

# SKILLSCOMMONS ACCESSIBILITY CHECKPOINTS

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METHODS FOR PDF FORMAT  
(NONASSISTIVE TECHNOLOGIES)

# 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:

1. Visit Cool4Ed eTextbook Reviews site @  
<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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PDF	Download a free PDF of this book.
Web View	Read live on the web.
Bookshare	Download a free accessible version of this book.



# 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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# How to access texts

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PDF	Download a free PDF of this book.
<b>Web View</b>	Read live on the web.
Bookshare	Download a free accessible version of this book.



# Introductory Statistics

Book by: OpenStax College

 Contents +  Metadata +  Tools +

 Back  Next 

ASK US

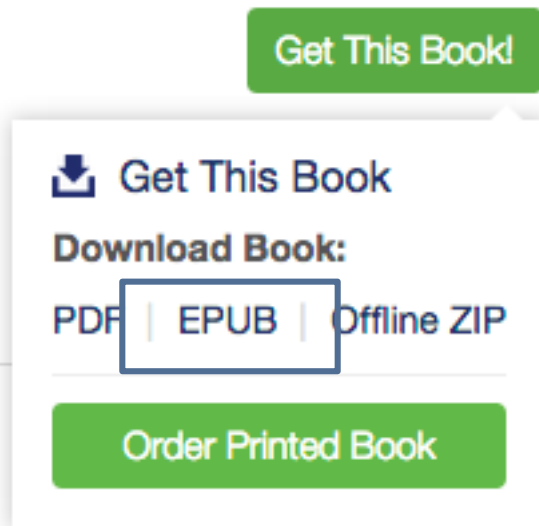
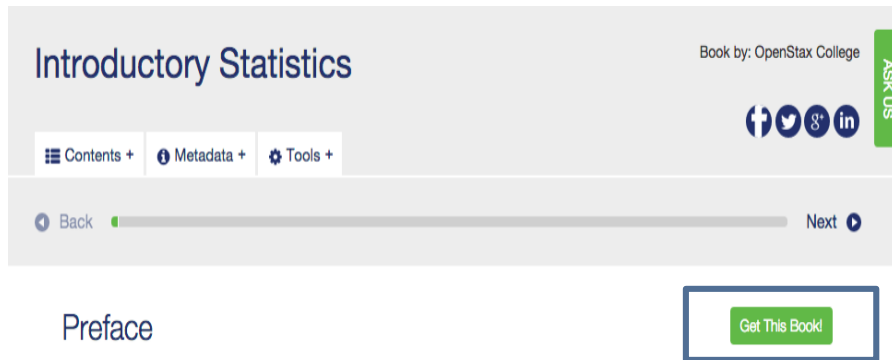
Preface

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 Markup (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 Markup (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)

Select content type from dropdown list

Select format and OS – note: each format has a different checklist

Only for HTML

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

# 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.

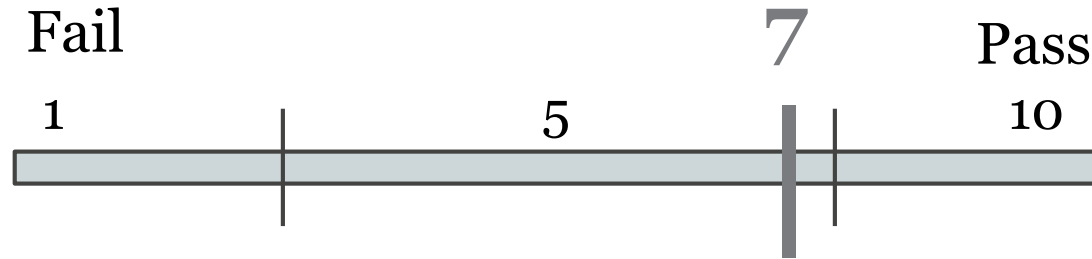
Enter info  
such as the  
pages you  
evaluated  
here as well.

# Pass, Fail, or N/A?

- Evaluate material based on the amount of material included in the checklist
- Example: Evaluate 10 links for flickering
  - 7 / 10 links - PASS
  - 6/10 links - FAIL
  - N/A cannot be used here!*

# 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

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# PDF Evaluation Requirements

## OS

- Windows OS (XP or above)

## Require Downloading

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

\*\* Following screenshots are done with Adobe Acrobat Pro XI

# 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 allows the user to enable text-to-speech (TTS) functionality

● Amount of Material to Be Evaluated

\*\*\* Sample 5 pages \*\*\*

## 2. Text Access

### STEPS:

1. Open file with Adobe Acrobat XI Pro
2. View > Read Out Loud > Activate
3. Select Read This Page Only when you are on the page you would like to evaluate.

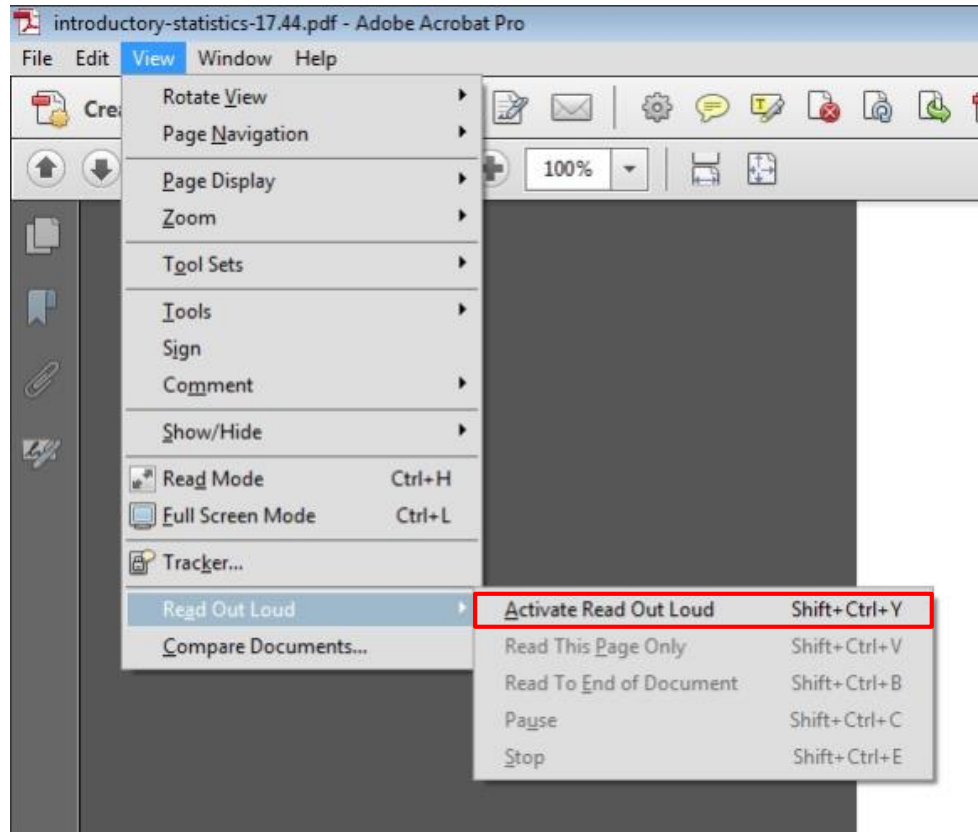
## 2. Text Access

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

● Amount of Material to Be Evaluated

\*\*\* Sample 5 pages \*\*\*

## 2. Text Access



## 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 read-out-loud function did not read text and states that the page was empty. Adobe Acrobat Pro XI and the Read Out Loud function 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 read-out-loud function. Adobe Acrobat Pro XI and the Read Out Loud function 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% zoom
  - Do not check for text reflow in this checkpoint

### 3. Text Adjustment (Size)

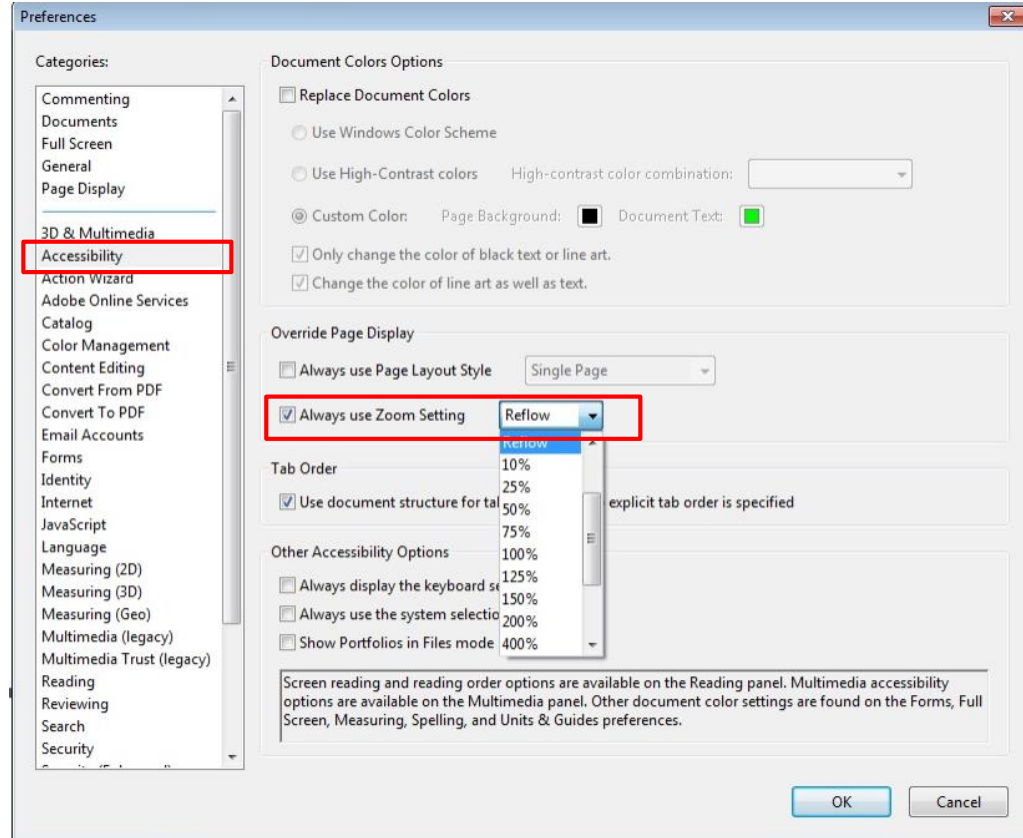
#### STEPS:

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  
(Take into account sections that are cutoff when scoring)
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)

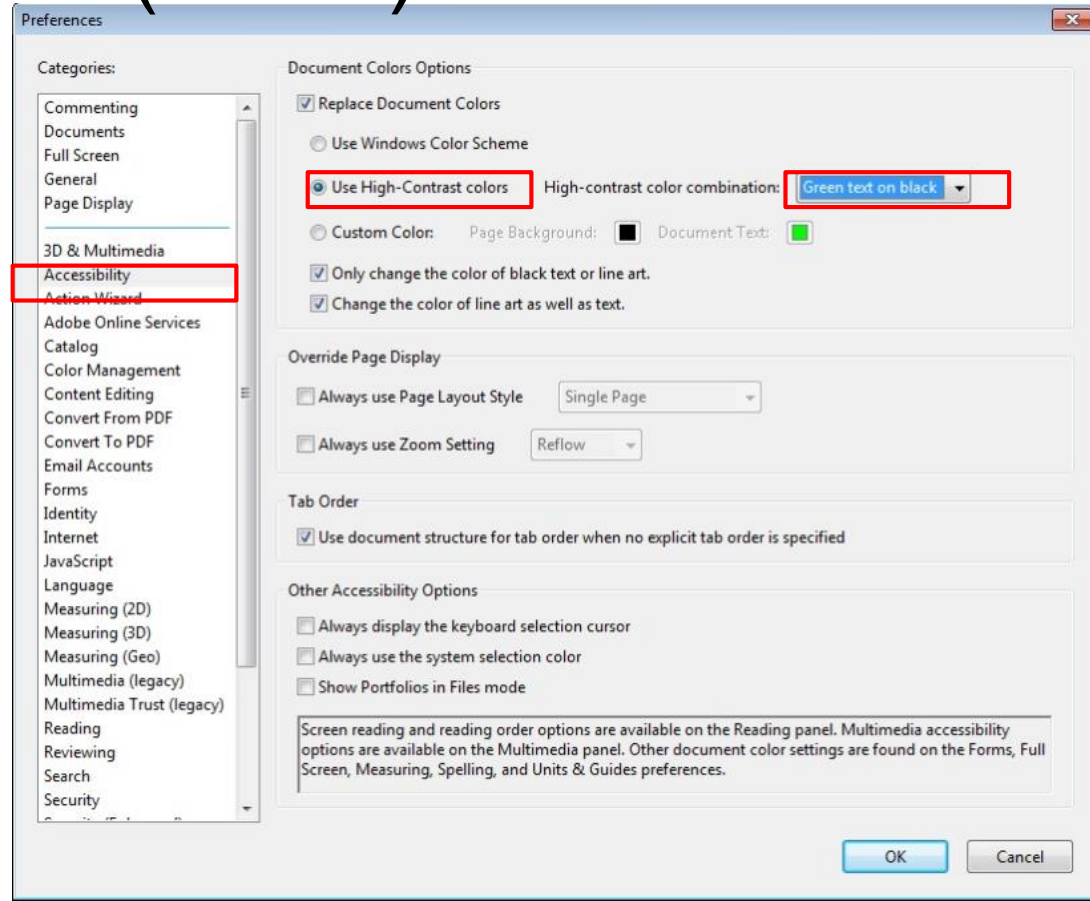
## STEPS:

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. 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 checked and passed 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 allows the user to reflow the text by specifying the margins and line spacing

Check text size between 50% to 200% zoom

● Amount of Material to Be Evaluated

\*\*\* Sample 5 pages \*\*\*

## 4. Reading Layout (reflow)

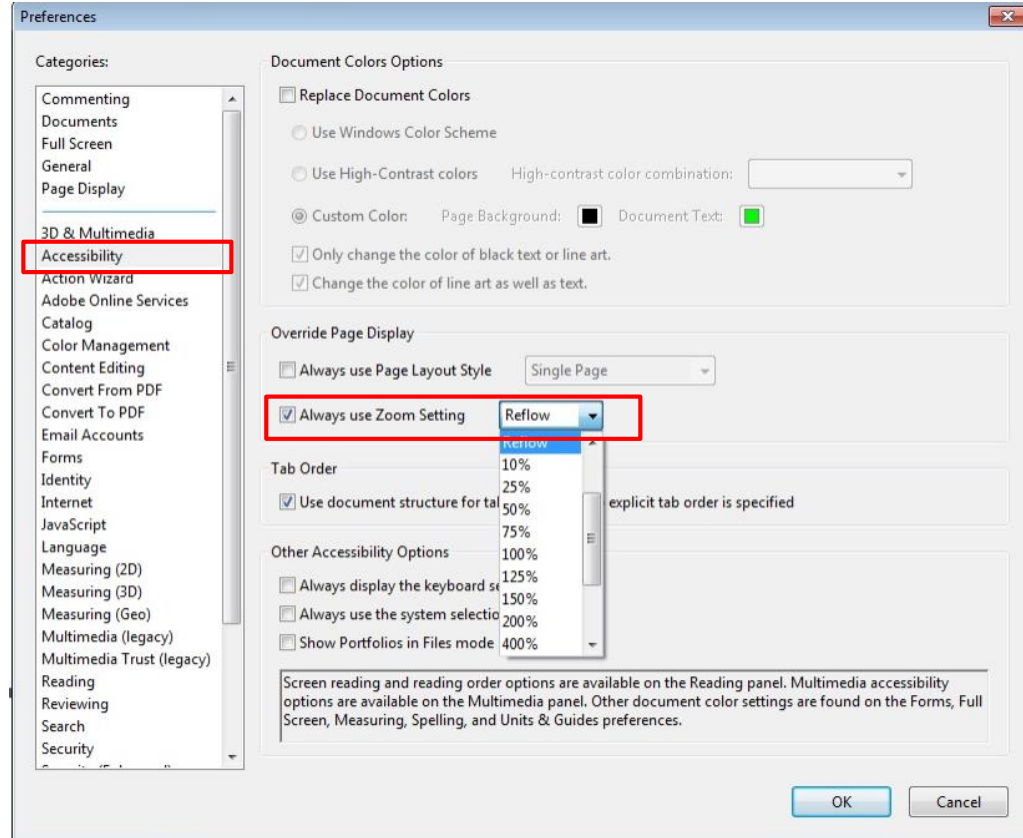
### STEPS:

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 checkpoint with N/A, we don't have the printed version of the text\*\*

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 text to speech functionality

### ● Amount of Material to Be Evaluated

\*\*\* Sample 5 pages \*\*\*

# 5. Reading Order

## STEPS:

1. Open file with Adobe Acrobat XI Pro
2. Locate 5 pages ( include page # in the reports) that contain a more complicated layout
3. Use the Read Out Loud function to check if the reading order is logical (please refer to checkpoint #2 for instructions on Read Out Loud)

● Amount of Material to Be Evaluated

\*\*\* Sample 5 pages \*\*\*

# 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 Read Out Loud function 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 Read Out Loud function 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 Read Out Loud function read text content in a manner that corresponded to the visual layout of the page without skipping content. Adobe Acrobat Pro XI and the Read Out Loud function were used to access and evaluate this text.

## 6. Structural Markup / Navigation

### Part A: Navigation Text

- ☒ The text of the digital resource includes markup (e.g. tags or styles) that allows for navigation by key structural elements (chapters, headings, pages)
- ☒ Results: Check for Tagged PDF, Title, Bookmarks, and Headings
- ☒ Include the ratio of passing content and score accordingly

## 6. Structural Markup / Navigation

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

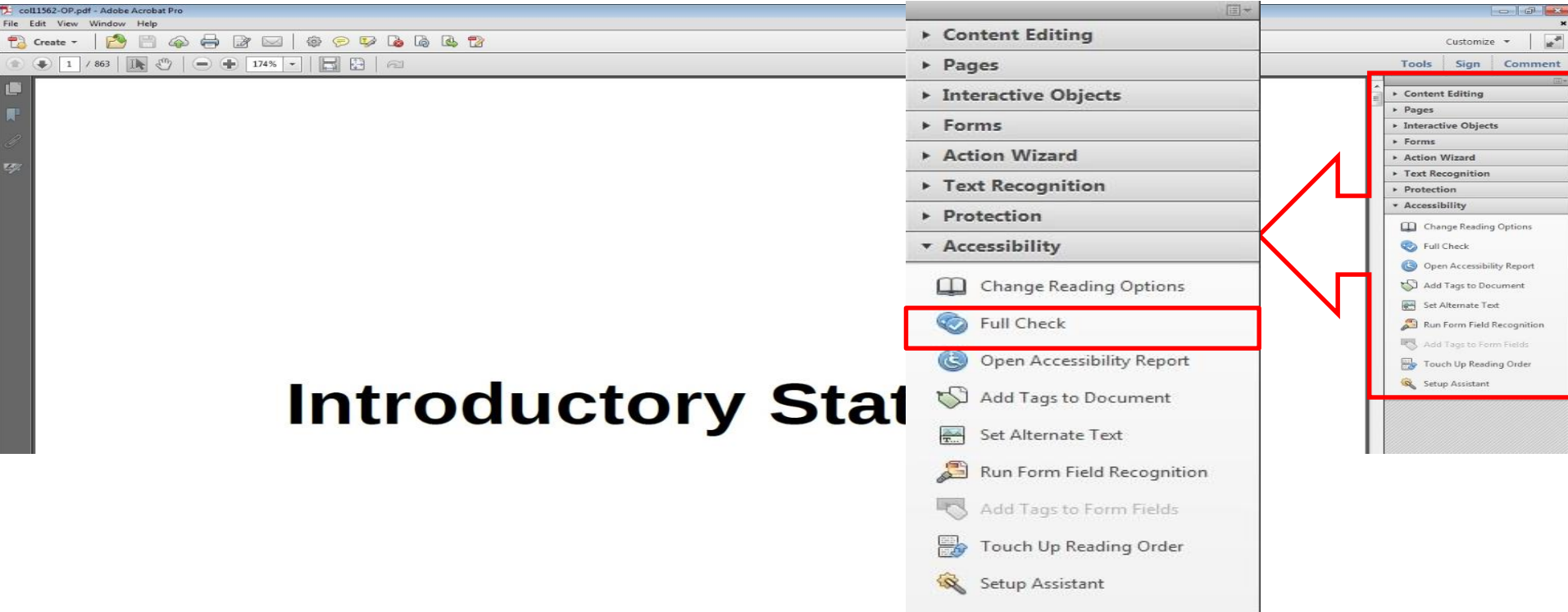


# Introductory Statistics



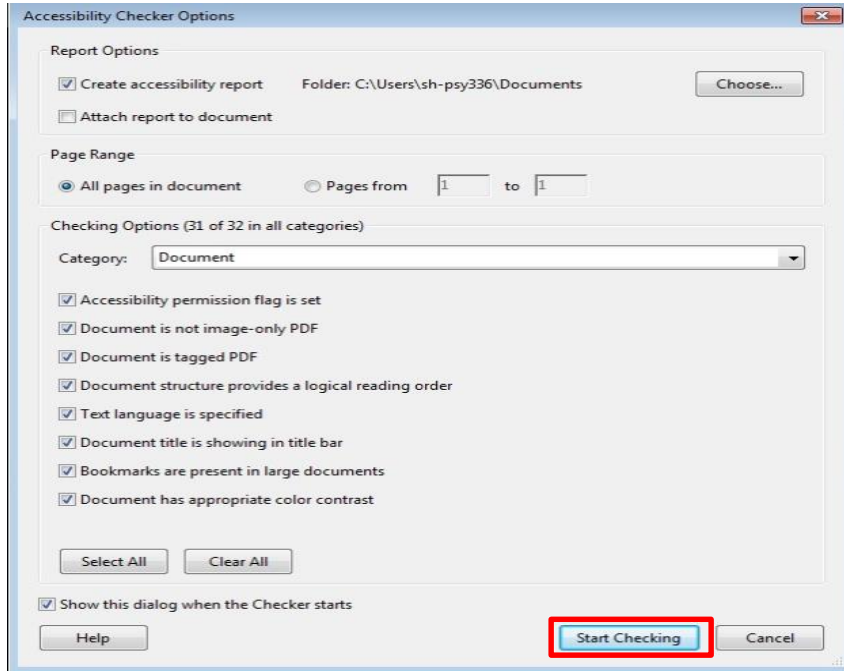
# 6. Structural Markup / Navigation

## 3. Select Full Check.



# 6. Structural Markup / Navigation

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



# 6. Structural Markup / Navigation

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

col11562-OP.pdf - Adobe Acrobat Pro

File Edit View Window Help

Create 1 / 863 139%

Accessibility Checker

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)

Statistics

Tools Sign Comment

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

10:27 AM 6/30/2015

# Structural Markup: Checkpoint 6 A, Navigation Text

Fail =

1/4 accessibility criterion pass structural markup for text navigation. A full accessibility check in Adobe Acrobat XI Pro indicated that the text passed for bookmarks, but failed for title, tagged PDF, and headings. Adobe Acrobat XI Pro was used to access and evaluate this text.

Pass =

4/4 accessibility criterion pass structural markup for text navigation. A full accessibility check in Adobe Acrobat XI Pro indicated that the text passed for bookmarks, title, tagged PDF, and headings. Adobe Acrobat XI Pro was used to access and evaluate this text.

# 6. Structural Markup / Navigation

## Part B: Lists

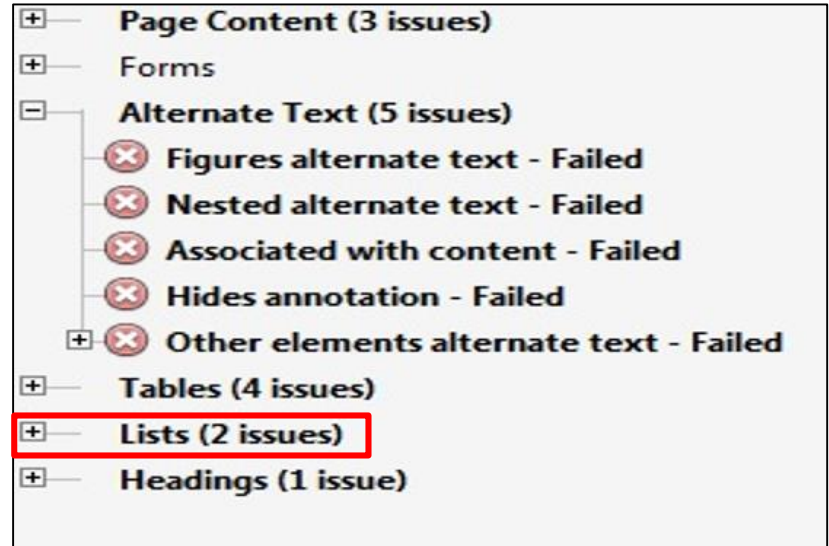
- The text of the digital resource includes markup for bullets and numbered lists

- Results: Check for both

1. List Items

2. Lbl and Lbody

- Include ratio of passing content and score according to 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 Read Out Loud function in Adobe. 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.

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 the read out loud function within Adobe. A full accessibility check in Adobe Acrobat XI Pro indicated that lists pass for both list items and lbl and Lbody. Adobe Acrobat XI Pro and Read Out Loud were used to access and evaluate this text.

7/10 lists pass for structural markup. Lists were found on pages 2, 3, 5, 11(2), 12, 13, and 24(3). For passing content, all list items, and numbers were read by the read out loud function within Adobe. Failing lists were the three lists found on page 24 and they failed because the individual list items could not be read. A full accessibility check in Adobe Acrobat XI Pro indicated that lists pass for both list items and lbl and Lbody. Adobe Acrobat XI Pro and Read Out Loud were used to access and evaluate this text.

## 6. Structural Markup / Navigation

### Part C: eReader Application

- ☒ 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

**\*\*Mark as N/A: We are not using an additional e-reader application for this evaluation\*\***

## 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
- ☒ Results: Check for Rows, TH and TD, Headers, and Regularity
- ☒ Include the ratio of passing content but score according to your manual check

# 7. Tables

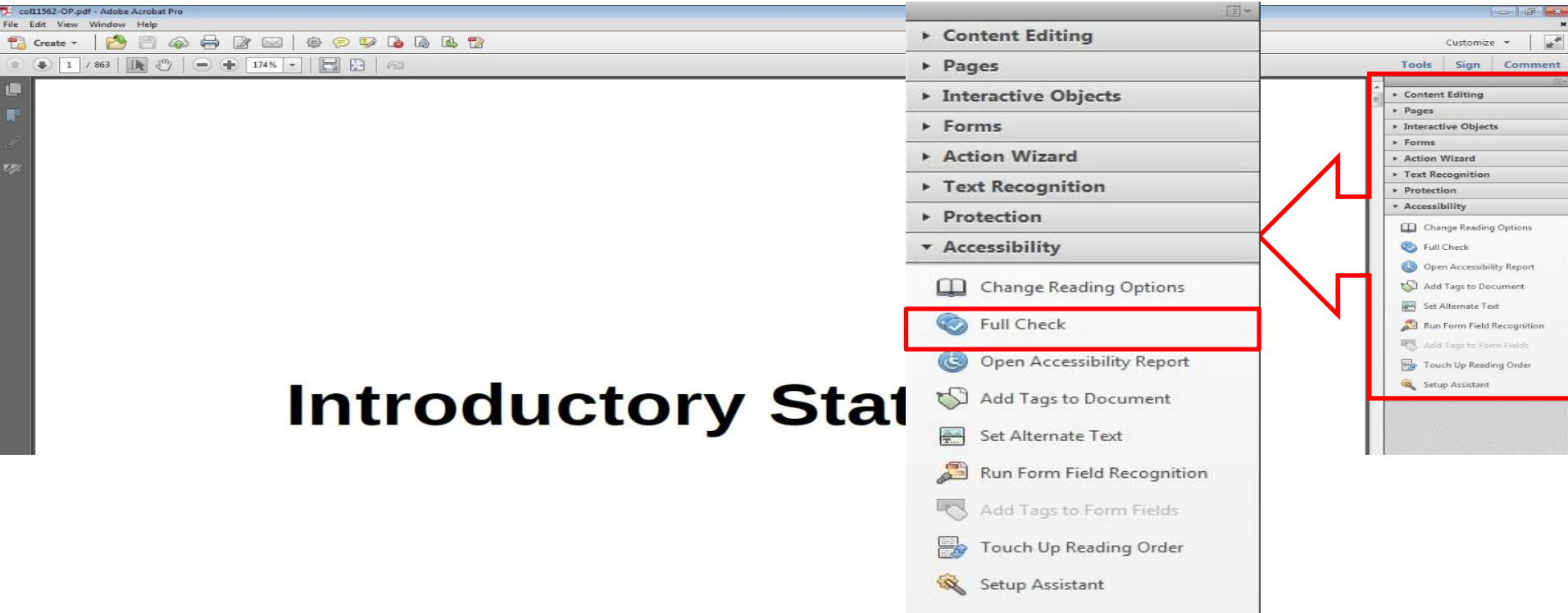
- Adobe Acrobat Pro: Accessibility Checker
  1. Open the file in Adobe Acrobat Pro XI
  2. Select Accessibility Tools



## Introductory Statistics

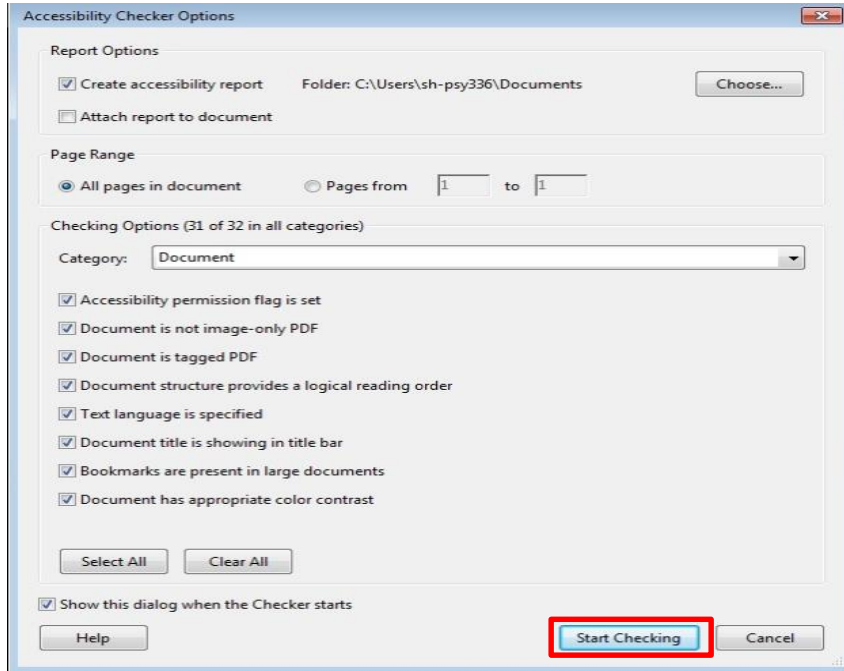
# 7. Tables

## 3. Select Full Check.



# 7. Tables

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



# 7. Tables Results

col11562-OP.pdf - Adobe Acrobat Pro

File Edit View Window Help

Create 1 / 863 139%

Accessibility Checker

- 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)

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)

Accessibility Checker

Document (5 issues)

Page Content (3 issues)

Forms

Alternate Text (5 issues)

Tables (4 issues)

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

Lists (2 issues)

Headings (1 issue)

Tools Sign Comment

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

10:27 AM 6/30/2015

# 7. Tables

- Additional Manual Check

## STEPS:

1. Select a table in the text
2. Activate the read-out-loud function (please refer to Checkpoint #2)
3. Use the read-out-loud function to read the current page (Shift + Ctrl + V)
4. Repeat the steps to check for 5 tables

\*\*\* Sample 5 tables \*\*\*

### Example 2.4

In a survey, 40 mothers were asked how many times per week a teenager must be reminded to do his or her chores. The results are shown in **Table 2.7** and in **Figure 2.2**.

Number of times teenager is reminded	Frequency
0	2
1	5
2	8
3	14
4	7
5	4

Table 2.7

# 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 read out loud function within Adobe. 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 was used to access the text for this evaluation.

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 read out loud function within Adobe. 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 was used to access the text for this evaluation.

4/5 tables pass for table markup. Tables were found on pages 27, 40-41, 63, 86, and 102-103. All passing tables were able to be read by the read out loud function within Adobe. The single failing table was found on page 41-42. Text content within the failing table was jumbled and Read Out Loud would skip cells. The accessibility checker tool 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 was used to access the text for this evaluation.

## 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)
- ☒ Check that the link redirects to the correct location
- ☒ If the link does not redirect when the enter button is clicked then fail this sub category
- ☒ If the link is not accessed when using the tab and enter key 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 both within-book links and live hyperlinks for both functionality and descriptiveness

## 8. Hyperlinks (in-book)

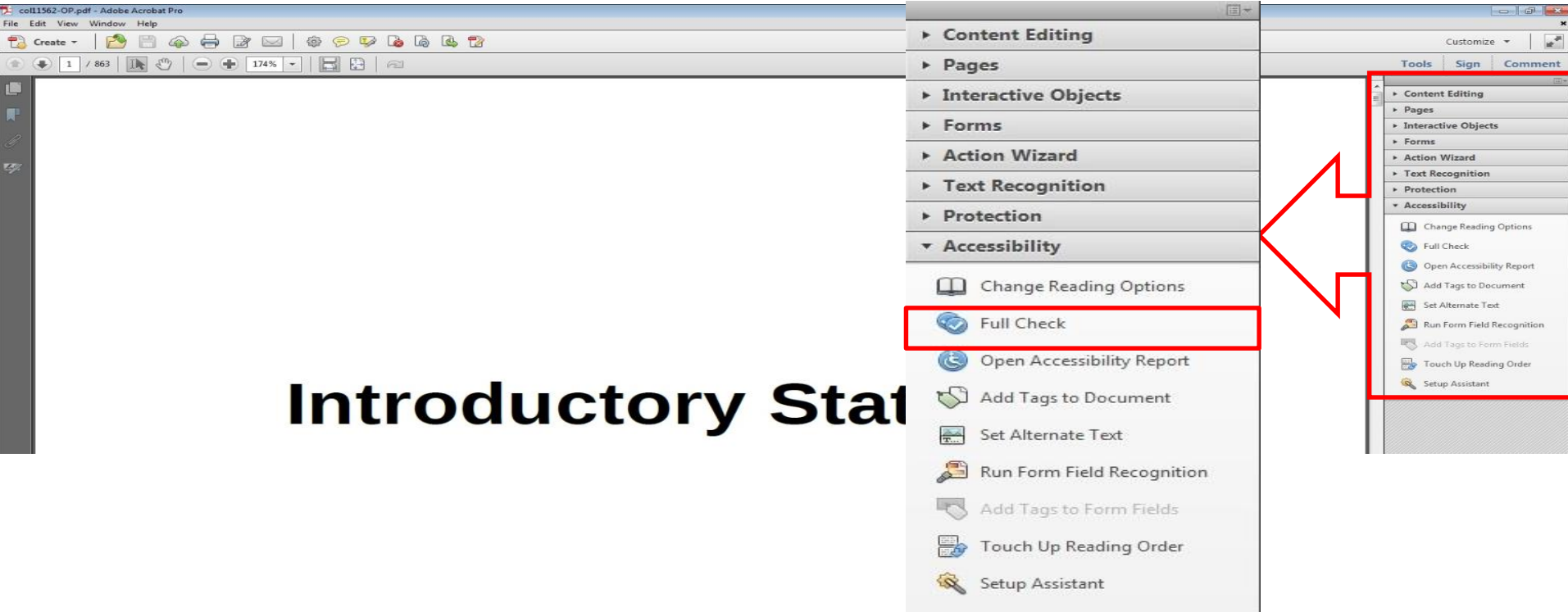
- Adobe Acrobat Pro: Accessibility Checker
  1. Open the file in Adobe Acrobat Pro XI
  2. Select Accessibility Tools



# Introductory Statistics

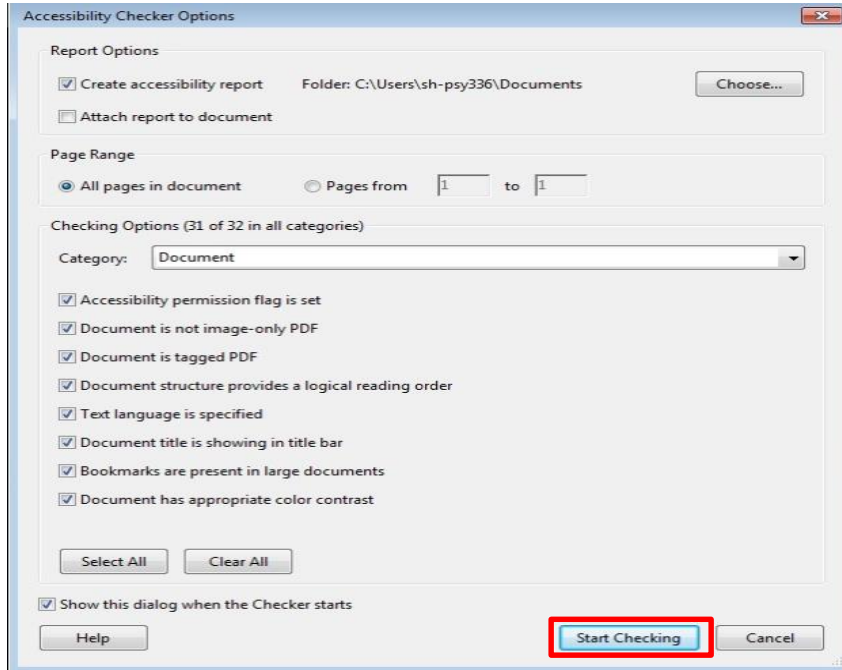
# 8. Hyperlinks (in-book)

## 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 tool, showing the results of an accessibility check. The first screenshot shows the full list of issues, with a red box highlighting the 'Page Content' section. A red arrow points from this box to the second screenshot, which shows the 'Page Content' section expanded. Another red arrow points from the 'Page Content' section in the second screenshot to the third screenshot, which shows the 'Page Content' section expanded further, highlighting the 'Navigation links' issue.

**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)**

- Tagged content - Failed
- Tagged annotations - Failed
- Tab order - Failed

**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)**

- Figures alternate text - Failed
- Nested alternate text - Failed
- Associated with content - Failed
- Hides annotation - Failed

**Lists (2 issues)**

- Figures alternate text - Failed
- Nested alternate text - Failed

**Headings (1 issue)**

- Figures alternate text - Failed

**Navigation links - Passed**

# 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 \*\*\*

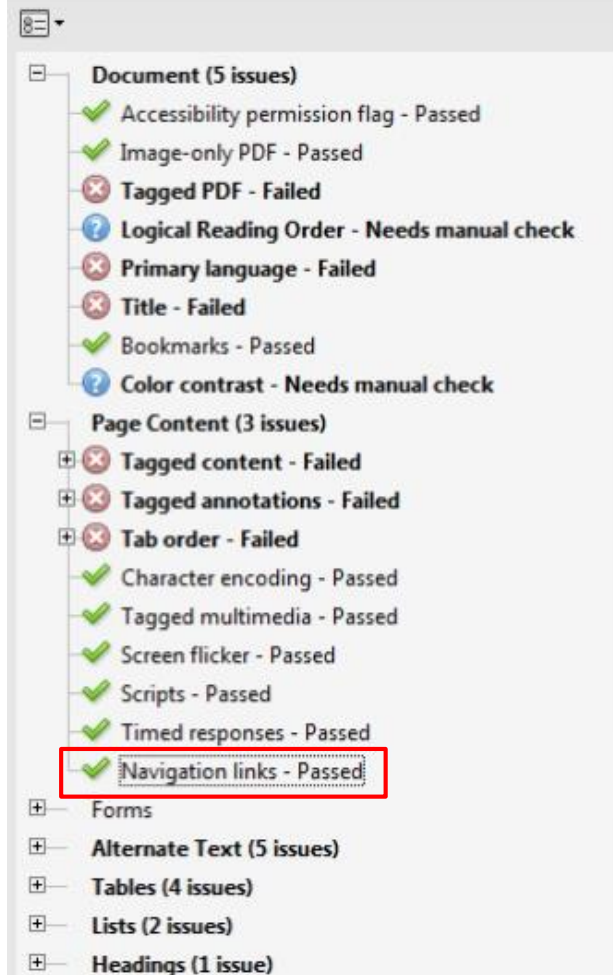
10 from the beginning of the book

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 was 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 was used to access and evaluate this checkpoint.

# 8. Hyperlinks (Live)

Hyperlink that takes you somewhere outside of the book

Ex. Links to a live website

STEPS:

Use Tab key to navigate through links

> Press enter when you find a live hyperlink (Check for functionality and descriptive link at the same time)

● Amount of Material to Be Evaluated

\*\*\* Sample 20 website hyperlinks \*\*\*

2

- **Using the TI-83, 83+, 84, 84+ Calculator** shows students step-by-step instructions to input problems into their calculator.
- **The Technology Icon** indicates where the use of a TI calculator or computer software is recommended.
- **Practice, Homework, and Bringing It Together** problems give the students problems at various degrees of difficulty while also including real-world scenarios to engage students.

## Statistics Labs

These innovative activities were developed by Barbara Illowsky and Susan Dean in order to offer students the experience of designing, implementing, and interpreting statistical analyses. They are drawn from actual experiments and data-gathering processes, and offer a unique hands-on and collaborative experience. The labs provide a foundation for further learning and classroom interaction that will produce a meaningful application of statistics.

Statistics Labs appear at the end of each chapter, and begin with student learning outcomes, general estimates for time on task, and any global implementation notes. Students are then provided step-by-step guidance, including sample data tables and calculation prompts. The detailed assistance will help the students successfully apply the concepts in the text and lay the groundwork for future collaborative or individual work.

## Ancillaries

- **Instructor's Solutions Manual**
- **Webassign Online Homework System**
- **Video Lectures** (<http://cnx.org/content/m18746/latest/?collection=col10522/latest>) delivered by Barbara Illowsky are provided for each chapter.



# Hyperlinks: Checkpoint 8, 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. Adobe Acrobat XI Pro 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. The failing links were all found on page 149 and are in the form of a URL address. Adobe Acrobat XI Pro 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

● Amount of Material to Be Evaluated

\*\*\* Sample 5% of the pages \*\*\*

# 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

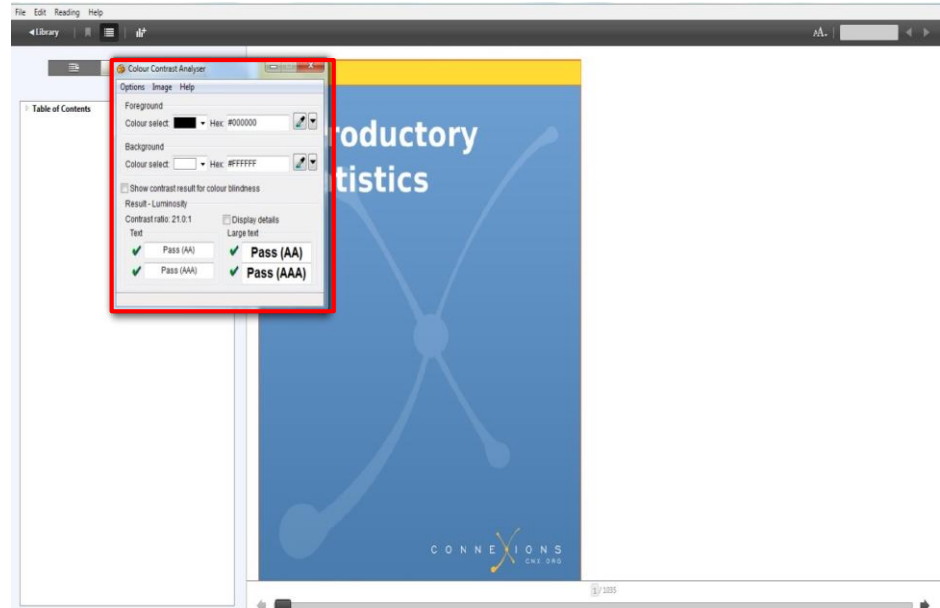
### STEPS:

1. [Download Colour Contrast Analyzer Tool](#)
2. Open the document you want to evaluate
3. Open the application
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.
6. Click the **Background eye dropper** tool, hover over and click the background color.
7. Check and compare the ratio to 4:5:1

# Color & Contrast (Contrast Ratio)

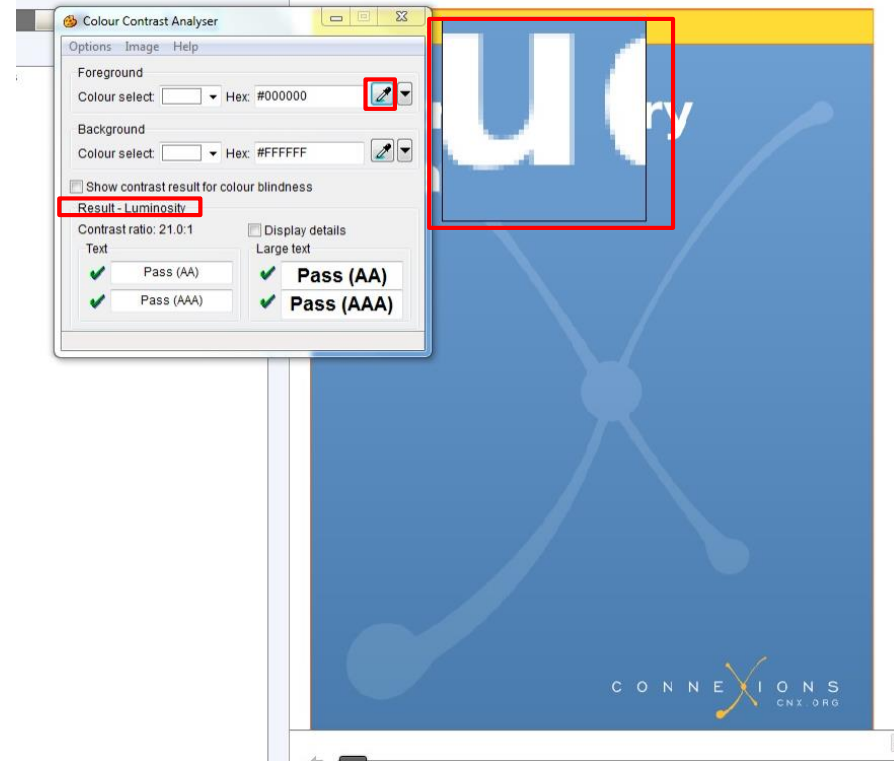
## Colour Contrast Analyzer (CCA)

1. Download Colour Contrast Analyzer Tool
2. Open the document you want to evaluate
3. Open the application



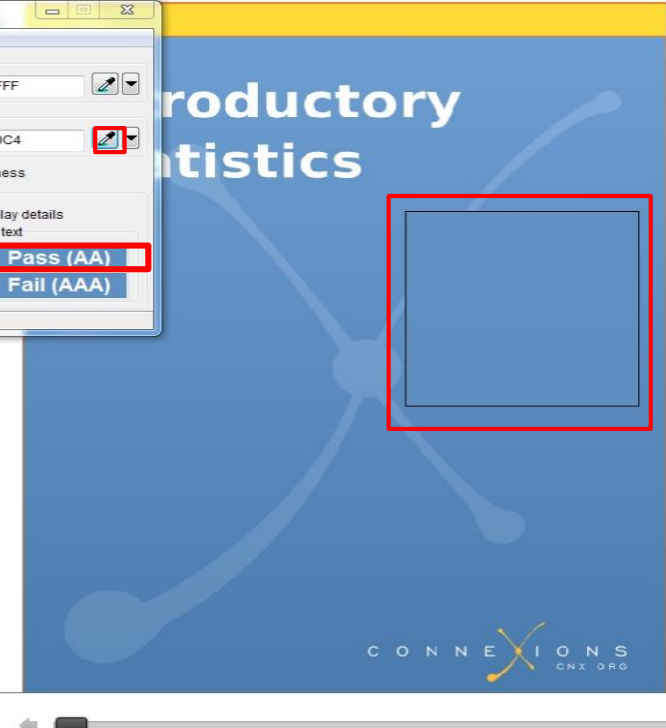
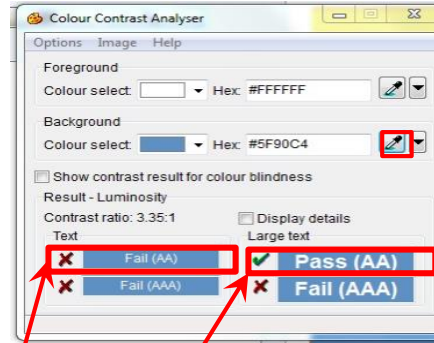
# Color & Contrast (Contrast Ratio)

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. Be sure to be in full screen at 100% zoom
8. Determine if the text is greater than 18 points (e.g. Header).  
Small text: Check under "Text"  
Large text (18+): Check under "Large text"

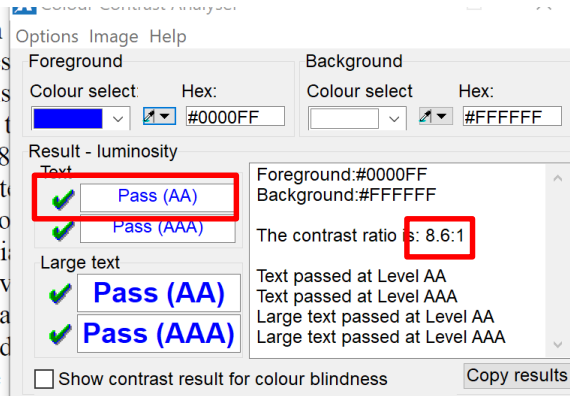




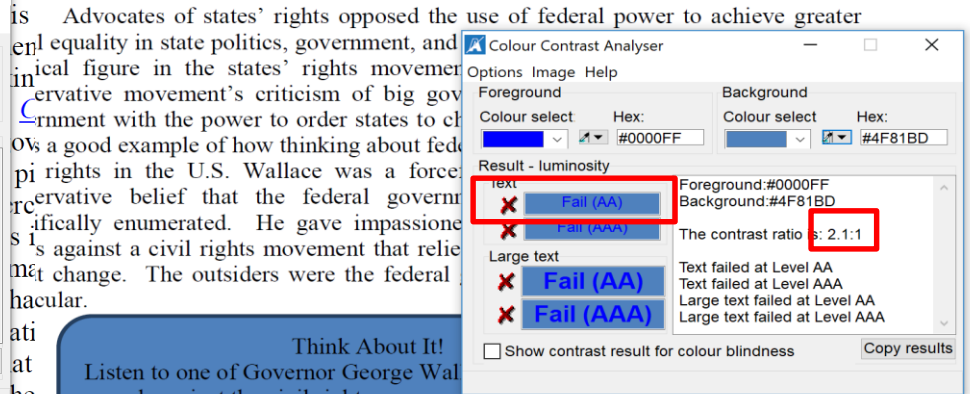
## Reporting Contrast results

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.”

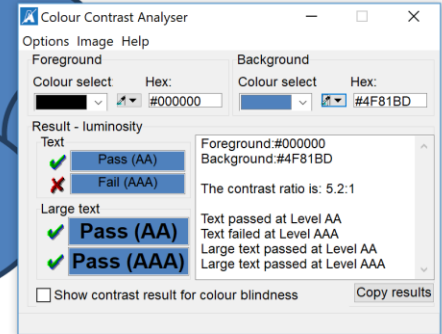
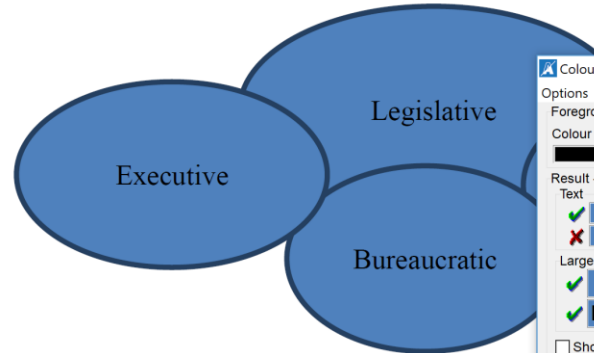
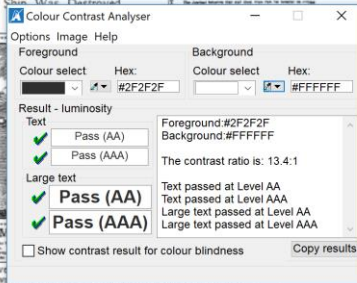


Think About It!  
Listen to one of Governor George Wallace's speech against the civil rights movement:  
<http://www.youtube.com/watch?v=QW6ikSCDaRQ&feature=endscreen&NR=1>

## Example Simple Image

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 & Contrast (Contrast Ratio)

- Provide color combinations for passing and failing content
- Provide contrast ratios only for failing content
- Amount of Material to Be Evaluated

Contrast Ratio

\*\*\* Sample 5% of the pages \*\*\*

# 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 Markup: The text of the digital resource includes markup that declares the language of the content
- ☒ Part B Passage: If the digital resource includes passages in a foreign language, these passages include markup that declares the language
  - ☒ **\*\*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

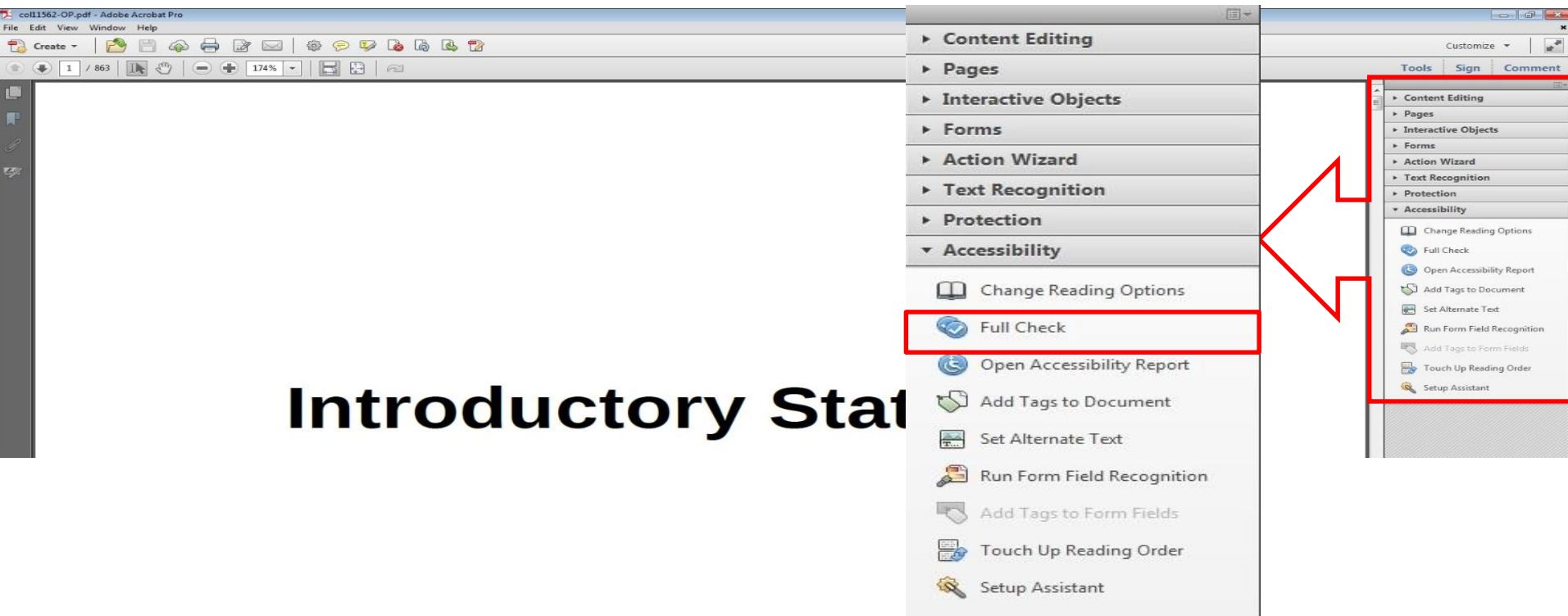


## Introductory Statistics



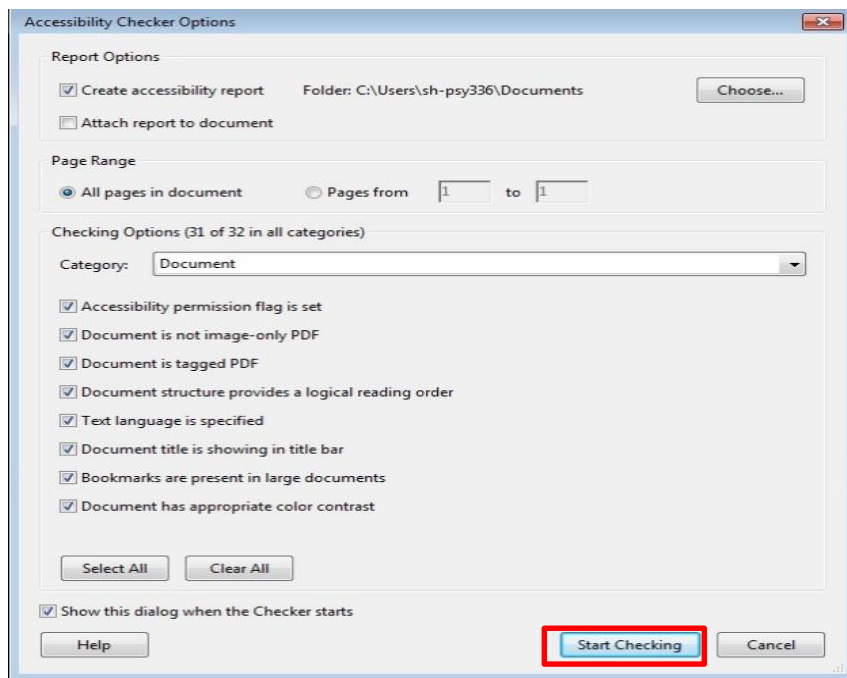
# 10. Language

## 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 tree view of the document's accessibility issues, with a red box highlighting the 'Primary language - Failed' issue. A red arrow points from this issue to the right pane, which shows a detailed list of the document's accessibility issues. The right pane 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, which is partially visible. The bottom of the screen shows the Windows taskbar with various application icons and the system clock displaying 10:27 AM on 6/30/2015.

# 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
- ☒ 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 the text to speech functionality

## Image Examples

### 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																									

# 11. Images

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

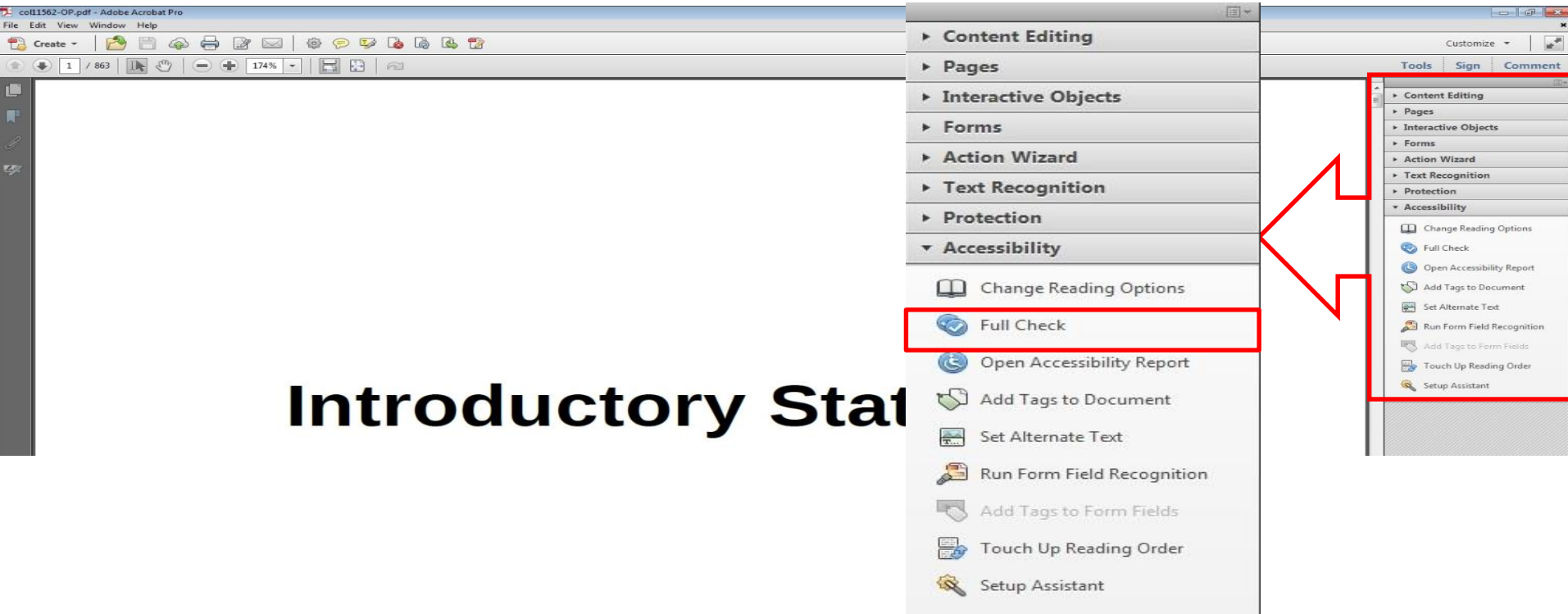


## Introductory Statistics



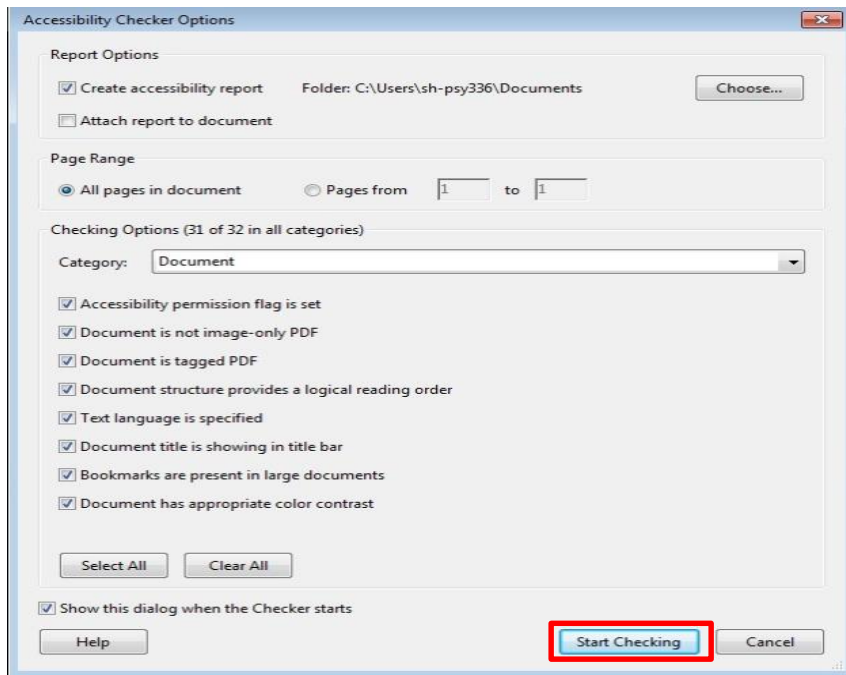
# 11. Images

## 3. Select Full Check.



# 11. Images

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



# 11. Images

## Results

col11562-OP.pdf - Adobe Acrobat Pro

File Edit View Window Help

Create 1 / 863 139%

Accessibility Checker

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)

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)

statistics

Tools Sign Comment

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

10:27 AM 6/30/2015

# 11. Images (Additional Manual Check)

- Check manually: Make sure the descriptions for the images are descriptive enough for both non-decorative images and complex images.
- Amount of Material to Be Evaluated for non-decorative and complex images:  
\*\*\* Sample 10 images each\*\*\*
- 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 descriptions that are sufficiently read using the read-out-loud function. The full accessibility check indicated that the figures alternate text failed. Adobe Acrobat XI Pro and the Read Out Loud function 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 images lack adequate descriptions and alternative text descriptions and are not read using the read-out-loud function. The full accessibility check indicated that the figures alternate text failed. Adobe Acrobat XI Pro and the Read Out Loud function 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 Read Out Loud function 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 read-out-loud function. The full accessibility check indicated that the figures alternate text failed. Adobe Acrobat XI Pro and the Read Out Loud function 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 read-out-loud function. The full accessibility check indicated that the figures alternate text failed. Adobe Acrobat XI Pro and the Read Out Loud function 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 Read Out Loud function 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 read-out-loud function. The full accessibility check indicated that the figures alternate text failed. Adobe Acrobat XI Pro and the Read Out Loud function 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 read-out-loud function. The full accessibility check indicated that the figures alternate text failed. Adobe Acrobat XI Pro and the Read Out Loud function 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 Read Out Loud function were used to access and evaluate this text.

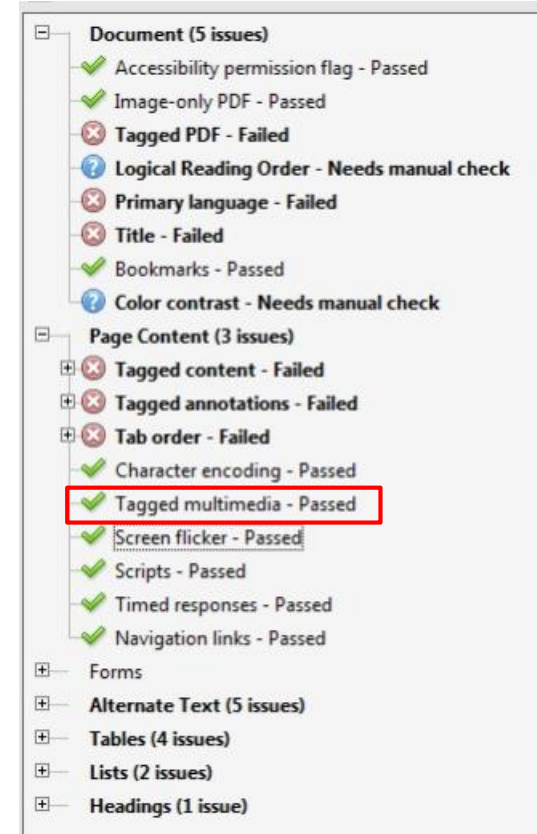
## 12. Multimedia

- ☒ 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.



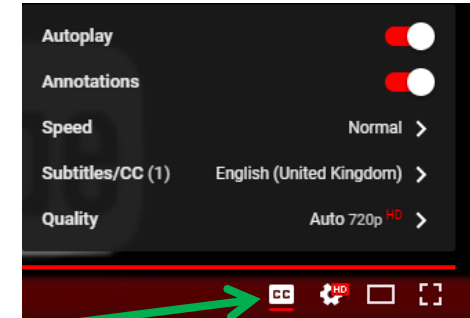
# 12. Multimedia

- 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



# 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.

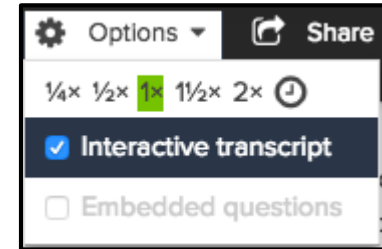
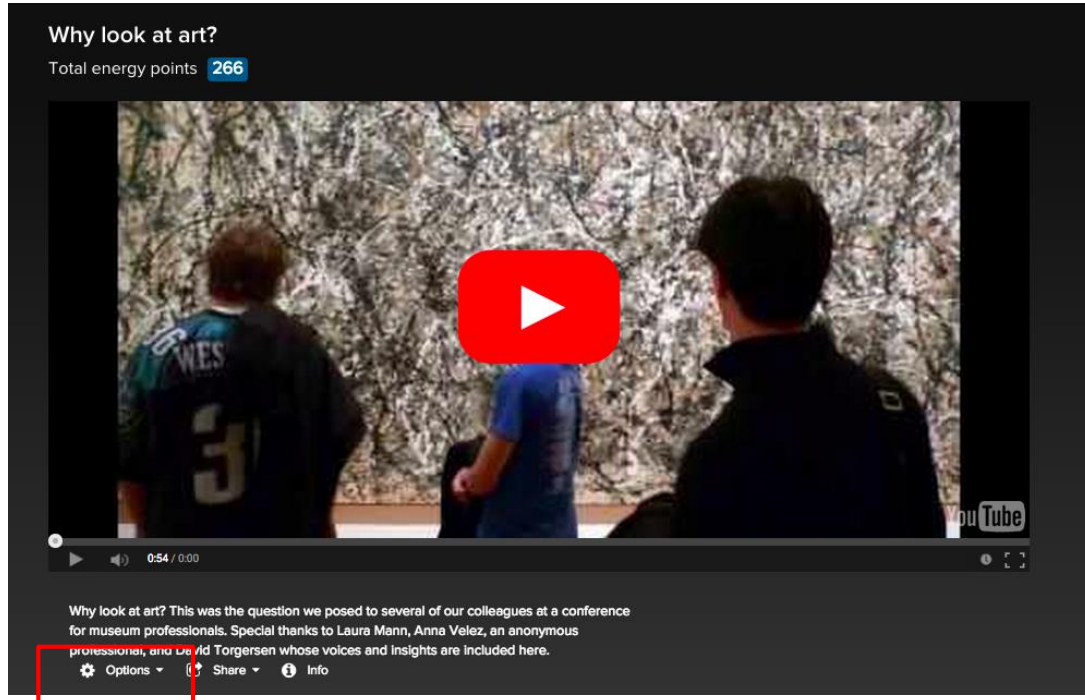
## **Multimedia (text track) not present:**

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



# 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

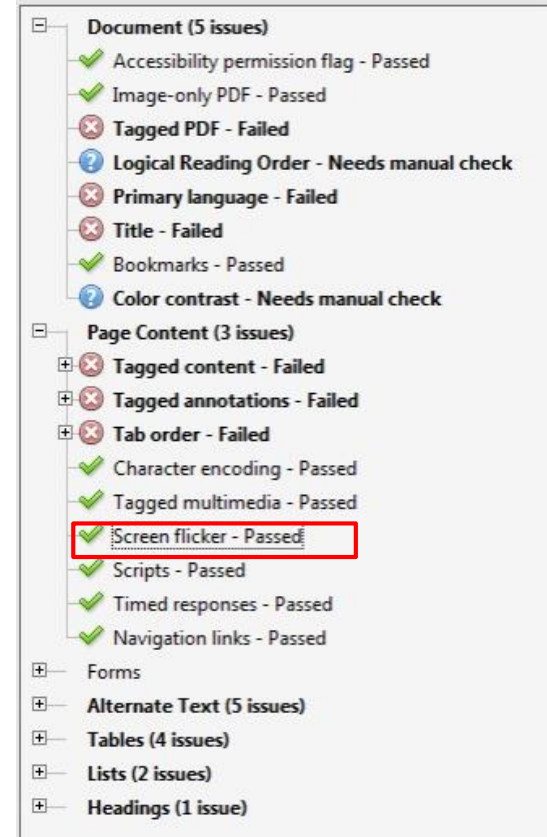
N/A =

We are not using as assistive player for this evaluation. 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

- ✓ **Markup**: STEM content is marked up in a manner that is compatible with text to speech functionality
- ✓ **Notation Markup**: The resource conveys both the notation (presentation) and meaning (semantics) of the STEM content

# STEM Figures

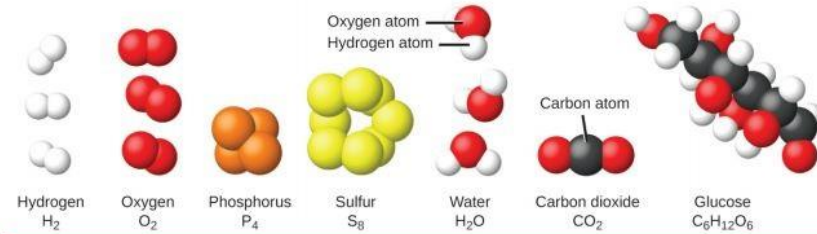


Figure 1.11 The elements hydrogen, oxygen, phosphorus, and sulfur form molecules consisting of two or more atoms of the same element. The compounds water, carbon dioxide, and glucose consist of combinations of atoms of different elements.

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.

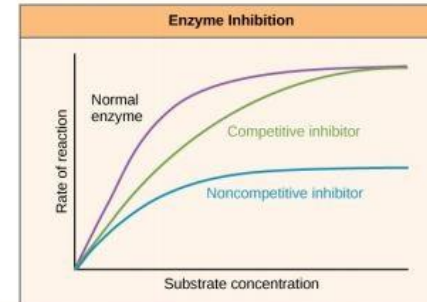


Figure 6.17 Competitive and noncompetitive inhibition affect the rate of reaction differently. Competitive inhibitors affect the initial rate but do not affect the maximal rate, whereas noncompetitive inhibitors affect the maximal rate.

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. Select a STEM content in the text
2. Activate the read-out-loud function (please refer to Checkpoint #2)
3. Use the read-out-loud function to read the current page (Shift + Ctrl + V)
4. Repeat the steps to check for 10 STEM content in each sub-section

The Greek letter  $\mu$  (pronounced "mew") represents the **population mean**. One of the requirements for the **sample mean** to be a good estimate of the **population mean** is for the sample taken to be truly random.

To see that both ways of calculating the mean are the same, consider the sample:

1; 1; 1; 2; 2; 3; 4; 4; 4; 4; 4

$$\bar{x} = \frac{1+1+1+2+2+3+4+4+4+4+4}{11} = 2.7$$

$$\bar{x} = \frac{3(1) + 2(2) + 1(3) + 5(4)}{11} = 2.7$$



Did read-out-loud  
read this correctly?

In the second example, the frequencies are  $3(1) + 2(2) + 1(3) + 5(4)$ .

You can quickly find the location of the median by using the expression  $\frac{n+1}{2}$ .

# Classifying STEM

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

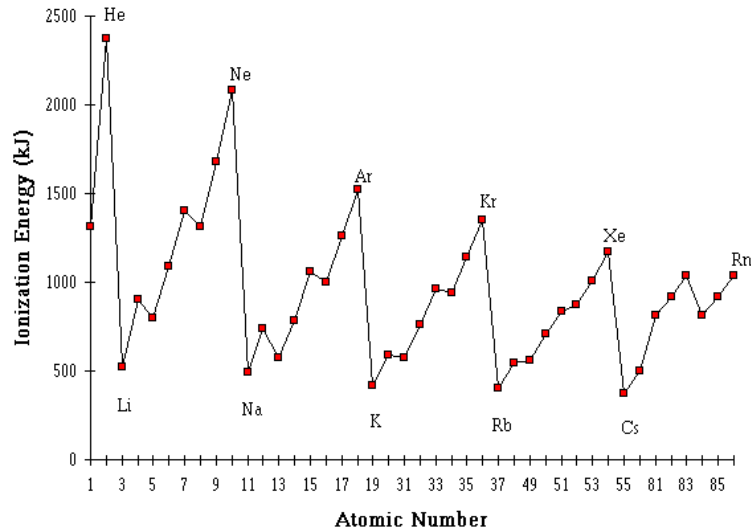


Figure 4.3.

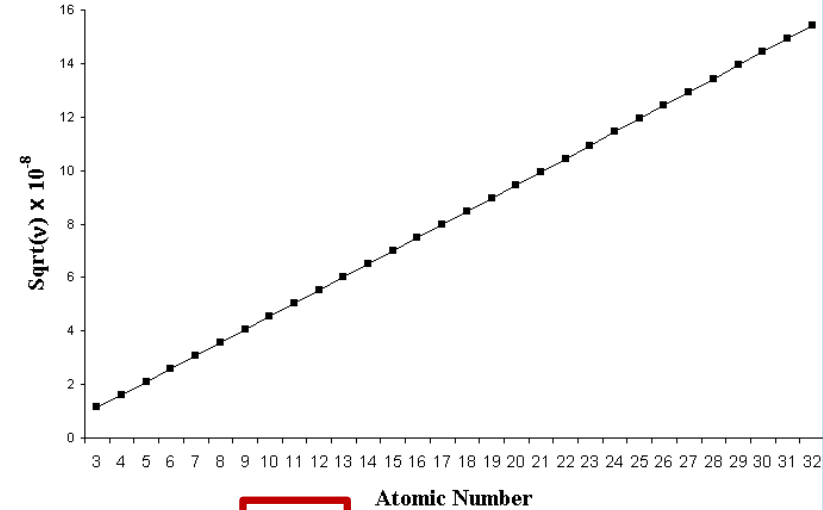


Figure 4.2. X-ray Frequencies Versus Atomic Number

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 text to speech functionality

## STEPS:

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



# 14. STEM Markup

Successive Ionization Energies (kJ/mol)

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

Table 4.1



Figure 6.2

The STEM content should have a label, description or tag

# 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 using the read-out-loud function in Adobe Acrobat Pro.

Every chemical reaction involves a change in free energy, called delta G ( $\Delta G$ ). The change in free energy can be calculated for any system that undergoes such a change, such as a chemical reaction. To calculate  $\Delta G$ , subtract the amount of energy lost to entropy (denoted as  $\Delta S$ ) from the total energy change of the system. This total energy change in the system is called **enthalpy** and is denoted as  $\Delta H$ . The formula for calculating  $\Delta G$  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  $\Delta G$  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 read-out-loud function in Adobe. Adobe Acrobat XI Pro and the Read Out Loud function 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 read-out-loud function in Adobe. Adobe Acrobat XI Pro and the Read Out Loud function 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 Read Out Loud function 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

Manually check that all figures, graphs, and tables have a description that conveys notation and meaning



**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)

# STEM: Checkpoint 14 B, 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 read-out-loud function in Adobe. Adobe Acrobat XI Pro and the Read Out Loud function 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 read-out-loud function in Adobe. Adobe Acrobat XI Pro and the Read Out Loud function 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:

- Without assistive technology, use the TAB key to navigate the menu
- Items that are selected will have a box around the link
- 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

**\*\*Mark as N/A because this requires assistive technology\*\***

# Interactive Elements: Checkpoint 15 B, Markup

## **If interactive elements are present:**

N/A =

We are not using assistive technology for this evaluation. 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

## ☒ Text prompts

The following are conveyed with assistive technology:

☒ Instructions

☒ Prompts

☒ Error messages

How to:

Use Tab key to activate the interactive elements and check if you receive any text prompts.

**\*\*Mark as N/A because this requires assistive technology\*\***

# Interactive Elements: Checkpoint 15 C, Text Prompts

## **If interactive elements are present:**

N/A =

We are not using assistive technology for this evaluation. 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.