

Get This Book!

How to access texts

Now you can download the EPUB file!

Note: At the time of this writing, only OpenStax texts have been found to need additional navigation. All other texts have been found to clearly list out all available formats.



Checklist

All information obtained from textbook evaluation will be entered into checklists:

HTML Accessibility Checklist					
Content	Name of book	Format	OS Used	Total Number of Pages	Number of Chapters
		HTML			

Check point	Criteria	Amount of Material	Pass/Fail
1 Acc. Documentation	A. URL to Formal Accessibility Policy		
1 Acc. Documentation	B. URL to Accessibility Statement		
1 Acc. Documentation	C. URL to Accessibility Evaluation Report		
2 Text Access	Text to Speech	0	
3 Text Adjustment	A. Compatible	0	
3 Text Adjustment	B. Adjust font and colors	0	
4 Reading Layout	A. Reflow the text	30 web pages	
4 Reading Layout	B. Page # match printed material & reflow of text	30 web pages	
5 Reading Order	Digital resource layout		
6 Structural Markup	A. Navigation text		
6 Structural Markup	B. Lists		
6 Structural Markup	C. eReader application		
7 Table Markup	Table Markup		
8 Hyperlinks	Hyperlinks (within book)		
8 Hyperlinks	Hyperlink (live on internet)	20 links	
9 Color and Contrast	A. Color redundancy		
9 Color and Contrast	B. Contrast		
10 Language	A. Markup		
10 Language	B. Passage Markup		
11 Images	A. Non-decorative		
11 Images	B. Decorative		
11 Images	C. Complex		
12 Multimedia	A. Text Track		
12 Multimedia	B. Transcript		
12 Multimedia	C. Assistive Player		
13 Flickering	Flickering	10 links	
14 STEM	A. Markup (figures)	10 figures	
14 STEM	A. Markup (graphs)	10 graphs	
14 STEM	A. Markup (equation)	10 equations	
14 STEM	B. Notation Markup (figures)	10 figures	
14 STEM	B. Notation Markup (graphs)	10 graphs	
14 STEM	B. Notation (equation)	10 equations	
15 Interactive Elements	A. Keyboard		
15 Interactive Elements	B. Markup		
15 Interactive Elements	C. Text Prompts		

EPUB Accessibility Checklist					
Content	Name of book	Format	OS Used	Total Number of Pages	Number of Chapters
		EPUB			
#	Check point	Criteria	Amount of Material	Pass/Fail	Additional Info
1	Acc. Documentation	A. URL to Formal Accessibility Policy			
1	Acc. Documentation	B. URL to Accessibility Statement			
1	Acc. Documentation	C. URL to Accessibility Evaluation Report			
2	Text Access	Text to Speech	0 pages		
3	Text Adjustment	A. Compatible	0 pages		
3	Text Adjustment	B. Adjust font and colors	0 pages		
4	Reading Layout	A. Reflow the text	0 pages		
4	Reading Layout	B. Page #s match printed material & reflow of text	0 pages		
5	Reading Order	Digital resource layout			
6	Structural Markup	A. Navigation text			
6	Structural Markup	B. Lists			
6	Structural Markup	C. eReader application			
7	Table Markup	Table Markup			
8	Hyperlinks	Hyperlinks (in-book)	30 links		
8	Hyperlinks	Hyperlink (live)	20 links		
9	Color and Contrast	A. Color redundancy			
9	Color and Contrast	B. Contrast			
10	Language	A. Markup			
10	Language	B. Passage Markup			
11	Images	A. Non-decorative			
11	Images	B. Decorative			
11	Images	C. Complex			
12	Multimedia	A. Text Track			
12	Multimedia	B. Transcript			
12	Multimedia	C. Assistive Player			
13	Flickering	Flickering	10 links		
14	STEM	A. Markup (figures)	10 figures		
14	STEM	A. Markup (graphs)	10 graphs		
14	STEM	A. Markup (equation)	10 equations		
14	STEM	B. Notation Markup (figures)	10 figures		
14	STEM	B. Notation Markup (graphs)	10 graphs		
14	STEM	B. Notation (equation)	10 equations		
15	Interactive Elements	A. Keyboard			
15	Interactive Elements	B. Markup			
15	Interactive Elements	C. Text Prompts			

Checklist

For every book, enter the following:

- Content area
- Name of book
- Format (i.e., EPUB, HTML, Word, or PDF)
- OS used (e.g., Microsoft; Windows)
- For EPUB, Word, and PDF formats: Total number of pages (obtained from Word or PDF format preferably, if available)
- For HTML only: Total number of chapters

Note: Only Windows
will be used for
analysis until Apple
equivalents are
decided upon.

Checklist

Example for the EPUB format of Introductory Statistics (PDF version has 863 pages)

The diagram illustrates the EPUB Accessibility Checklist form with three annotations:

- Select content type from dropdown list**: Points to the 'Content' column.
- Select format and OS – note: each format has a different checklist**: Points to the 'Format' and 'OS Used' columns.
- Only for HTML**: Points to the 'Number of Chapters' column.

The form itself is a table with the following structure:

EPUB Accessibility Checklist					
Content	Name of book	Format	OS Used	Total Number of Pages	Number of Chapters
Introduction to Statistics	Introductory Statistics	EPUB	Windows	863	

Enter name of book in its entirety: Points to the 'Name of book' column.

Checklist


Note: When certain information is entered such as the number of pages or number of chapters, certain information in the checklist is updated:

EPUB Accessibility Checklist					
Content	Name of book	Format	OS Used	Total Number of Pages	Number of Chapters
Introduction to Statistics	Introductory Statistics	EPUB	Windows	863	
#	Check point	Criteria	Amount of Material	Pass/Fail	Additional Info
1	Acc. Documentation	A. URL to Formal Accessibility Policy			
1	Acc. Documentation	B. URL to Accessibility Statement			
1	Acc. Documentation	C. URL to Accessibility Evaluation Report			
2	Text Access	Text to Speech	172.6 pages		
3	Text Adjustment	A. Compatible	86.3 pages		
3	Text Adjustment	B. Adjust font and colors	86.3 pages		
4	Reading Layout	A. Reflow the text	172.6 pages		
4	Reading Layout	B. Page #s match printed material & reflow of text	172.6 pages		

Checklist

This information is based upon predetermined values for the amount of information that needs to be evaluated. You only need to round up to the next page count (or link count).

EPUB Accessibility Checklist					
Content	Name of book	Format	OS Used	Total Number of Pages	Number of Chapters
Introduction to Statistics	Introductory Statistics	EPUB	Windows	863	
#	Check point	Criteria	Amount of Material	Pass/Fail	Additional Info
1	Acc. Documentation	A. URL to Formal Accessibility Policy			
1	Acc. Documentation	B. URL to Accessibility Statement			
1	Acc. Documentation	C. URL to Accessibility Evaluation Report			
2	Text Access	Text to Speech	172.6 pages		
3	Text Adjustment	A. Compatible	86.3 pages		
3	Text Adjustment	B. Adjust font and colors	86.3 pages		
4	Reading Layout	A. Reflow the text	172.6 pages		
4	Reading Layout	B. Page #s match printed material & reflow of text	172.6 pages		




173 pages
87 pages
87 pages
173 pages
173 pages

Checklist

The percentages used are included in this presentation, but that is only for your reference – the checklist will fill out this information for you!

EPUB Accessibility Checklist					
Content	Name of book	Format	OS Used	Total Number of Pages	Number of Chapters
Introduction to Statistics	Introductory Statistics	EPUB	Windows	863	
#	Check point	Criteria	Amount of Material	Pass/Fail	Additional Info
1	Acc. Documentation	A. URL to Formal Accessibility Policy			
1	Acc. Documentation	B. URL to Accessibility Statement			
1	Acc. Documentation	C. URL to Accessibility Evaluation Report			
2	Text Access	Text to Speech	172.6 pages		
3	Text Adjustment	A. Compatible	86.3 pages		
3	Text Adjustment	B. Adjust font and colors	86.3 pages		
4	Reading Layout	A. Reflow the text	172.6 pages		
4	Reading Layout	B. Page #s match printed material & reflow of text	172.6 pages		



173 pages
87 pages
87 pages
173 pages
173 pages

Skills Commons Accessibility Checkpoints

All information obtained from textbook evaluation will be entered into the checkpoints document:

3. *Text Adjustment*

PASS/FAIL: _____ Ranking: _____

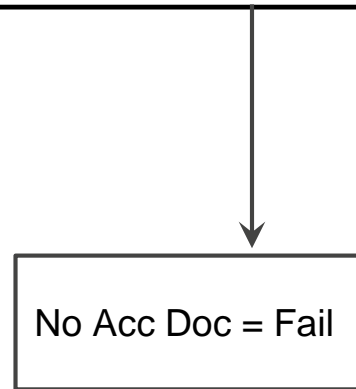
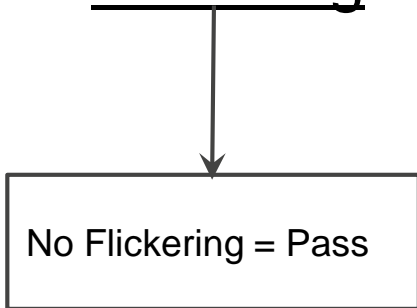
- A. Text is compatible with assistive technology.
- B. The resource allows the user to adjust the font size and font/background color (or is rendered by an application such as a browser, media player, or reader) that offers this functionality).

Additional Information: Please describe the technologies (hardware and software versions) and methodologies you used to evaluate the accessibility of the resource for this feature.

Enter info
such as the
pages you
evaluated
here as well.

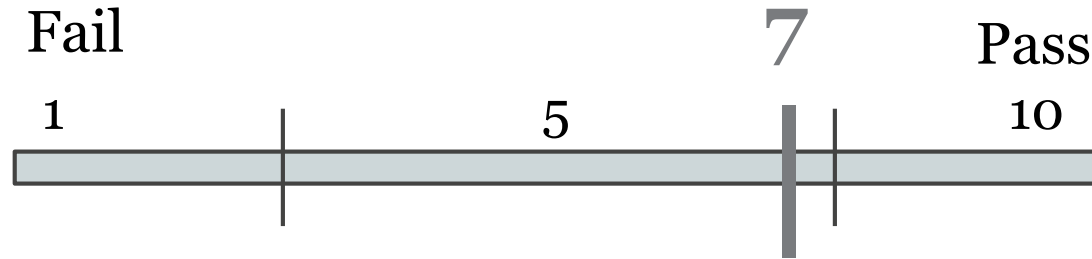
Pass, Fail, or N/A?

- Evaluate material based on the amount of material included in the checklist.
- If there is no related materials, mark N/A for that checkpoint. The only exception are Acc Documentation and Flickering.



Ratings

- Ratings are on a scale of 1-10



- Failure to meet a checkpoint (Fail) should not be rated above a 7
- Meeting a checkpoint (Pass) should not be rated below a 7

PDF

PDF Evaluation Requirements

OS

- Windows OS (XP or above)

Require Downloading

- NVDA ([Download](#))
- Color Contrast Analyzer- CCA ([Download](#))
- Adobe Acrobat XI Pro or DC (DC: [Download](#), \$449)

** Pro/complete version is suggested, versions older than XI should not be used

** Following screenshots are done with Adobe Acrobat XI Pro

NVDA

Keep in mind when using NVDA:

- Make sure that NumLock is off.
- Try using only the keyboard.
- For more keyboard shortcut ([Click here](#))



Note

The **NVDA** key is set to the **Insert** key by default, but it can be changed to the **Caps lock** key when installing NVDA for the first time. If you want to change your NVDA key preference later, press **Ctrl** + **NVDA** + **K**.

1. Accessibility Documentation

For the textbooks' organizations, find the following:

- ☒ URL to formal Accessibility Policy
- ☒ URL to accessibility statements
- ☒ URL to Accessibility Evaluation Report

Accessibility Documentation: Checkpoint 1 parts A, B, and C

Pass =

There was a URL address found for the formal accessibility policy/accessibility statement/accessibility evaluation report. Adobe Acrobat Pro XI/DC and Google Chrome were used to access and evaluate this text.

Fail =

There was no URL address found for the formal accessibility policy/accessibility statement/accessibility evaluation report. Adobe Acrobat Pro XI/DC and Google Chrome were used to access and evaluate this text.

2. Text Access

- ☒ The text of the digital resource is available to assistive technology that allows the user to enable text-to-speech (TTS) functionality

Text Access

STEPS:

1. Download NVDA
2. Open the book with Adobe Acrobat
3. Activate NVDA
(Ctrl + Alt + N)
4. Use NVDA to read from top of the page (Numpad +)
Use Ctrl to stop

Note: make sure your speaker is on!

2. Text Access

- 5. The text content should be read in a manner that is clear and understandable to the listener.
- 6. If elements of the text are not read adequately take that into account when scoring this checkpoint
- 7. Base your score off of the amount of passing material

Text Access: Checkpoint 2 Text to Speech

Fail =

0/5 pages pass for text to speech. Pages 10, 150, 250, 350, and 400 were used for this checkpoint. The screen reader NVDA did not read text and states that the pages were empty. Adobe Acrobat Pro XI and the screen reader NVDA were used to access and evaluate this text.

Pass =

5/5 pages pass for text to speech. Pages 10, 150, 250, 350, and 400 were used for this checkpoint. All pages were successfully read using the screen reader NVDA. Adobe Acrobat Pro XI and the screen reader NVDA were used to access and evaluate this text.

3. Text Adjustment (Size)

☒ The text allows the user to adjust the font size

Check text size between the range of 50% to 200%

Do not check for text reflow in this checkpoint

3. Text Adjustment (Size)

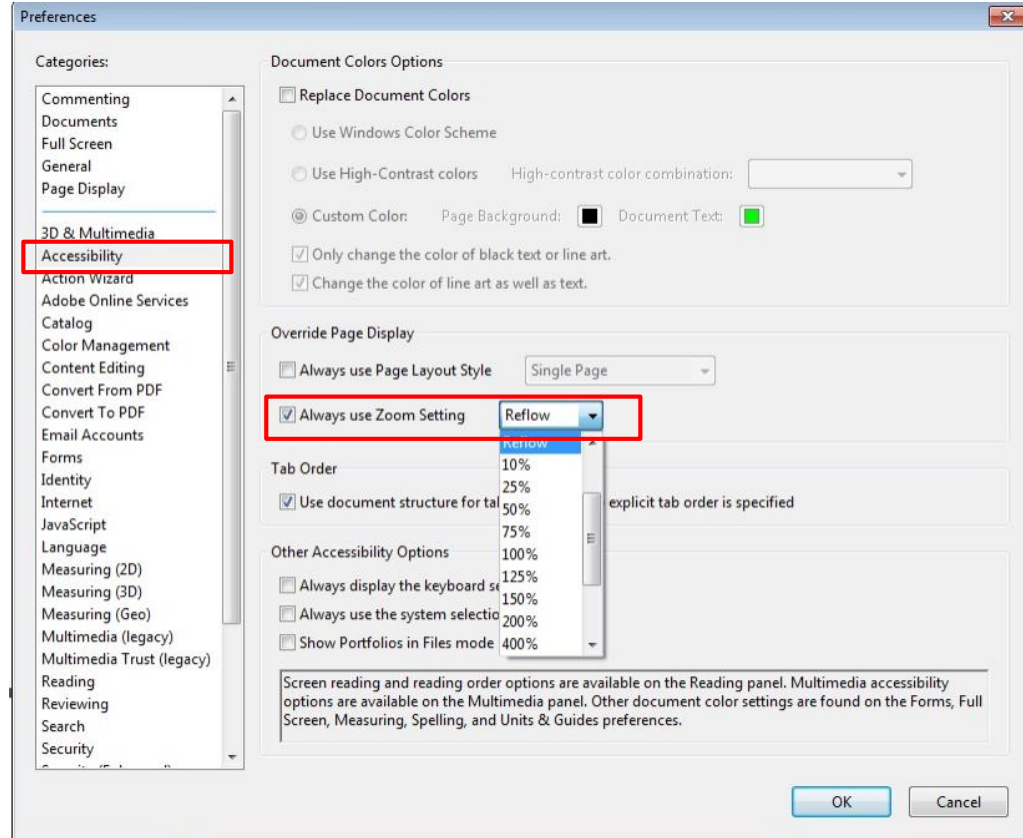
STEPS:

1. Open file with Adobe Acrobat XI Pro
2. Edit > Preference > Accessibility
3. Select Always use Zoom Setting > Reflow (drop down)
4. Click OK
5. CLOSE Adobe Acrobat Pro
6. Open the file with Adobe Acrobat Pro again
7. Zoom in and out to see if the text adjust its size to fit the screen (50% to 200%; Do not check for reflow)
8. Remember to deselect Always use Zoom Setting > click ok > close and reopen the file (to keep everything in original format for the rest of the evaluation)

3. Text Adjustment (Size)

● Amount of Material to Be Evaluated

*** Sample 5 pages ***



Text Adjustment: Checkpoint 3 A, Compatible (Size)

Fail =

0/5 pages pass for text size adjustment. Pages 15, 115, 215, 315, and 415 were used for this checkpoint. Text size was able to be adjusted between 75% to 200% zoom on all pages; however, text size was not able to be adjusted below 75% zoom. Adobe Acrobat Pro XI was used to access and evaluate this text.

Pass =

5/5 pages pass for text size adjustment. Pages 15, 115, 215, 315, and 415 were used for this checkpoint. Text size was able to be adjusted between 50% to 200% zoom on all pages. Adobe Acrobat Pro XI was used to access and evaluate this text.

3. Text Adjustment (Color)

- ☒ The text allows the user to adjust the font/background color

3. Text Adjustment (Color)

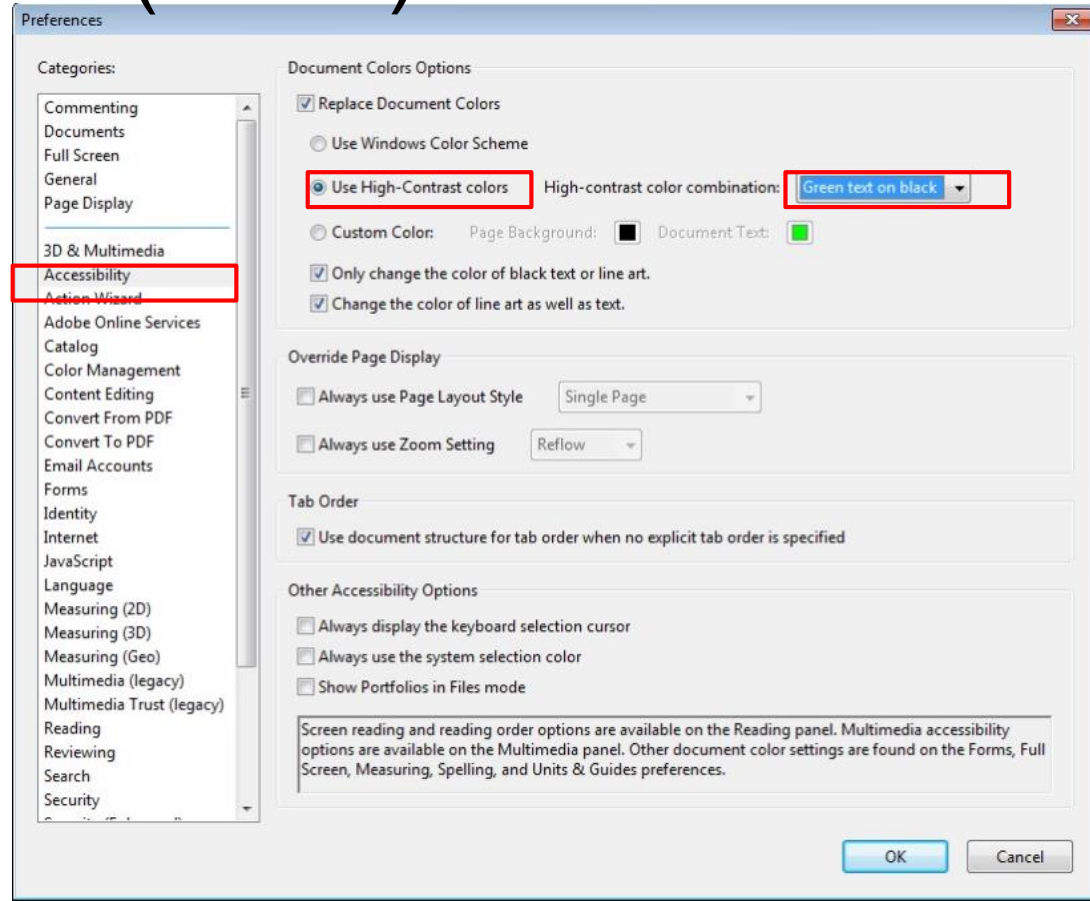
STEPS:

1. Open file with Adobe Acrobat XI Pro
2. Edit > Preference > Accessibility
3. Select Replace Document Colors > Green text on Black (drop down)
4. Click OK
5. Sometime you must go to the next page for the change to take place
6. Remember to deselect Replace Document Colors > click OK > close and reopen the file (to keep everything in original format for the rest of the evaluation)

3. Text Adjustment (Color)

● Amount of Material to Be Evaluated

*** Sample 5 pages***



Text Adjustment: Checkpoint 3 B, Adjust font and colors

Fail =

0/5 pages passed font and color adjustment. Pages 8, 108, 208, 308, 408 were checked and failed. The text color was adjusted but a portion of the background remained a light color making it difficult to see. Adobe Acrobat Pro XI was used to access and evaluate this text.

Pass =

5/5 pages passed font and color adjustment. Pages 8, 108, 208, 308, and 408 were because text color was adjusted and the background was darkened. Adobe Acrobat Pro XI was used to access and evaluate this text.

4. Reading Layout (reflow)

- ☒ Text of the digital resource is compatible with assistive technology that allows the user to reflow the text by specifying the margins and line spacing
- ☒ Check 50% to 200% zoom
 - Amount of Material to Be Evaluated

*** Sample 5 pages ***

4. Reading Layout (reflow)

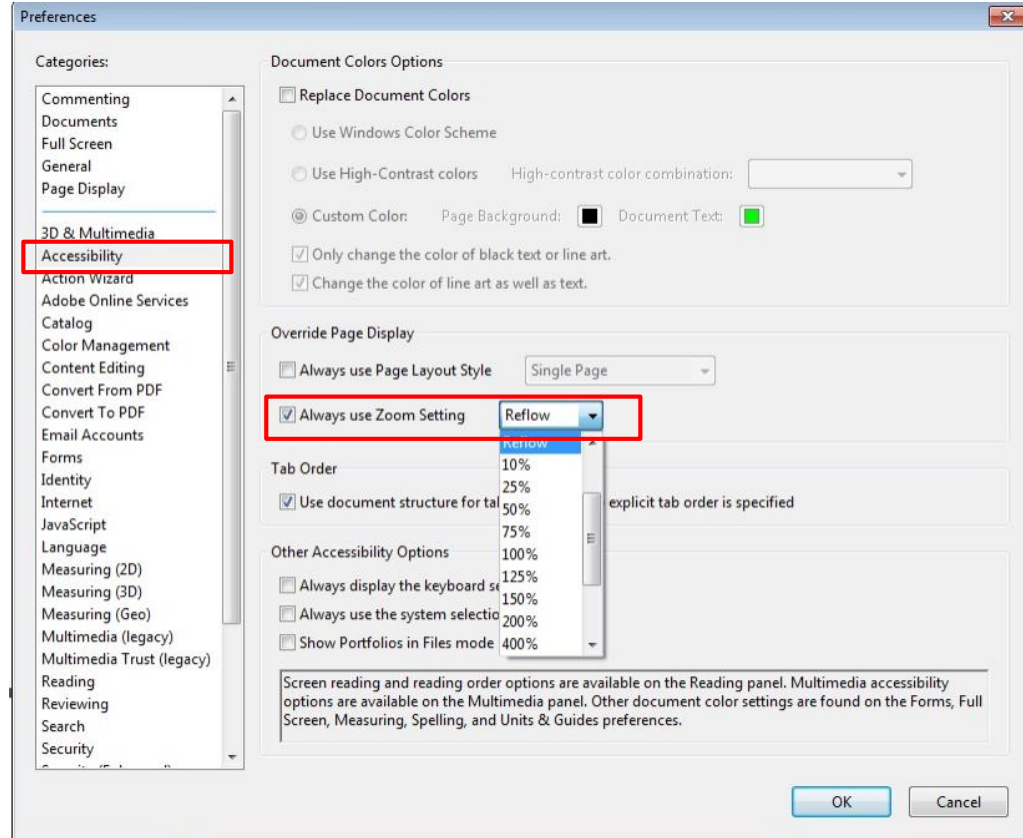
STEPS:

1. Open file with Adobe Acrobat XI Pro
2. Edit > Preference > Accessibility
3. Select Always use Zoom Setting > Reflow (drop down)
4. Click OK
5. CLOSE Adobe Acrobat Pro
6. Open the file with Adobe Acrobat Pro again
7. Zoom in and out to see if the text reflows
8. Remember to deselect Always use Zoom Setting > click ok > close and reopen the file (to keep everything in original format for the rest of the evaluation)

4. Reading Layout (reflow)

● Amount of Material to Be Evaluated

*** Sample 5 pages ***



Reading Layout: Checkpoint 4 A, Reflow the Text

Fail =

0/5 pages pass for reflow of the text. Pages 15, 115, 215, 315, and 415 were used for this checkpoint. All evaluated pages failed because horizontal scrolling was required at 115% zoom and above. Adobe Acrobat XI Pro was used to access and evaluate this text.

Pass =

5/5 pages pass for reflow of the text. Pages 15, 115, 215, 315, and 415 were used for this checkpoint. All evaluated pages had proper text reflow without the use of horizontal scroll bars when text was resized from 50% to 200% zoom. Adobe Acrobat XI Pro was used to access and evaluate this text.

4. Reading Layout (# of pages)

- ☒ If the digital resource is an electronic alternative to printed materials, the page numbers correspond to the printed material

****Mark this subsection N/A: We don't have the printed version****

Reading Layout: Checkpoint 4 B, Page # match printed material & reflow of text

N/A =

We do not have access to the printed version of this text. Adobe Acrobat XI Pro was used to access and evaluate this text.

5. Reading Order

- ☒ Reading order for digital resource content logically corresponds to the visual layout of the page when rendered by assistive technology

● Amount of Material to Be Evaluated

*** Sample 5 pages ***

5. Reading Order

STEPS:

1. Open the book with Adobe Acrobat
2. Locate 5 pages (include page # in the reports) that contains a more complicated layout
3. Use the NVDA to read from top of the page (Numpad +) and check if the reading order is logical

Reading Order: Checkpoint 5, Digital Resource Layout

Fail =

0/5 pages pass reading order for digital resource layout. Pages 16, 72, 83, 129, and 241 were used for this checkpoint. All pages failed because the screen reader NVDA would start reading the main text and then skip to content in the margins or to figures before returning to the main text. Adobe Acrobat Pro XI and the screen reader NVDA were used to access and evaluate this text.

Pass =

5/5 pages pass reading order for digital resource layout. Pages 16, 72, 83, 129, and 241 were used for this checkpoint. All evaluated pages pass because the screen reader NVDA read text content in a manner that corresponded to the visual layout of the page without skipping content. Adobe Acrobat Pro XI and the screen reader NVDA were used to access and evaluate this text.

6. Structural Markup / Navigation / Headers

- ☒ The text of the digital resource includes markup (e.g. tags or styles) that allows for navigation by key structural elements (chapters, headings, pages) using assistive technology

STEPS:

1. Open the book with Adobe Acrobat and activate NVDA
2. Use heading quick keys (H & 1-6) to check for all heading levels
3. Use the Shift key to search previous headings
4. Score based on manual check

Headings and Lists

Command	Description
H	Headings Quick Key
1-6	Headings level 1-6
L	List Quick Key
I	List Item Quick Key

6. Structural Markup / Navigation / Headers

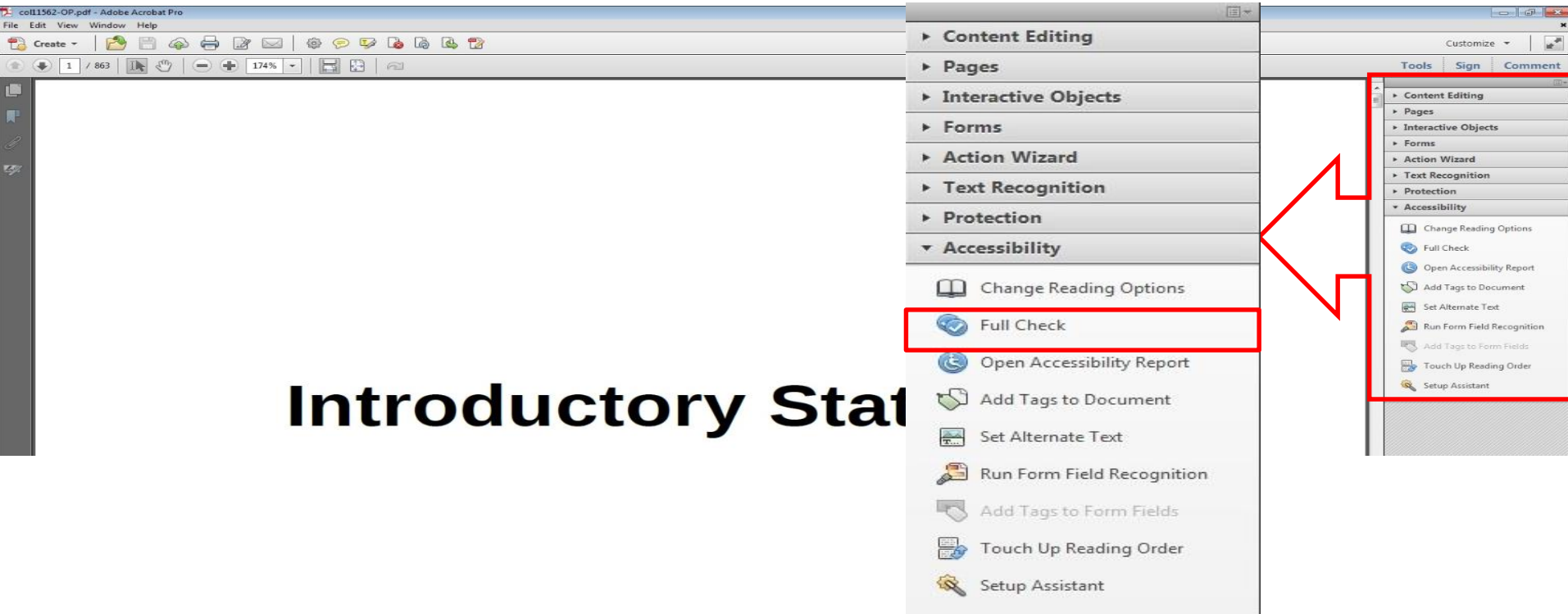
- Include Adobe Acrobat Pro: Accessibility Checker Results
 1. Open the file in Adobe Acrobat Pro XI
 2. Select Accessibility Tools



Introductory Statistics

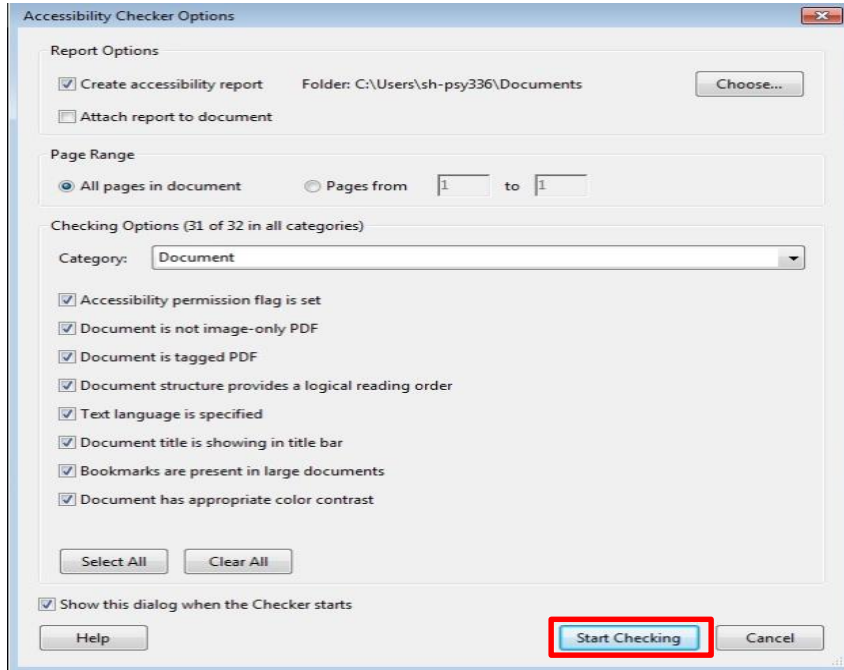
6. Structural Markup / Navigation / Headers

3. Select Full Check.



6. Structural Markup / Navigation / Headers

4. Select the Start Checking button to begin the full check.



6. Structural Markup / Navigation / Headers

Results: Check for Tagged PDF, Title, Bookmarks, and Headings

The screenshot displays the Adobe Acrobat Pro interface with the Accessibility Checker tool open. The document is titled 'col11562-OP.pdf'. The Accessibility Checker shows the following results:

- Document (5 issues)**
 - Accessibility permission flag - Passed
 - Image-only PDF - Passed
 - Tagged PDF - Failed**
 - Logical Reading Order - Needs manual check
 - Primary language - Failed
 - Title - Failed**
 - Bookmarks - Passed
 - Color contrast - Needs manual check
- Page Content (3 issues)**
- Forms**
- Alternate Text (5 issues)**
 - Figures alternate text - Failed
 - Nested alternate text - Failed
 - Associated with content - Failed
 - Hides annotation - Failed
 - Other elements alternate text - Failed
- Tables (4 issues)**
- Lists (2 issues)**
- Headings (1 issue)**

A red arrow points from the left pane to the right pane. The right pane shows a list of issues, with 'Tagged PDF - Failed', 'Title - Failed', and 'Headings (1 issue)' highlighted in red boxes. The word 'Statistics' is visible in the background.

Structural Markup: Checkpoint 6 A, Text

Fail =

0/5 pages pass structural markup for navigation of the text. Pages 5 through 10 were used for this checkpoint. The screen reader NVDA did not identify any chapter headings or the various levels of chapter/section headings. The full accessibility check within Adobe indicated that 4/4 text navigation criteria passed including Headings, Tagged PDF, Title, and Bookmarks. Adobe Acrobat XI Pro and the screen reader NVDA were used to access and evaluate this text.

Pass =

5/5 pages pass structural markup for navigation of the text. Pages 5 through 10 were used for this checkpoint. The screen reader NVDA clearly identified all chapter headings and the various levels of chapter/section headings. The full accessibility check within Adobe indicated that 4/4 text navigation criteria passed including Headings, Tagged PDF, Title, and Bookmarks. Adobe Acrobat XI Pro and the screen reader NVDA were used to access and evaluate this text.

Structural Markup / Navigation / Lists

- ☒ The text of the digital resource includes markup for bullets and numbered lists that is compatible with assistive technology

STEPS:

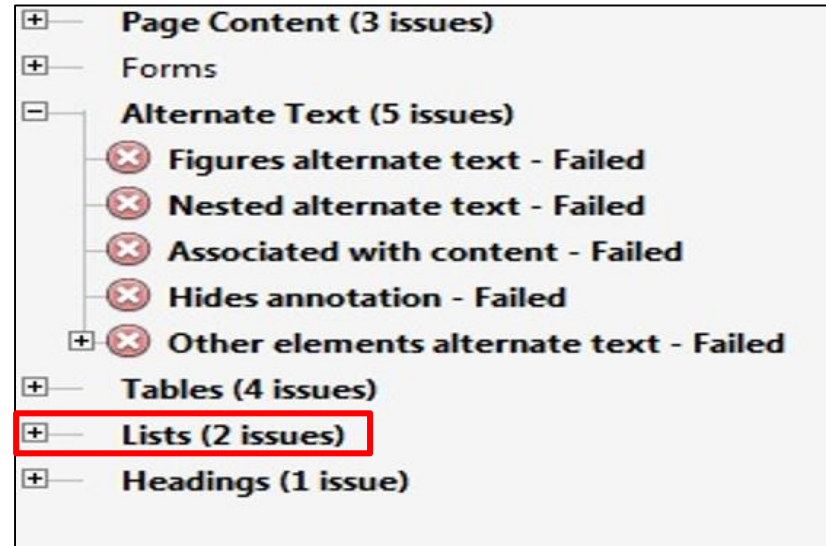
1. Open the book with Adobe Acrobat and activate NVDA
 1. Locate a list
 2. Use List quick keys (L) to check if the program can recognize it as a list.
 3. Use List quick keys (I) to check if the program can recognize each item in the list
- ***Repeat the steps for 10 lists***

Headings and Lists

Command	Description
H	Headings Quick Key
1-6	Headings level 1-6
L	List Quick Key
I	List Item Quick Key

6. Structural Markup / Navigation / Lists

- Include results from the Adobe Accessibility checker
- Include ratio of passing content
- Score accordingly to the manual check



Structural Markup: Checkpoint 6 B, Lists

Fail =

0/10 lists pass for structural markup. Lists were found on pages 2, 3, 5, 11(2), 12, 13, and 24(3). All lists were unable to be read using the screen reader NVDA. A full accessibility check in Adobe Acrobat XI Pro indicated that lists failed for list items but passed for lbl and Lbody. Adobe Acrobat XI Pro and the screen reader NVDA were used to access and evaluate this text.

Pass =

10/10 lists pass for structural markup. Lists were found on pages 2, 3, 5, 11(2), 12, 13, and 24(3). All lists, list items, and numbers were read by screen reader NVDA. A full accessibility check in Adobe Acrobat XI Pro indicated that lists failed for both list items and lbl and Lbody. Adobe Acrobat XI Pro and Read Out Loud were used to access and evaluate this text.

Structural Markup / eReader Navigation

- ☒ If the text of the digital resource is delivered within an ebook reader application, a method is provided that allows users to bypass the reader interface and move directly to the text content that is compatible with assistive technology

****Not using reader application, mark N/A on the reports****

Structural Markup: Checkpoint 6 C, eReader Application

N/A =

We are not using an additional eReader application in this evaluation.
Adobe Acrobat XI Pro was used to access and evaluate this text.

7. Tables

- ☑ Data tables include markup (e.g. tags or styles) that identifies row and column headers in a manner that is compatible with assistive technology

STEPS:

1. Open the book with Adobe Acrobat and activate NVDA
1. Locate a table
2. Use Table quick keys (T) to check if the program can recognize it as a table, then use other quick keys to check for all cells.

Repeat the steps for 10 tables

Tables

Command	Description
T	Table Quick Key
Ctrl + Alt + →	Cell to Right
Ctrl + Alt + ←	Cell to Left
Ctrl + Alt + ↓	Cell Below
Ctrl + Alt + ↑	Cell Above

7. Tables

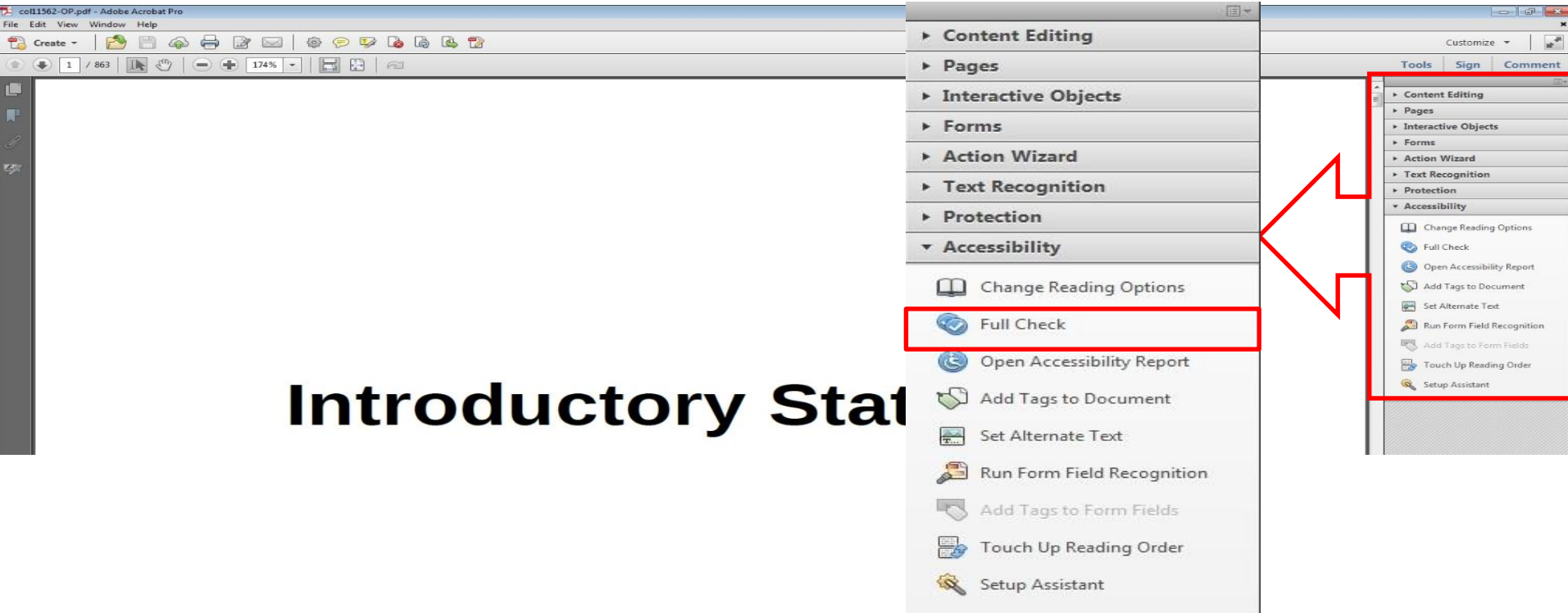
- Adobe Acrobat Pro: Accessibility Checker
 1. Open the file in Adobe Acrobat Pro XI
 2. Select Accessibility Tools



Introductory Statistics

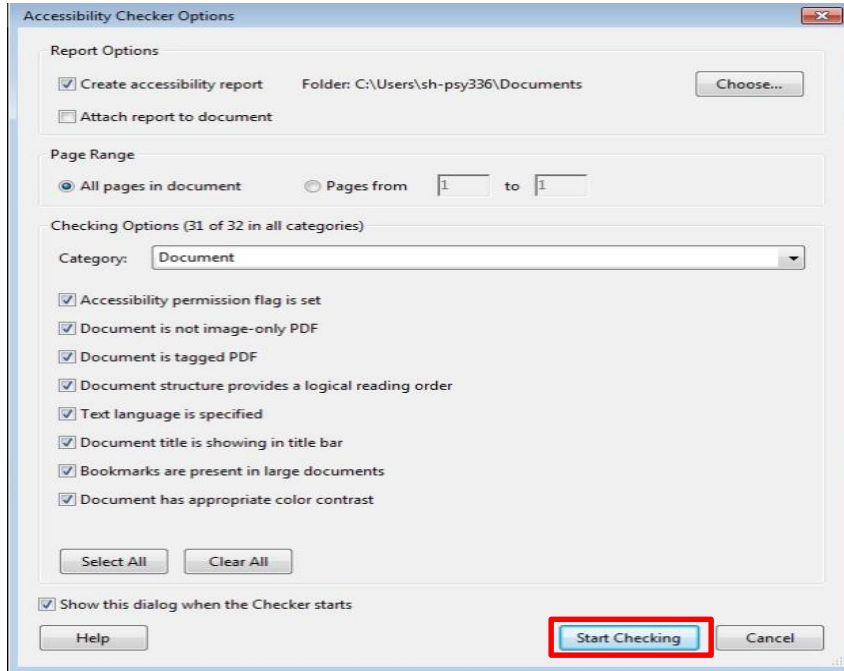
7. Tables

3. Select Full Check.



7. Tables

4. Select the Start Checking button to begin the full check.



7. Tables

Results: include but score according to manual check

The screenshot displays the Adobe Acrobat Pro interface with the Accessibility Checker tool open. The document is 'cot11562-OP.pdf'. The Accessibility Checker shows a tree view of issues on the left, a detailed list of issues in the center, and a detailed view of the selected 'Tables (4 issues)' section on the right.

Document (5 issues)

- Accessibility permission flag - Passed
- Image-only PDF - Passed
- Tagged PDF - Failed
- Logical Reading Order - Needs manual check
- Primary language - Failed
- Title - Failed
- Bookmarks - Passed
- Color contrast - Needs manual check

Page Content (3 issues)

- Forms
- Alternate Text (5 issues)
- Figures alternate text - Failed
- Nested alternate text - Failed
- Associated with content - Failed
- Hides annotation - Failed
- Other elements alternate text - Failed

Tables (4 issues)

- Rows - Failed
- TH and TD - Failed
- Headers - Failed
- Regularity - Failed
- Summary - Skipped

Lists (2 issues)

- Lists (2 issues)

Headings (1 issue)

- Headings (1 issue)

Table Markup: Checkpoint 7, Table Markup

Fail =

0/5 tables pass for table markup. Tables were found on pages 27, 40-41, 63, 86, and 102-103. All tables evaluated were not able to be read by the screen reader NVDA. The full accessibility check within Adobe indicated that 4/4 criteria passed. Tables passed for Rows, Th and TD, Headers, and Regularity. Adobe Reader XI Pro and the screen reader NVDA were used to access and evaluate the text.

Pass =

5/5 tables pass for table markup. Tables were found on pages 27, 40-41, 63, 86, and 102-103. All tables were able to be read by the screen reader NVDA. The full accessibility check within Adobe indicated that 2/4 criteria passed. The passing criteria were Rows and Th and TD, while the failing criteria were Headers and Regularity. Adobe Reader XI Pro and the screen reader NVDA were used to access and evaluate the text.

8. Hyperlinks

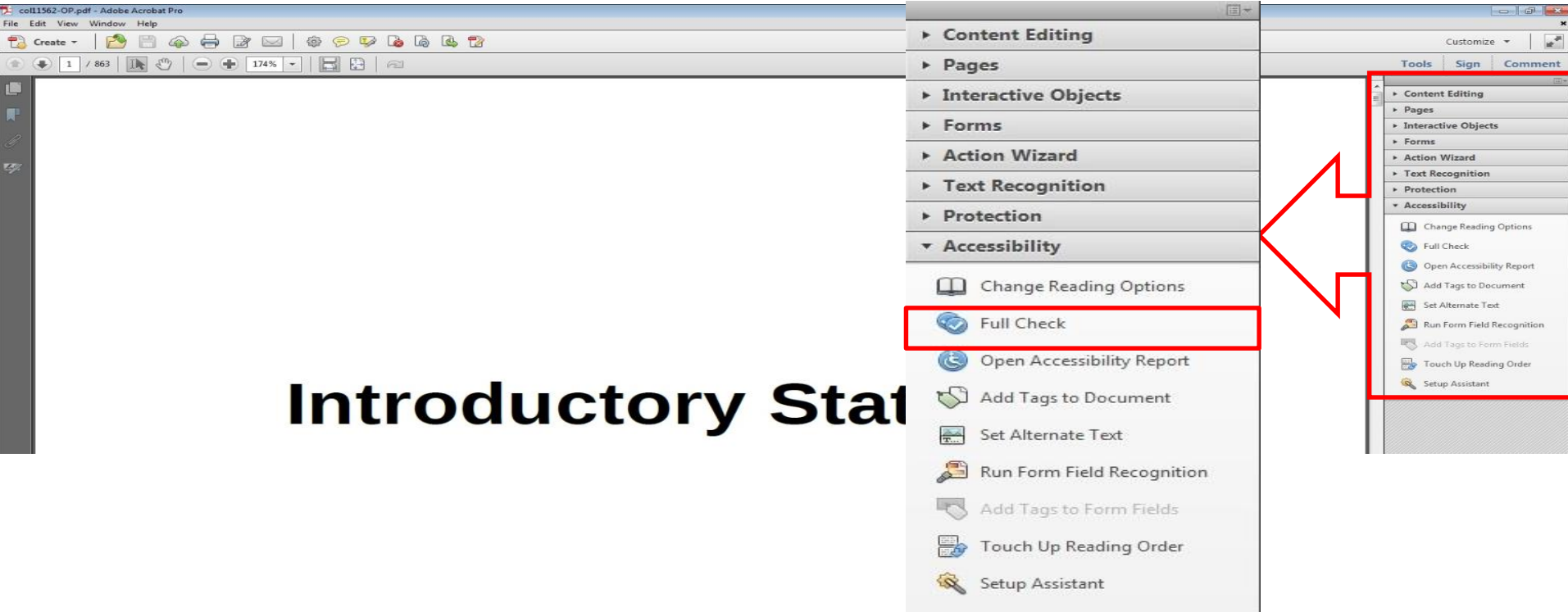
- ☒ **Functionality**: Links (e.g. website or email addresses) within the text of the digital resource are rendered as active hyperlinks in a manner that allows them to be detected (using the tab key) and activated (using the enter key) with assistive technology.
- ☒ Check that the link redirects to the correct location
- ☒ If the link is not accessed when using the tab button then fail this sub category
- ☒ If the link does not redirect when the enter button is clicked then fail this sub category

8. Hyperlinks

- ☒ **Descriptive:** The link is descriptive enough for the users to know where the link will take them.
- ☒ If the link appears as an URL = fail this sub category.
- ☒ Check for both in-book links and live hyperlinks

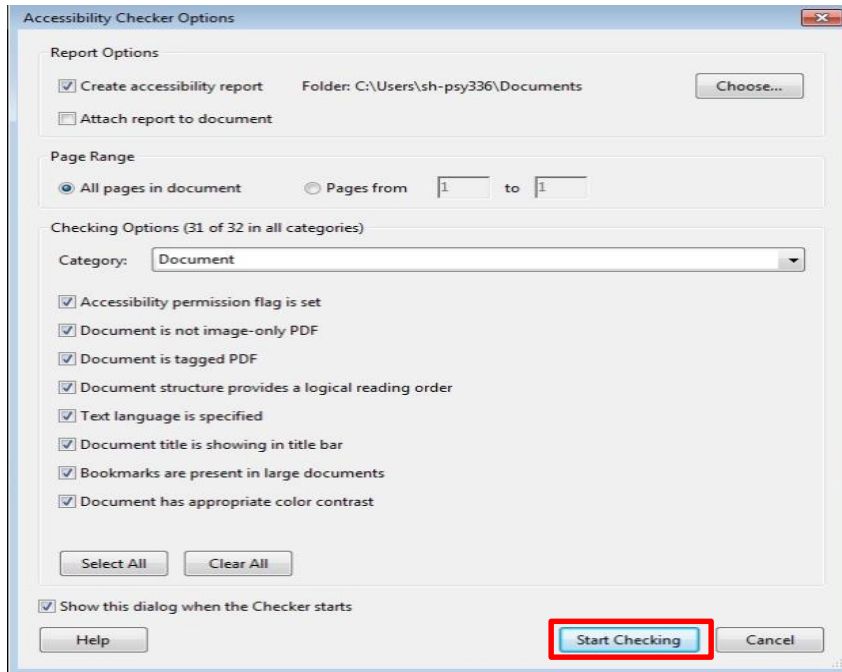
8. Hyperlinks (in-book)

3. Select Full Check.



8. Hyperlinks (in-book)

4. Select the Start Checking button to begin the full check.



8. Hyperlinks (in-book)

Results

The image displays three screenshots of the Adobe Acrobat Accessibility Checker, illustrating the results of an accessibility check for a PDF document. The screenshots are arranged in a sequence, with red arrows indicating the progression of the check.

Screenshot 1 (Left): Shows the full list of issues. The 'Page Content' section is highlighted with a red box. The issues listed are:

- Document (5 issues)
 - Accessibility permission flag - Passed
 - Image-only PDF - Passed
 - Tagged PDF - Failed
 - Logical Reading Order - Needs manual check
 - Primary language - Failed
 - Title - Failed
 - Bookmarks - Passed
 - Color contrast - Needs manual check
- Page Content (3 issues)
- Forms
- Alternate Text (5 issues)
 - Figures alternate text - Failed
 - Nested alternate text - Failed
 - Associated with content - Failed
 - Hides annotation - Failed
 - Other elements alternate text - Failed
- Tables (4 issues)
- Lists (2 issues)
- Headings (1 issue)

Screenshot 2 (Middle): Shows the 'Page Content' section expanded. The issues listed are:

- Page Content (3 issues)
- Forms
- Alternate Text (5 issues)
 - Figures alternate text - Failed
 - Nested alternate text - Failed
 - Associated with content - Failed
 - Hides annotation - Failed
 - Other elements alternate text - Failed
- Tables (4 issues)
- Lists (2 issues)
- Headings (1 issue)

Screenshot 3 (Right): Shows the 'Page Content' section expanded further. The issues listed are:

- Page Content (3 issues)
 - Tagged content - Failed
 - Tagged annotations - Failed
 - Tab order - Failed
 - Character encoding - Passed
 - Tagged multimedia - Passed
 - Screen flicker - Passed
 - Scripts - Passed
 - Timed responses - Passed
 - Navigation links - Passed
- Forms
- Alternate Text (5 issues)
- Tables (4 issues)
- Lists (2 issues)
- Headings (1 issue)

8. Hyperlinks (in-book)

1. Check for Navigation links in Results

2. Manual check

- Score according to the manual check results

● Amount of Material to Be Evaluated

*** Sample 30 in-book links ***

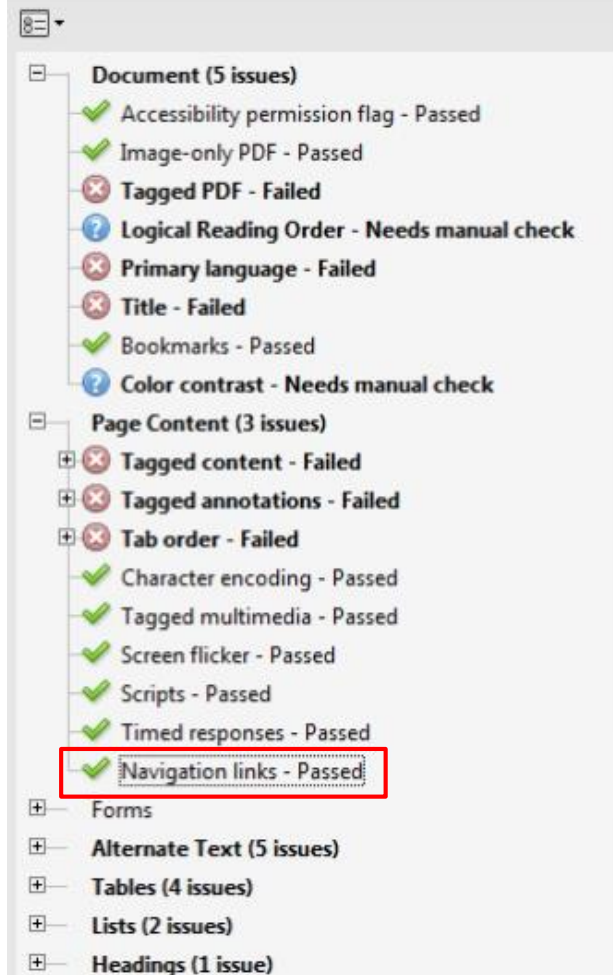
10 from the beginning of the book

10 from the middle of the book

10 from the end of the book

Ex. Links that takes you to a certain chapter

Check for descriptive links when going through each link manually.



Hyperlinks: Checkpoint 8, Within-book Hyperlinks

Fail =

15/30 within book links pass for functionality and 0/30 within book links pass for descriptiveness. Links were found on pages 5(6), 19(3), 47(4), 65(8), 93(4), and 106(5). The links on pages 5, 47, and 106 failed functionality because they were not active and could not be selected using the tab and enter key; All links were non-descriptive because they were single words or numbers. The full accessibility check indicated that navigational links passed. Adobe Acrobat XI Pro and the screen reader NVDA were used to access and evaluate this checkpoint.

Pass =

30/30 within book links pass for functionality and descriptiveness. Links were found on pages 5(6), 19(3), 47(4), 65(8), 93(4), and 106(5). All links could be selected using the tab and enter key and were descriptive enough to inform the user regarding the location to which they would be taken. The full accessibility check indicated that navigational links passed. Adobe Acrobat XI Pro and the screen reader NVDA were used to access and evaluate this checkpoint.

8. Hyperlinks (Live)

1. Open the book with Adobe Acrobat and activate NVDA
2. Locate hyperlinks
3. Use Links quick keys (TAB or Shift TAB) to check if the program can recognize it as a link, then press enter to see if the link functions correctly (takes you to the right location)
4. Tab through a total of 20 live links from different sections of the book to check for both functionality and descriptiveness name.

Hyperlinks: Checkpoint 8, Hyperlink (Live on Internet) / Hyperlink Functionality (Live)

Hyperlink (Live on Internet) =

This is a combined average of the following two subsections (functionality and descriptiveness). Adobe Acrobat XI Pro was used to access the text for this evaluation and Google Chrome was used to access the links online.

Hyperlink Functionality (Live) =

Pass =

20/20 live links pass for hyperlink functionality. Pages 1 through 99 were used for this checkpoint. Passing links were found on pages 1(15), 65(3), and 99(2). All links were able to be selected using both the "Tab" and "Enter" keys and redirected to the correct locations. Adobe Acrobat XI Pro was used to access the text for this checkpoint and Google Chrome was used to access the links online.

Fail =

0/20 live links pass for hyperlink functionality. Pages 1 through 99 were used for this checkpoint. Failing links were found on pages 1(15), 65(3), and 99(2). None of the links could be accessed using the tab key. Adobe Acrobat XI Pro was used to access the text for this checkpoint and Google Chrome was used to access the links online.

Hyperlinks: Checkpoint 8, Hyperlink Descriptiveness (Live)

Hyperlink Descriptiveness (Live) =

Pass =

20/20 live hyperlinks pass for descriptiveness. Links were found on pages 79(6), 140(4), 146(3), and 149(7). All evaluated links clearly describe the location to which they redirect the user when using the screen reader NVDA. Adobe Acrobat XI Pro, NVDA and Google Chrome were used to access and evaluate this text.

Fail =

13/20 live hyperlinks pass for descriptiveness. Links were found on pages 79(6), 140(4), 146(3), and 149(7). Passing links clearly describe the location to which they redirect the user when using NVDA. The failing links were all found on page 149 and are in the form of a URL address. Adobe Acrobat XI Pro, NVDA and Google Chrome were used to access and evaluate this text.

9. Color & Contrast (Color Redundancy)

- ✓ Color redundancy (information is not conveyed by color alone) needs to be checked manually
- ✓ Consider the amount of failing content in each chapter/section when determining the score

n changes in classrooms has several other effects. One, for example, is that it can tempt teachers to think that what is taught is equivalent to what is learned—even e different. If I assign a reading to my students about the Russian Revolution, it would be nice to assume not only that they have read the same words, but also learn read and learned all of what I assigned; others may have read everything but misunderstood the material or remembered only some of it, and still others, unfortunately, find this picture, if asked confidentially. There are ways, of course, to deal helpfully with such diversity of outcomes; for suggestions, see especially [Section 10.1](#).¹ If the instructional strategies I adopt, they cannot include assuming that what I teach is the same as what students understand or retain of what I teach.

as dependent on sequencing and readiness

Even teaching and learning creates a secondary issue for teachers, that of educational **readiness**. Traditionally the concept referred to students' preparedness to **start school**, for example, if he or she was in good health, showed moderately good social skills, could take care of personal physical needs (like eating lunch or sleeping). [Table 2.6](#) shows a similar set of criteria for determining whether a child is "ready" to learn to read (Copple & Bredekamp, 2006). At older ages (such as in high school), to take a course in physics, for example, a student must first have certain prerequisite experiences, such as studying advanced algebra or calculus. To begin work in psychology, for example, a student must first have completed a course in biology. (To mention also studying educational psychology!).

E.g.
Links are presented
with color (blue) and
underline.

Color and Contrast: Checkpoint 9 A, Color Redundancy

Fail =

0/5 pages pass for color redundancy. Pages 256-261 were used for this checkpoint. The evaluated pages were not color redundant for certain text elements such as links. The links on each page were only distinguishable from standard text by means of color. Adobe Acrobat XI Pro was used to access and evaluate this text.

Pass =

5/5 pages pass for color redundancy. Pages 256-261 were used for this checkpoint. All evaluated pages were color redundant, using alternate means of distinguishing content aside from color. This includes underlining links in the text and providing texture patterns for color sections of a graph. Adobe Acrobat XI Pro was used to access and evaluate this text.

9. Color & Contrast (Contrast Ratio)

- ☒ The visual presentation of text and images of text in the digital resource has a contrast ratio of at least 4.5:1 (AA)
- Provide color combinations for passing and failing content
- Provide contrast ratios only for failing content
- Make sure you are evaluating with Adobe in full screen at 100% zoom

Normal text

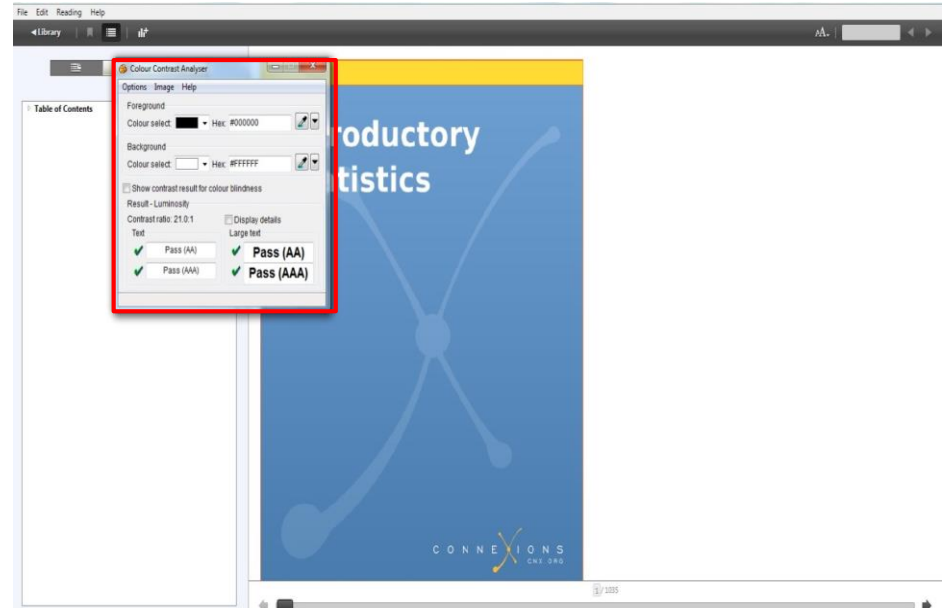
Large text

- ☒ Large text (18 point +) has a contrast ratio of at least 3:1 (AA)

Color & Contrast (Contrast Ratio)

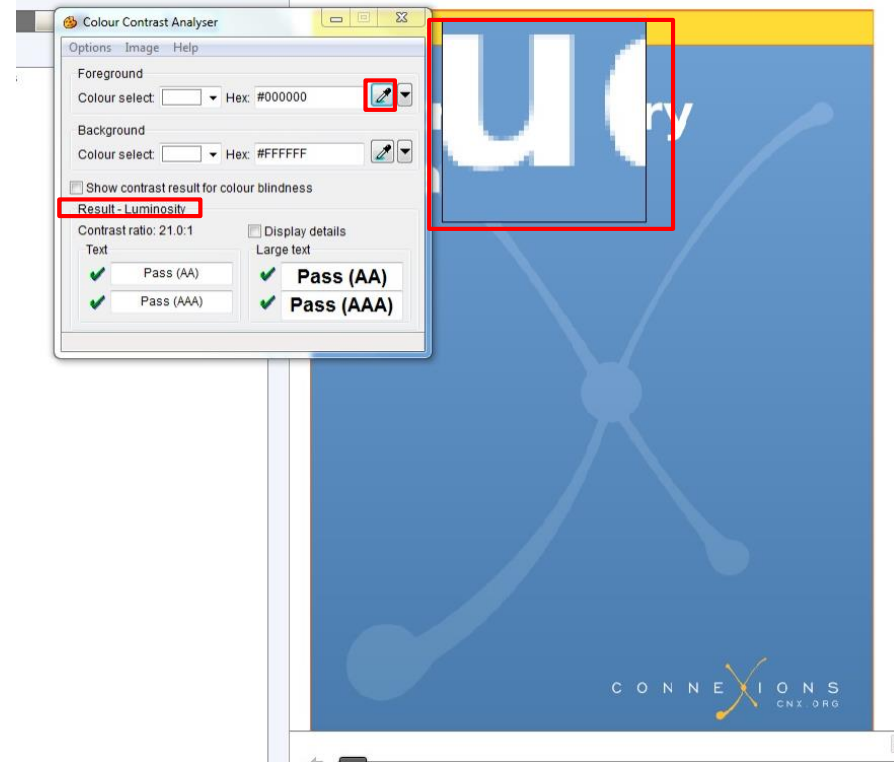
Colour Contrast Analyzer (CCA)

1. Download Colour Contrast Analyzer Tool
2. Open the book you want to evaluate with Adobe Acrobat
3. Open the CCA application



Color & Contrast (Contrast Ratio)

4. Make sure you are in the **Result** -- **Luminosity** mode.
5. Click the **Foreground eye dropper** tool, hover over and click the foreground color to select it.



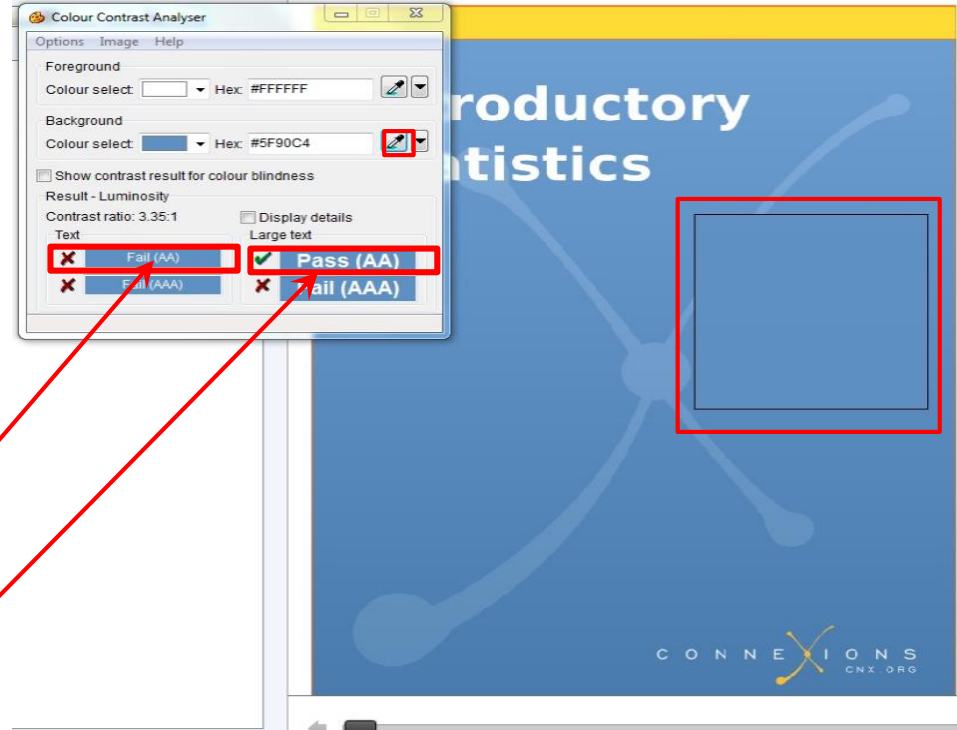
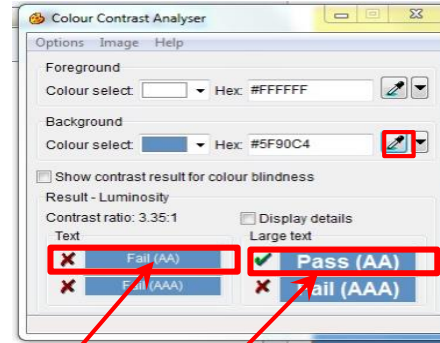
Color & Contrast (Contrast Ratio)

6. Click the **Background eye dropper** tool, hover over and click the background color.

7. Determine if the text is greater than 18 points (e.g. Header).

Small text: Check under "Text" (AA)

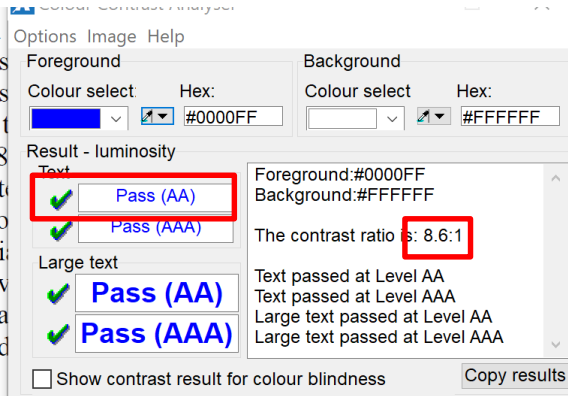
Large text (18+): Check under "Large text" (AA)



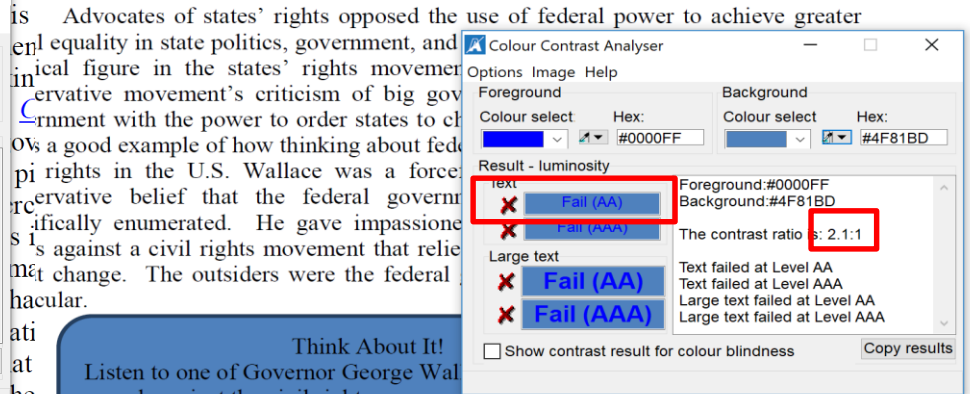
Color & Contrast (Contrast Ratio): Example

When content passes, report the color combination but not the ratio:
“The blue text on white background passed.”

The first era of federalism of federalism that describes equal sovereigns. Each is Supreme Court endorsed [Board of Port Wardens](#) (18 could require that ships enter Constitution gives the nation the states. The Philadelphia commerce. The Court developed for local or national regulation their nature national, or adj justly be said to...require national and require local Doctrine assumes that the national and state governments have separate responsibility. For example, the national government would have exclusive power



When content fails, report the color combination and the ratio:
“The blue text on blue background fails with a ratio of 2.1:1.”

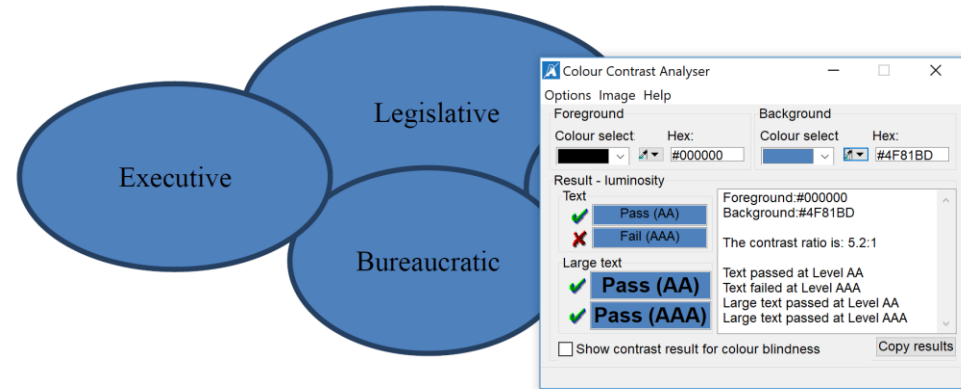


Think About It!
Listen to one of Governor George Wallace's speech against the civil rights movement:
<http://www.youtube.com/watch?v=QW6ikSCDaRQ&feature=endscreen&NR=1>

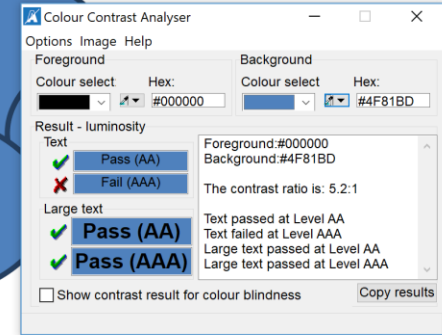
Color & Contrast (Contrast Ratio): Example

When content passes, report the color combination but not the ratio:

“The simple image was found on page 45 and the black on white background passed with the Colour Contrast Analyzer.”



“The simple image found on page 91 passed with the black text on the blue background.”



Color and Contrast: Checkpoint 9 A, Headers

Contrast =

This is a combined average of the following three subsections (Header, Text, and Simple Images). Adobe Acrobat XI Pro was used to access the text for this evaluation and the Colour Contrast Analyzer tool was used to determine contrast ratios.

A) Contrast – Headers =

Pass =

3/3 Header color combinations pass for color contrast. Pages 5 through 40 were used for this checkpoint. The passing header color combinations were black text on a white background, black text on a light green background, and dark blue text on a light grey background. Adobe Acrobat XI Pro was used to access the text for this evaluation and the Colour Contrast Analyzer tool was used to determine contrast ratios.

Fail =

1/3 Header color combinations pass for color contrast. Pages 5 through 40 were used for this checkpoint. The passing header color combination was black text on a white background. The failing header color combinations were light green text on a light blue background with a contrast ratio of 1.27:1, and light orange text on a light blue background with a contrast ratio of 1.18:1. Adobe Acrobat XI Pro was used to access the text for this evaluation and the Colour Contrast Analyzer tool was used to determine contrast ratios.

Color and Contrast: Checkpoint 9 B, Text

B) Contrast – Text =

Pass =

3/3 Text color combinations pass for color contrast. Pages 5 through 40 were used for this checkpoint. The passing text color combinations were black text on a white background, black text on a light green background, and dark blue text on a light grey background. Adobe Acrobat XI Pro was used to access the text for this evaluation and the Colour Contrast Analyzer tool was used to determine contrast ratios.

Fail =

1/3 Text color combinations pass for color contrast. Pages 5 through 40 were used for this checkpoint. The passing text color combination was black text on a white background. The failing text color combinations were light green text on a light blue background with a contrast ratio of 1.27:1, and light orange text on a light blue background with a contrast ratio of 1.18:1. Adobe Acrobat XI Pro was used to access the text for this evaluation and the Colour Contrast Analyzer tool was used to determine contrast ratios.

Color and Contrast: Checkpoint 9 C, Simple Images

C) Contrast – Simple Images =

Pass =

2/2 Simple images pass for color contrast. Pages 5 through 40 were used for this checkpoint. Simple images were found on pages 17 and 29. The passing color combinations for simple images was black on a white background. Adobe Acrobat XI Pro was used to access the text for this evaluation and the Colour Contrast Analyzer tool was used to determine contrast ratios.

Fail =

1/2 Simple images pass for color contrast. Pages 5 through 40 were used for this checkpoint. Simple images were found on pages 17 and 29. The passing color combination for the simple image on page 17 was black on a white background. The failing color combination for the simple image on page 29 was light green on a light blue background with a contrast ratio of 1.27:1. Adobe Acrobat XI Pro was used to access the text for this evaluation and the Colour Contrast Analyzer tool was used to determine contrast ratios.

10. Language

- ☒ **Part A Mark-up:** The text of the digital resource includes markup that declares the language of the content in a manner that is compatible with assistive technology
- ☒ **Part B Passage:** If the digital resource includes passages in a foreign language, these passages include markup that declares the language in a manner that is compatible with assistive technology
 - ☒ ****Mark Passage Markup as N/A: Adobe Pro XI does not check for foreign language****

10. Language

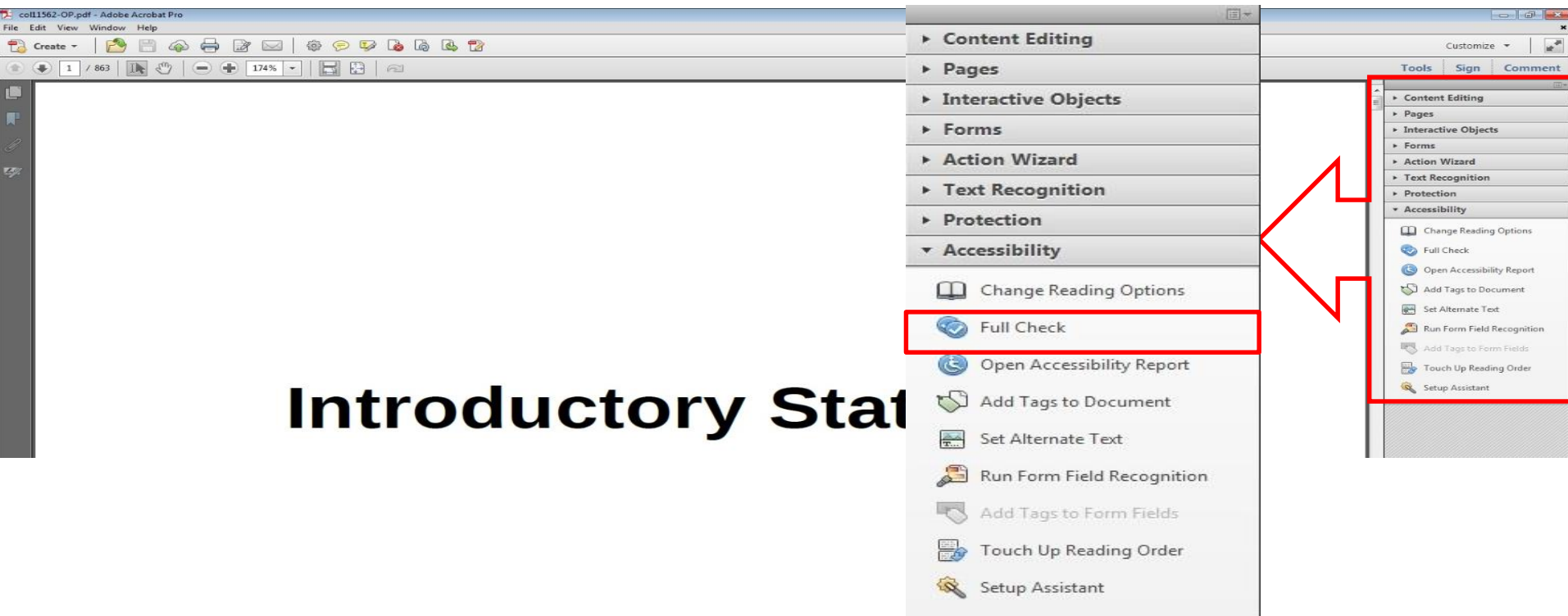
- Adobe Acrobat Pro: Accessibility Checker
 1. Open the file in Adobe Acrobat Pro XI
 2. Select Accessibility Tools



Introductory Statistics

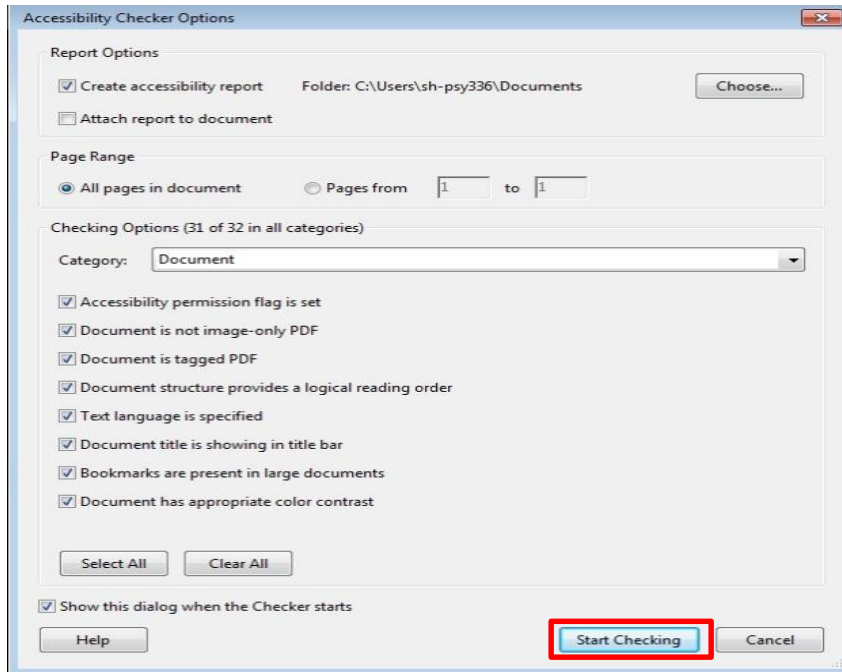
10. Language

3. Select Full Check.



10. Language

4. Select the Start Checking button to begin the full check.



10. Language Results

The screenshot displays the Adobe Acrobat Pro interface with the Accessibility Checker tool open. The left pane shows a list of issues, with 'Primary language - Failed' highlighted by a red box. A red arrow points from this box to the right pane, which shows the 'Statistics' section. The 'Statistics' section lists the following issues:

- Document (5 issues)
 - Accessibility permission flag - Passed
 - Image-only PDF - Passed
 - Tagged PDF - Failed
 - Logical Reading Order - Needs manual check
 - Primary language - Failed
 - Title - Failed
 - Bookmarks - Passed
 - Color contrast - Needs manual check
- Page Content (3 issues)
- Forms
- Alternate Text (5 issues)
 - Figures alternate text - Failed
 - Nested alternate text - Failed
 - Associated with content - Failed
 - Hides annotation - Failed
 - Other elements alternate text - Failed
- Tables (4 issues)
- Lists (2 issues)
- Headings (1 issue)

The right pane also shows a 'Statistics' section with the following items:

- Content Editing
- Pages
- Interactive Objects
- Forms
- Action Wizard
- Text Recognition
- Protection
- Accessibility
 - Change Reading Options
 - Full Check
 - Open Accessibility Report
 - Add Tags to Document
 - Set Alternate Text
 - Run Form Field Recognition
 - Add Tags to Form Fields
 - Touch Up Reading Order
 - Setup Assistant

Language: Checkpoint 10, A – Markup, B – Passage Markup

A – Markup:

Fail =

Language markup failed for this text. A full accessibility check was conducted using tools within Adobe Acrobat XI Pro. Results indicated that primary language failed. Adobe Acrobat XI Pro was used to access and evaluate this text.

Pass =

Language markup passed. A full accessibility check was conducted using tools within Adobe Acrobat XI Pro. Results indicated that primary language passed. Adobe Acrobat XI Pro was used to access and evaluate this text.

B – Passage Markup:

N/A =

Adobe Acrobat XI Pro does not check for foreign languages. Adobe Acrobat XI Pro was used to access and evaluate this text.

11. Images

- ☒ Non-decorative images have alternative text that is compatible with assistive technology (or is rendered by an application such as a browser, media player, or reader that offers this functionality)
- ☒ A non-decorative image is an image that is directly related and relevant to the text content

11. Images

- ☒ Decorative images are marked with null alternate text or contain markup that allows them to be ignored by assistive technology
- ☒ Decorative images are images that are not related in any way to the content of the text
- ☒ Complex images, charts, and graphs have longer text descriptions that are compatible with assistive technology

11. Image Example

Non-Decorative

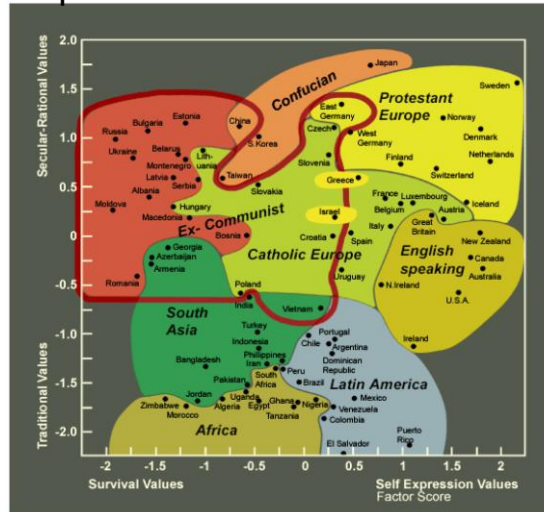
Adds something to the content
and can easily be described

																H											He
Li	Be																	B	C	N	O	F	Ne				
Na	Mg																	Al	Si	P	S	Cl	Ar				
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr										
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe										
Cs	Ba	La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn										
Fr	Ra	Ac																									

Noble gases

Complex

Adds something to the content and
takes more than one sentence to
explain



Decorative

Does not add to the knowledge
gained in a section.



11. Images

- Use Image quick key (G) or Link quick key (TAB) to check if the program recognize it as an image or link.
- Check if the image have alternative text
 - All images in AT should contain an “Alt” tag
-
- ◎ Amount of Material to Be Evaluated for non-decorative and complex images:
 - *** Sample 10 images each***

11. Images

Include Adobe Accessibility results

The screenshot displays the Adobe Acrobat Pro interface with the Accessibility Checker tool open. The document is titled 'col11562-OP.pdf'. The Accessibility Checker shows the following results:

- Document (5 issues)**
 - Accessibility permission flag - Passed
 - Image-only PDF - Passed
 - Tagged PDF - Failed
 - Logical Reading Order - Needs manual check
 - Primary language - Failed
 - Title - Failed
 - Bookmarks - Passed
 - Color contrast - Needs manual check
- Page Content (3 issues)**
- Forms**
- Alternate Text (5 issues)**
 - Figures alternate text - Failed
 - Nested alternate text - Failed
 - Associated with content - Failed
 - Hides annotation - Failed
 - Other elements alternate text - Failed
- Tables (4 issues)**
- Lists (2 issues)**
- Headings (1 issue)**

The 'Statistics' panel on the right shows the following options:

- Content Editing
- Pages
- Interactive Objects
- Forms
- Action Wizard
- Text Recognition
- Protection
- Accessibility
 - Change Reading Options
 - Full Check
 - Open Accessibility Report
 - Add Tags to Document
 - Set Alternate Text
 - Run Form Field Recognition
 - Add Tags to Form Fields
 - Touch Up Reading Order
 - Setup Assistant

Images (Additional Manual Check)

- Check manually: Make sure the descriptions for the images are descriptive enough for both non-decorative images and complex images.
- Rule of thumb: if the image cannot be described in one sentence, it's complex!

Images: Checkpoint 11 A, Non-Decorative Images

Non-decorative images present:

Pass =

3/3 non-decorative images pass. Pages 1 through 74 were used for this checkpoint. The images were found on pages 12, 45, and 74. There were only three non-decorative images within the evaluated pages. All images have adequate alternate text descriptions that are sufficiently read by NVDA. The full accessibility check indicated that the figures alternate text failed. Adobe Acrobat XI Pro and the screen reader NVDA were used to access and evaluate this text.

Fail =

0/3 non- decorative images pass. Pages 1 through 74 were used for this checkpoint. The images were found on pages 12, 45, and 74. There were only three non-decorative images within the evaluated pages. All failing images lack adequate text descriptions and cannot be read by NVDA. The full accessibility check indicated that the figures alternate text failed. Adobe Acrobat XI Pro and the screen reader NVDA were used to access and evaluate this text.

Non-decorative images not present:

N/A =

There were no non-decorative images found within this text. The full accessibility check indicated that the figures alternate text failed. Adobe Acrobat XI Pro and the screen reader NVDA were used to access and evaluate this text.

Images: Checkpoint 11 B, Decorative Images

Decorative images present:

Pass =

3/3 Decorative images pass. Pages 1 through 74 were used for this checkpoint. The images were found on pages 12, 45, and 74. There were only three decorative images within the evaluated pages. All images were skipped and not read by the screen reader NVDA. The full accessibility check indicated that the figures alternate text failed. Adobe Acrobat XI Pro and the screen reader NVDA were used to access and evaluate this text.

Fail =

0/3 Decorative images pass. Pages 1 through 74 were used for this checkpoint. The images were found on pages 12, 45, and 74. There were only three decorative images within the evaluated pages. All images had descriptions that were read by the screen reader NVDA when they should have been skipped. The full accessibility check indicated that the figures alternate text failed. Adobe Acrobat XI Pro and the screen reader NVDA were used to access and evaluate this text.

Decorative images not present:

N/A =

There were no decorative images found within this text. The full accessibility check indicated that the figures alternate text failed. Adobe Acrobat XI Pro and the screen reader NVDA were used to access and evaluate this text.

Images: Checkpoint 11 C, Complex Images

Complex images present:

Pass =

3/3 Complex images pass. Pages 1 through 74 were used for this checkpoint. The images were found on pages 12, 45, and 74. There were only three complex images within the evaluated pages. All images have adequate descriptions and longer text descriptions that are read using the screen reader NVDA. The full accessibility check indicated that the figures alternate text failed. Adobe Acrobat XI Pro and the screen reader NVDA were used to access and evaluate this text.

Fail =

0/3 Complex images pass. Pages 1 through 74 were used for this checkpoint. The images were found on pages 12, 45, and 74. There were only three complex images within the evaluated pages. All images failed because text descriptions were not read or described using the screen reader NVDA. The full accessibility check indicated that the figures alternate text failed. Adobe Acrobat XI Pro and the screen reader NVDA were used to access and evaluate this text.

Complex images not present:

N/A =

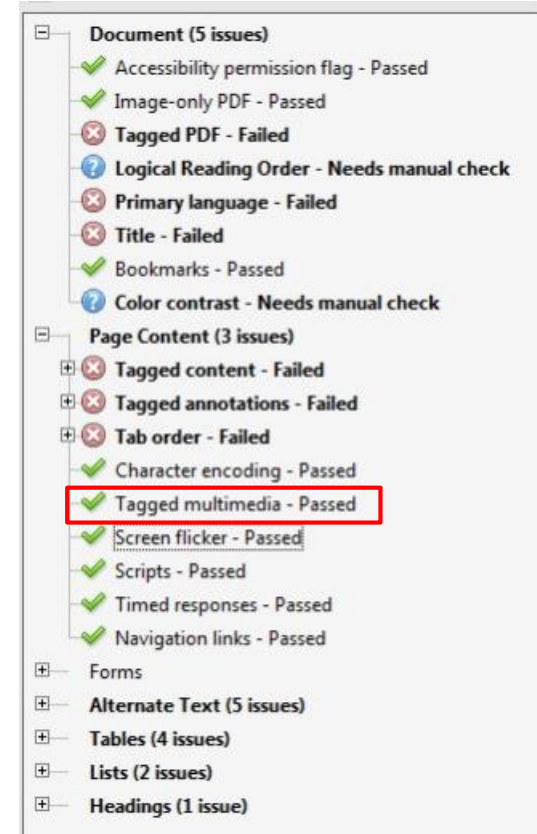
There were no complex images found within this text. The full accessibility check indicated that the figures alternate text failed. Adobe Acrobat XI Pro and the screen reader NVDA were used to access and evaluate this text.

12. Multimedia

- ☒ Part A: A synchronized text track (e.g. open or closed captions) is provided with all video content
- ☒ Part B: A transcript is provided with all audio content
- ☒ Part C: Audio/video content is delivered via a media player that is compatible with assistive technology

12. Multimedia

1. Check for Tagged Multimedia in Adobe Accessibility Full Check Results
2. Manual Check for synchronized text and transcript.



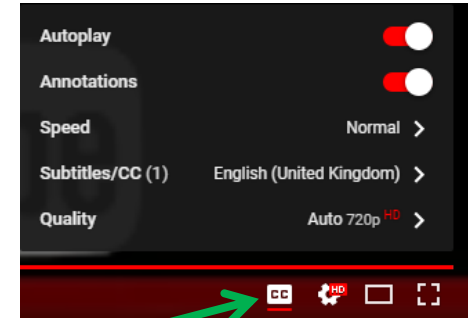
12. Multimedia

- Amount of Material to Be Evaluated

*** Sample a minimum of three videos, if applicable***

12. Multimedia (Text Track)

1. Find multimedia
2. Search for availability of a text track (e.g., CC)



Multimedia: Checkpoint 12 A, Text Track

Multimedia (Text track) present:

Pass =

3/3 multimedia pass for text track. The entire text was used for this checkpoint. Only three multimedia were found and they were on pages 48, 97, and 265. All multimedia included a text track that could be enabled by the user. The full accessibility check within Adobe indicated that tagged multimedia passed. Acrobat XI Pro was used to access and evaluate this text.

Fail =

0/3 multimedia pass for text track. The entire text was used for this checkpoint. Only three multimedia were found and they were on pages 48, 97, and 265. All multimedia failed to provide a text track that could be enabled by the user. The full accessibility check within Adobe indicated that tagged multimedia passed. Acrobat XI Pro was used to access and evaluate this text.

Multimedia (text track) not present:

N/A =


There were no multimedia found within this text. The full accessibility check within Adobe indicated that tagged multimedia passed. Adobe Acrobat XI Pro was used to access and evaluate this text.

12. Multimedia (Transcript)

1. Find multimedia
2. Search for availability of a transcript

Why look at art?

Total energy points **266**



0:54 / 0:00

Why look at art? This was the question we posed to several of our colleagues at a conference for museum professionals. Special thanks to Laura Mann, Anna Velez, an anonymous professional, and David Torgersen whose voices and insights are included here.

Options Share Info



Options Share

1/4x 1/2x 1x 1 1/2x 2x

☒ Interactive transcript

☐ Embedded questions

12. Multimedia (Transcript)

Why look at art? This was the question we posed to several of our colleagues at a conference for museum professionals. Special thanks to Laura Mann, Anna Velez, an anonymous professional, and David Torgersen whose voices and insights are included here.

 Options ▾  Share ▾  Info

0:00 [MUSIC PLAYING]

0:05 SPEAKER 1: I think it's important

0:07 that people look at art because we live in a visual world.

0:11 And understanding, and looking at,

0:14 and thinking about the way images

0:16 communicate in all kinds of ways is important to being alive

0:21 today.

0:22 SPEAKER 2: If one has heightened visual acumen, which

0:26 you get from spending time looking at things, whether it's

Multimedia: Checkpoint 12 B, Transcript

Multimedia (Transcript) present:

Pass =

3/3 multimedia pass for transcript. The entire text was used for this checkpoint. Only three multimedia were found and they were on pages 48, 97, and 265. All multimedia included a transcript that could be enabled by the user. The full accessibility check within Adobe indicated that tagged multimedia passed. Acrobat XI Pro was used to access and evaluate this text.

Fail =

0/3 multimedia pass for transcript. The entire text was used for this checkpoint. Only three multimedia were found and they were on pages 48, 97, and 265. All multimedia failed to include a transcript that could be enabled by the user. The full accessibility check within Adobe indicated that tagged multimedia passed. Acrobat XI Pro was used to access and evaluate this text.

Multimedia (Transcript) not present:

N/A =

There were no multimedia found within this text. The full accessibility check within Adobe indicated that tagged multimedia passed. Adobe Acrobat XI Pro was used to access and evaluate this text.

12. Multimedia Assistive Player

- ☒ Audio/video content is delivered via a media player that is compatible with assistive technology

****Mark as N/A: We are not using an assistive player for this evaluation****

Multimedia: Checkpoint 12 C, Assistive Player

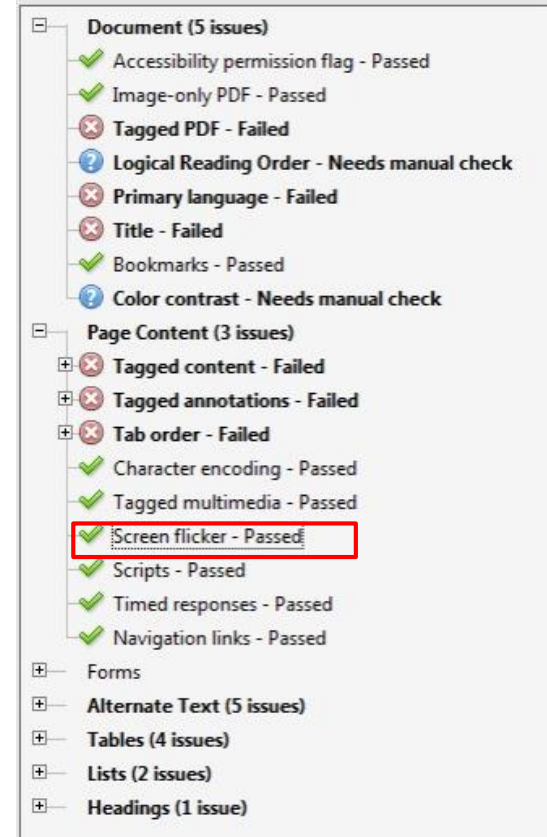
N/A =

We are not using as assistive player for this evaluation. The full accessibility check within Adobe indicated that tagged multimedia passed. Adobe Acrobat XI Pro was used to access and evaluate this text.

13. Flickering

- ☑ Resources should not contain anything that flashes more than three times in any one-second period

****Check for Screen Flicker in Results*



Flickering: Checkpoint 13, Flickering

Pass =

No content was found to flicker during the evaluation of this text. The entire text was used for this checkpoint. The full accessibility check within Adobe indicated that screen flicker passed. Adobe Acrobat XI Pro was used to access and evaluate this text.

Fail =

During the evaluation of this text certain content was found to flicker. The entire text was used for this checkpoint. Flickering content was found on pages 23, 59, and 72. The pages would flash three to four times before displaying the text. The full accessibility check within Adobe indicated that screen flicker failed. Adobe Acrobat XI Pro was used to access and evaluate this text.

14. STEM

STEM: Science, Technology, Engineering, and Math

- ☒ **Mark-up:** STEM content is marked up in a manner that is compatible with assistive technology
- ☒ **Notation Markup:** The resource conveys both the notation (presentation) and meaning (semantics) of the STEM content

STEM Figures

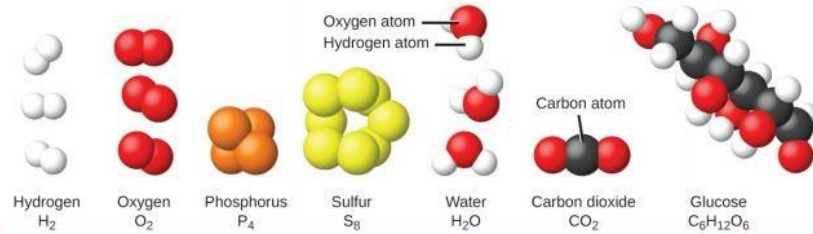


Figure 1.11 The elements hydrogen, oxygen, phosphorus, and sulfur form molecules consisting of two or more atoms of the same element. The compounds water, carbon dioxide, and glucose consist of combinations of atoms of different elements.

Markup

Markup
Notation

Enzymes can be regulated in ways that either promote or reduce their activity. There are many different kinds of molecules that inhibit or promote enzyme function, and various mechanisms exist for doing so. In some cases of enzyme inhibition, for example, an inhibitor molecule is similar enough to a substrate that it can bind to the active site and simply block the substrate from binding. When this happens, the enzyme is inhibited through **competitive inhibition**, because an inhibitor molecule competes with the substrate for active site binding (Figure 6.17). On the other hand, in noncompetitive inhibition, an inhibitor molecule binds to the enzyme in a location other than an allosteric site and still manages to block substrate binding to the active site.

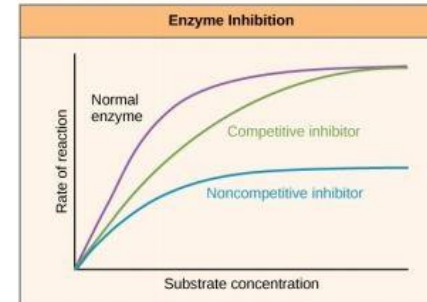


Figure 6.17 Competitive and noncompetitive inhibition affect the rate of reaction differently. Competitive inhibitors affect the initial rate but do not affect the maximal rate, whereas noncompetitive inhibitors affect the maximal rate.










Some inhibitor molecules bind to enzymes in a location where their binding induces a conformational change that reduces the affinity of the enzyme for its substrate. This type of inhibition is called **allosteric inhibition** (Figure 6.18). Most allosterically regulated enzymes are made up of more than one polypeptide, meaning that they have more than one protein subunit. When an allosteric inhibitor binds to an enzyme, all active sites on the protein subunits are changed slightly such that they bind their substrates with less efficiency. There are allosteric activators as well as inhibitors. Allosteric activators bind to locations on an enzyme away from the active site, inducing a conformational change that increases the affinity of the enzyme's active site(s) for its substrate(s).

14. STEM

For BOTH Markup and Notation:

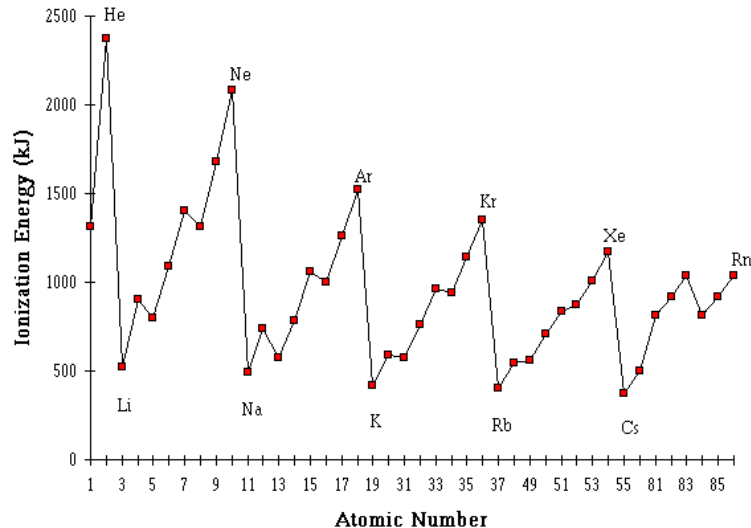
1. Open up the book with Adobe Acrobat
2. Locate a STEM content
3. Select the sentence right before the content
4. Use Numpad + to start reading at current location
5. Check if the reader reads the content correctly

Reading Text

Command	Description
 or Numpad 1	Say Prior Character
 or Numpad 3	Say Next Character
Numpad 2	Say Current Character
Numpad 5	Say Word
Numpad 5 twice quickly	Spell Word
Ctrl +  or Numpad 4	Say Prior Word
Ctrl +  or Numpad 6	Say Next Word
 or Numpad 7	Say Prior Line
 or Numpad 9	Say Next Line
NVDA +  or Numpad 8	Say Current Line
NVDA +  twice quickly	Spell Current Line
NVDA +  or Numpad +	Read all starting at current position
Shift + Numpad 7	Top line
Shift + Numpad 9	Bottom Line
Shift + Numpad 1	Start of Line
Shift + Numpad 3	End of Line

Classifying STEM

Remember, the markup will tell you how to classify content. If it is marked as Figure, it is a Figure.



Atomic Number

Figure 4.3.

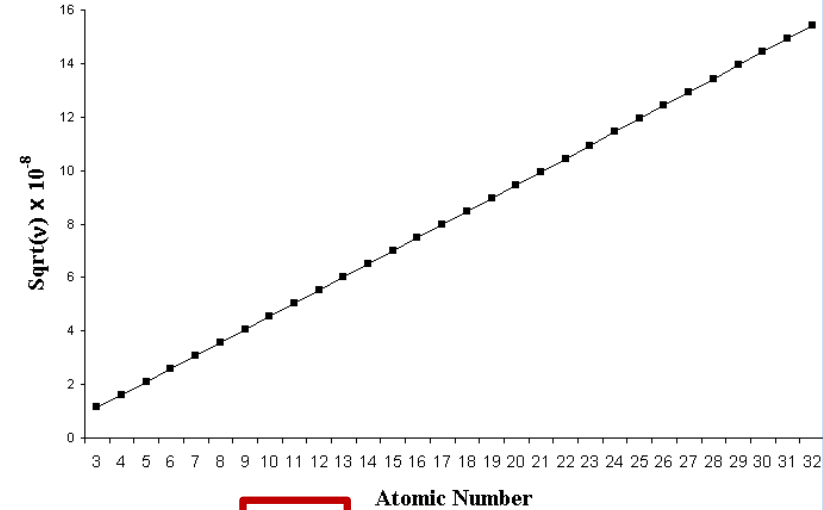


Figure 4.2. X-ray Frequencies Versus Atomic Number

Table 2.1. Mass Relationships for Hydrogen, Nitrogen, Oxygen Compounds

Compound	Total Mass	Mass of Hydrogen	Mass of Nitrogen	Mass of Oxygen	"Expected" Relative Atomic Mass of Hydrogen	"Expected" Relative Atomic Mass of Nitrogen	"Expected" Relative Atomic Mass of Oxygen
Nitric Oxide	15.0 g	-	7.0 g	8.0 g	-	7.0	8.0
Ammonia	8.5 g	1.5 g	7.0 g	-	1.5	7.0	-
Water	9.0 g	1.0 g	-	8.0 g	1.0	-	8.0

14. STEM Markup

- ☒ STEM content is marked up in a manner that is compatible with assistive technology

STEPS:

1. Manually check that the following have a label, description or tag that can be accessed by NVDA
 - Figures
 - Graphs
 - Equations
 - Tables

14. STEM Mark-up

Successive Ionization Energies (kJ/mol)

	Na	Mg	Al	Si	P	S	Cl	Ar
IE ₁	496	738	578	787	1012	1000	1251	1520
IE ₂	4562	1451	1817	1577	1903	2251	2297	2665
IE ₃	6912	7733	2745	3231	2912	3361	3822	3931
IE ₄	9543	10540	11575	4356	4956	4564	5158	5770
IE ₅	13353	13630	14830	16091	6273	7013	6542	7238
IE ₆	16610	17995	18376	19784	22233	8495	9458	8781
IE ₇	20114	21703	23293	23783	25397	27106	11020	11995

Table 4.1

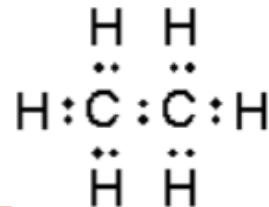
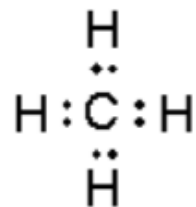


Figure 6.2

The STEM content should have a label, description or tag

In AT, you are checking to see that the STEM content has a markup present **AND** that it is read by the text to speech application (NVDA).

14. STEM Mark-up

This equation would fail for markup (none present), but it could pass for notation mark up if it was read correctly by NVDA.

Every chemical reaction involves a change in free energy, called delta G (ΔG). The change in free energy can be calculated for any system that undergoes such a change, such as a chemical reaction. To calculate ΔG , subtract the amount of energy lost to entropy (denoted as ΔS) from the total energy change of the system. This total energy change in the system is called **enthalpy** and is denoted as ΔH . The formula for calculating ΔG is as follows, where the symbol T refers to absolute temperature in Kelvin (degrees Celsius + 273):

$$\Delta G = \Delta H - T\Delta S$$

The standard free energy change of a chemical reaction is expressed as an amount of energy per mole of the reaction product (either in kilojoules or kilocalories, kJ/mol or kcal/mol; 1 kJ = 0.239 kcal) under standard pH, temperature, and pressure conditions. Standard pH, temperature, and pressure conditions are generally calculated at pH 7.0 in biological systems, 25 degrees Celsius, and 100 kilopascals (1 atm pressure), respectively. It is important to note that cellular conditions vary considerably from these standard conditions, and so standard calculated ΔG values for biological reactions will be different inside the cell.

STEM: Checkpoint 14 A, Markup

If STEM is present:

Pass =

10/10 STEM figures/graphs/equations/tables pass for markup. The STEM figures were found on pages 23(3), 32(2), 49(1), and 6(4). All figures included a markup that was able to be read using the screen reader NVDA. Adobe Acrobat XI Pro and the screen reader NVDA were used to access and evaluate this text.

Fail =

0/10 STEM figures/graphs/equations/tables pass for markup. The STEM figures were found on pages 23(3), 32(2), 49(1), and 6(4). All figures lacked a markup that was able to be read using the screen reader NVDA. Adobe Acrobat XI Pro and the screen reader NVDA were used to access and evaluate this text.

If STEM is not present:

N/A =

There were no STEM figures (*Tables/Graphs/Equations*) found within this text. Adobe Acrobat XI Pro and the screen reader NVDA were used to access and evaluate this text.

14. STEM Notation Markup

- ☒ The resource conveys both the notation (presentation) and meaning (semantics) of the STEM content

STEPS:

1. Manually check that the following have a text description that conveys notation and meaning
 - Figures
 - Graphs
 - Equations/Tables

14. STEM: Notation

If the image itself does not contain an Alt tag but the content/text around it does have a notation (presentation) and meaning (semantics) of the STEM content with good description then we may PASS it with a note included.

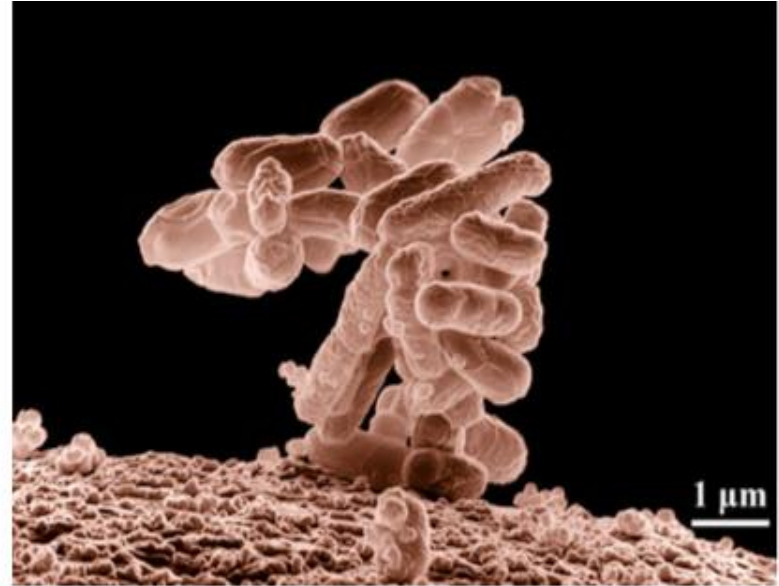


Figure 1.15 Biologists may choose to study *Escherichia coli* (*E. coli*), a bacterium that is a normal resident of our digestive tracts but which is also sometimes responsible for disease outbreaks. In this micrograph, the bacterium is visualized using a scanning electron microscope and digital colorization. (credit: Eric Erbe; digital colorization by Christopher Pooley, USDA-ARS)

Checkpoint 14: STEM Markup Notation

If STEM is present:

Pass =

3/3 STEM figures/graphs/equations/tables pass for notation markup. Only three STEM figures were found within the text. STEM figures were found on page 17, 84, and 92. All STEM figures had text descriptions that clearly described the STEM content and was able to be read using the screen reader NVDA. The images did not have proper alt tags. Adobe Acrobat XI Pro and the screen reader NVDA were used to access and evaluate this text.

Fail =

0/3 STEM figures/graphs/equations/tables pass for notation markup. Only three STEM figures were found within the text. STEM figures were found on page 17, 84, and 92. None of the STEM figures had text descriptions that clearly described the STEM content and all STEM figures were not able to be read using the screen reader NVDA. The images did not have proper alt tags. Adobe Acrobat XI Pro and the screen reader NVDA were used to access and evaluate this text.

If STEM is not present:

N/A =

No STEM figures (*or Tables/Graphs/Equations*) were found in this text. This text was viewed using Adobe Acrobat Pro.

15. Interactive Elements

☒ Keyboard

- ☒ Interactive elements allow for keyboard-only operation
- ☒ The interactive element can be navigated and accessed using the tab and enter key

15. Interactive Elements

STEPS:

1. Use the TAB key to navigate the menu
2. Items that are selected will have a box around the link
3. Use the ENTER key to select a link or other item

Interactive Element Example

The CSULB Campus Map

Campus structures can be navigated through using the “Tab” key and selected using the “Enter” key



Interactive Elements: Checkpoint 15 A, Keyboard

If interactive elements are present:

Pass =

1/1 interactive elements pass for keyboard operation. There was only one interactive element found within this text and it was on page 52. The interactive element allowed for keyboard only operation using the “Tab” and “Enter” keys to navigate and select components. Adobe Acrobat XI Pro was used to access and evaluate this text.

Fail =

0/1 interactive elements pass for keyboard operation. There was only one interactive element found within this text and it was on page 52. The interactive element did not allow for keyboard only operation using the “Tab” and “Enter” keys to navigate and select components. The user was required to use a mouse to interact with the element. Adobe Acrobat XI Pro was used to access and evaluate this text.

If interactive elements are not present:

N/A =

There were no interactive elements found within this text. Adobe Acrobat XI Pro was used to access and evaluate this text.

15. Interactive Elements

☒ Markup

Each interactive element conveys information to assistive technology regarding the element's

☒ name

☒ type

☒ status

***As Applicable:

If there is no Interactive Elements, mark N/A on the report***

Interactive Elements: Checkpoint 15 B, Markup

If interactive elements are present:

Pass =

1/1 interactive elements pass for markup. There was only one interactive element found within this text and it was on page 52. The interactive element allowed for the identification of its name and status when using the screen reader NVDA. Adobe Acrobat XI Pro and the screen reader NVDA were used to access and evaluate this text.

Fail =

0/1 interactive elements pass for keyboard operation. There was only one interactive element found within this text and it was on page 52. The interactive element did not allow for the identification of the elements name or status when using the screen reader NVDA. Adobe Acrobat XI Pro and the screen reader NVDA were used to access and evaluate this text.

If interactive elements are not present:

N/A =

There were no interactive elements found within this text. Adobe Acrobat XI Pro and the screen reader NVDA were used to access and evaluate this text.

15. Interactive Elements

- ☒ Text prompts

The following are conveyed with assistive technology:

- ☒ Instructions

- ☒ Prompts

- ☒ Error messages

Interactive Elements: Checkpoint 15 , Text Prompts

If interactive elements are present:

Pass =

1/1 interactive elements pass for markup. There was only one interactive element found within this text and it was on page 52. The instructions and text prompts displayed by the interactive element were able to be read by the screen reader NVDA. Adobe Acrobat XI Pro and the screen reader NVDA were used to access and evaluate this text.

Fail =

0/1 interactive elements pass for keyboard operation. There was only one interactive element found within this text and it was on page 52. The instructions and text prompts displayed by the interactive element were not able to be read by the screen reader NVDA. Adobe Acrobat XI Pro and the screen reader NVDA were used to access and evaluate this text.

If interactive elements are not present:

N/A =

There were no interactive elements found within this text. Adobe Acrobat XI Pro and the screen reader NVDA were used to access and evaluate this text.