

CREATING ACCESSIBLE BOOKS IN BLOOM

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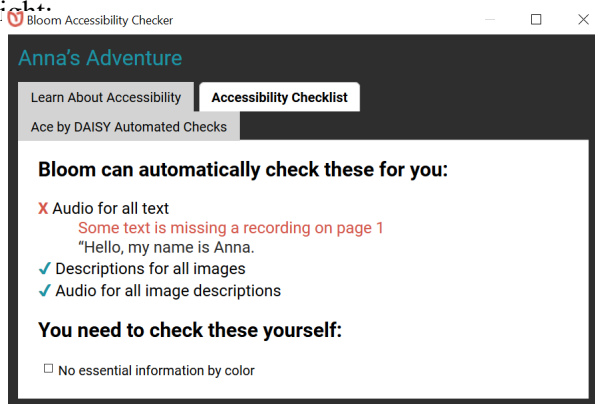
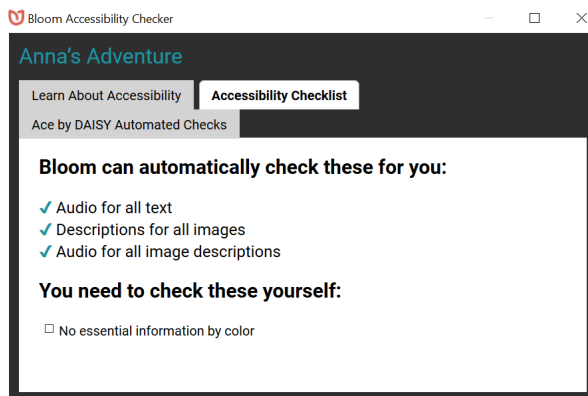
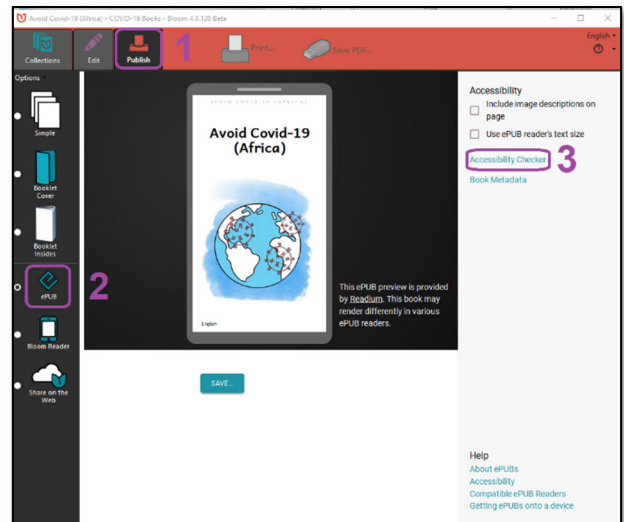
Making a Bloom Book Accessible

Accessible books should comply with common accessibility guidelines, including the [Web Content Accessibility Guidelines](#), [EPUB Accessibility 1.0](#), [EPUB 3 Accessibility Guidelines](#), and [Top Tips for Creating Accessible EPUB3 Files](#).

If you intend for your books to meet accessibility standards, you need to use Bloom’s accessibility tools to, at a minimum, provide descriptions for all images using Bloom’s Image Description Tool and recording the audio for all text (including the image descriptions) using Bloom’s Talking Book Tool. Appendix A provides step by step instructions on how to use these Bloom tools (page 4). It is challenging to write good image descriptions. Appendix B provides guidelines for writing them (page 20).

Once you have made your books accessible, you need to check them against the standards. To access Bloom’s checking tools, you need to select your book, click on the “Publish” tab (1), then click on ePUB as your publishing option (2).

Once Bloom has created the preview, you will be able to click on the “Accessibility Checker” button (3) and a dialogue box will open. If you book passes the basic checks, it will look like the figure on the left. If it still needs work, it will look like the image on the right.



If there are errors, return to the Edit tab and correct them. You will need to run the checks again to verify that all of the errors have been eliminated.

You should also consider using the ACE by Daisy Automated Checks. To do so, click on the **ACE by Daisy Automated Checks** tab. Your ePUB will be reprocessed and a report will be generated. This report will help you to determine what fixes, if any, you need to make before finalizing your ePUB.

EPUB Accessibility Report
 Generated by DAISY Ace (1.0.1) on 10/6/2020, 2:52:47 PM
 Title: Anna's Adventure
 Violations Metadata Outlines Images

Each of the tabs (Violations, Metadata, Outlines, and Images) may provide you with helpful information. You should revise your book until there are no violations reported.

A clean Violations report will look like this:

Summary of violations					
	Critical	Serious	Moderate	Minor	Total
WCAG 2.0 A	0	0	0	0	0
WCAG 2.0 AA	0	0	0	0	0
EPUB	0	0	0	0	0
Best Practice	0	0	0	0	0
Other	0	0	0	0	0
Total	0	0	0	0	0

This report shows a single (Critical) violation:

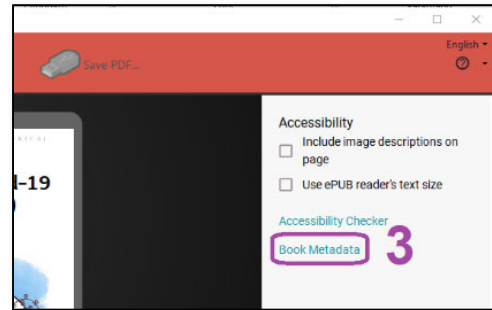
Summary of violations					
	Critical	Serious	Moderate	Minor	Total
WCAG 2.0 A	1	0	0	0	1
WCAG 2.0 AA	0	0	0	0	0
EPUB	0	0	0	0	0
Best Practice	0	0	0	0	0
Other	0	0	0	0	0
Total	1	0	0	0	1

The violation found in the second case relates to a missing image description. Edit your book again, add the image description, record the audio for the description, publish to ePUB, and re-run the accessibility checkers. Note which WCAG level the book meets (A or AA) as you will need that information for the next step. You should also check the audio in your book by “playing” the book in the ePUB viewer. You can do this by clicking on ▶ at the top of the preview screen. The text for which you have recorded audio should be highlighted in yellow and you should be able to hear the audio. (If you can’t hear it, be sure that your speaker is turned on). Advance through each page and ensure that all pages have audio that matches the text. If it does not, you will need to edit your book again and make corrections as needed.



Adding Metadata using Bloom's Book Metadata Tool

Metadata, or information about the book, is needed to describe the content of your accessible books. With Bloom, you can add the metadata to the book itself. To access Bloom's "Book Metadata" Tool, select your book, click on the "Publish" tab, then click on ePUB as your publishing option, as described above. Bloom will create a preview of the ePUB. After Bloom has created the preview, you will be able to click on the "Book Metadata" button and a dialogue box will open.



Bloom will provide some of the book's metadata automatically, and you will fill in the remaining fields. The metadata fields in Bloom include: Author, Summary, Typical age range, Reading level, Subjects (dropdown menu), Accessibility level, and Level certified by. You can also indicate whether your book has any Flashing Hazard or Motion Simulation Hazard and whether your book has any Accessibility features (image descriptions and/or sign language).


For Accessibility level, please select either Level A, Level AA, Level AAA Conformance, or None. (The ACE by Daisy checking tool will tell you which level the book meets. Click OK. Bloom will generate a new book preview.

A screenshot of the "Book Metadata" dialog box. It contains the following fields and options:

- Picture: A globe icon.
- Name: Avoid Covid-19 (Africa)
- Number of pages: 7
- Language: en
- License: http://creativecommons.org/licenses/by-nc/4.0/
- Author: [Empty text box]
- Summary: Basic information on how to avoid Coronavirus (Covid-19) (version 2)
- Typical age range: [Empty text box]
- Reading level: [Empty text box]
- Subjects: [Dropdown menu]
- Accessibility level: None (dropdown menu)
- Level certified by: [Empty text box]
- Hazards: Flashing Hazard, Motion Simulation Hazard
- Accessibility features: Has Image Descriptions, Sign Language

At the bottom are buttons for "HELP", "OK", and "CANCEL".

Appendix A Creating Accessible Books

 Image Description Tool


Learn to make effective image descriptions:
poet.diagramcenter.org


Write your image description on the left, in the box next to the picture.

Check your image description against each of these reminders:

- Context is Key
- Consider your Audience
- Be Concise
- Be Objective
- General to Specific


[Help](#)





Black and white illustration of the Sherlock Holmes short story *The Red-Headed League*, which appeared in *The Strand Magazine* in August, 1891. Original caption was "HE CONGRATULATED ME WARMLY."

Three formally dressed men are shown. One man is standing in the background. Another man, holding a top hat in his left hand is shaking the hand of the third man who is leaning in to greet him.

 Talking Book Tool

device and that these levels are showing blue:

2) Look at the highlighted sentence


3) Speak

4) Check

5) Next

Back

Clear

 Listen to the whole page

Creating Accessible Books in Bloom

Accessible books are electronic books that have features to make their content more readily accessible or available to people with visual disabilities. Such features include audio recording of the text, descriptions of images, and text size that can be changed by the person reading the book. Bloom can help you create books with these features and that meet technical accessibility standards.

What to expect in this module

In this training module, you will learn how to:

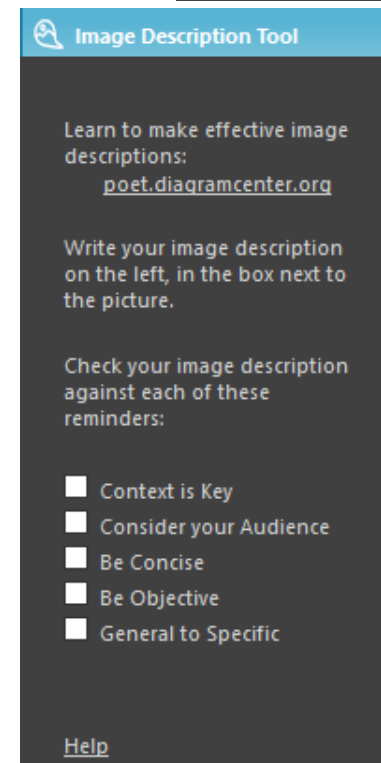
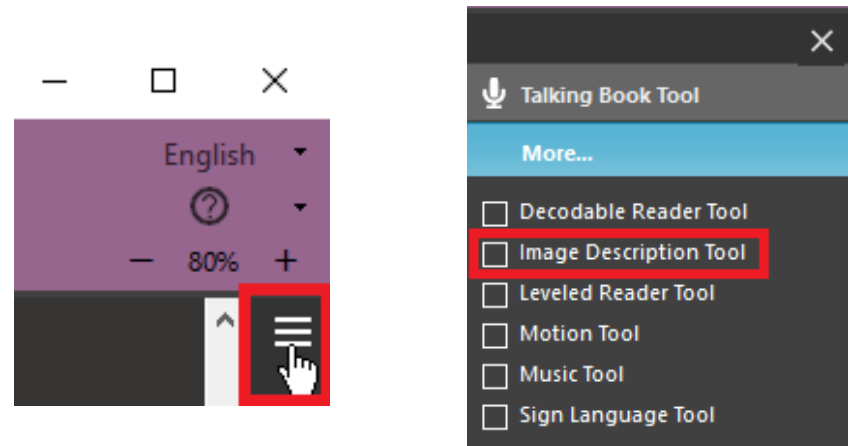
1. Create image descriptions,
2. Record audio of the text in the book and in image descriptions,
3. Evaluate whether images need adjustment for visual impairment, and
4. Choose images that are going to be easier to perceive.

Activating the Image Description Tool

In order to access the Image Description Tool click on the menu icon at the top right of the screen. A list of available tools will appear.

Activate the **Image Description Tool** by clicking in the check box.

The Image Description Tool will now appear indicating that you now have access to it.

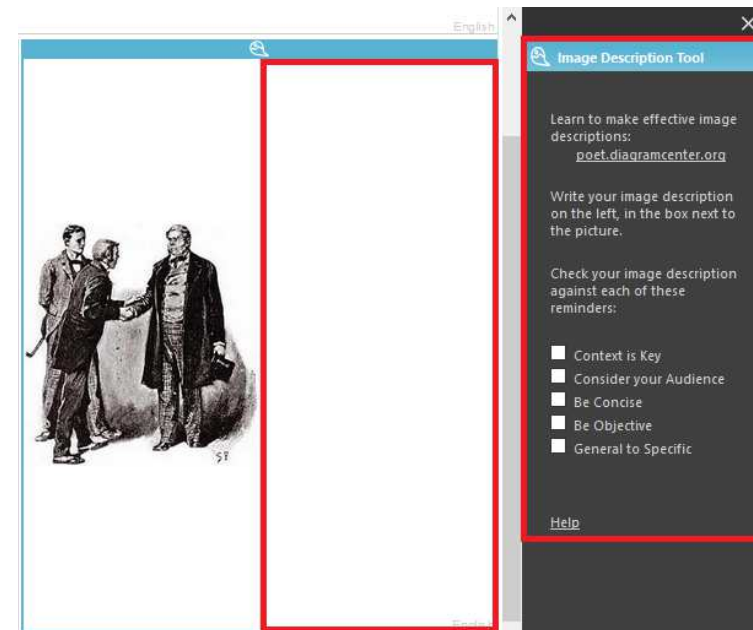


Create Image Descriptions

Now that the Image Description Tool has been activated, the **Image Description Tool icon** will appear at the lower left of each image.



If you click on the Image Description Tool icon, a space will be created next to the image for adding a text description and the Image Description Tool will open on the right-hand side of the screen.



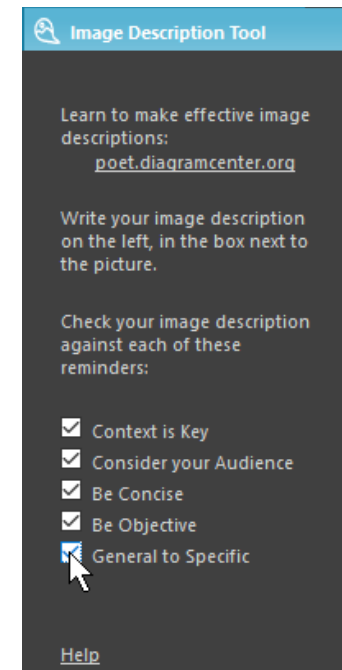
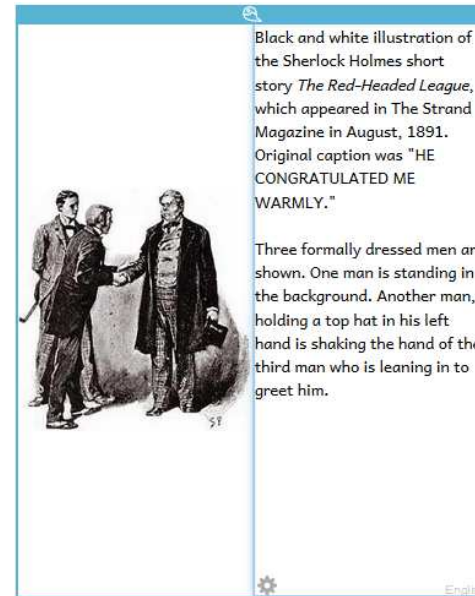
Create Image Descriptions

You may now type in the text which describes the image.

If you are not familiar with how to write image descriptions, you may want to visit:
poet.diagramcenter.org

A checklist is also provided to help guide you as you write the description. You can check the boxes after you have thought about each issue.

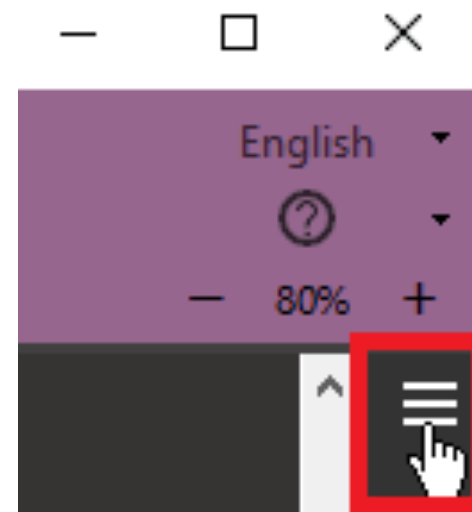
Once you are satisfied with the image description, you can close the Image Description Tool by clicking on the **X** above the Image Description Tool window. Alternatively, you can click anywhere outside of the image on the page. Repeat this process for each image in the book.



Recording Audio of Text and Image Descriptions

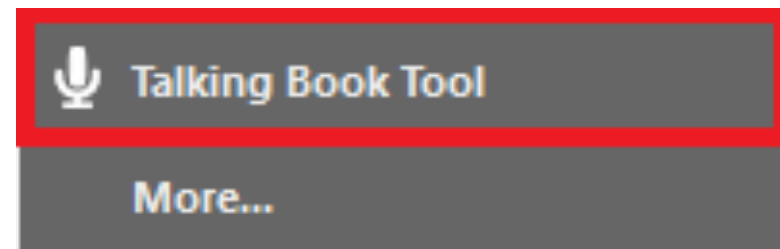
Learning to Use Bloom tells how to record audio of the text in a book. Those instructions start on page 149. If you are not familiar with this process, please review that chapter before proceeding. The process is the same for recording the audio of image description text. To make a book accessible, you need to record all of the text as well as all of the image descriptions. Here we will show you how to record the image descriptions.

To begin, click on the **menu icon** at the top right of the screen.



Then select the **Talking Book Tool**.

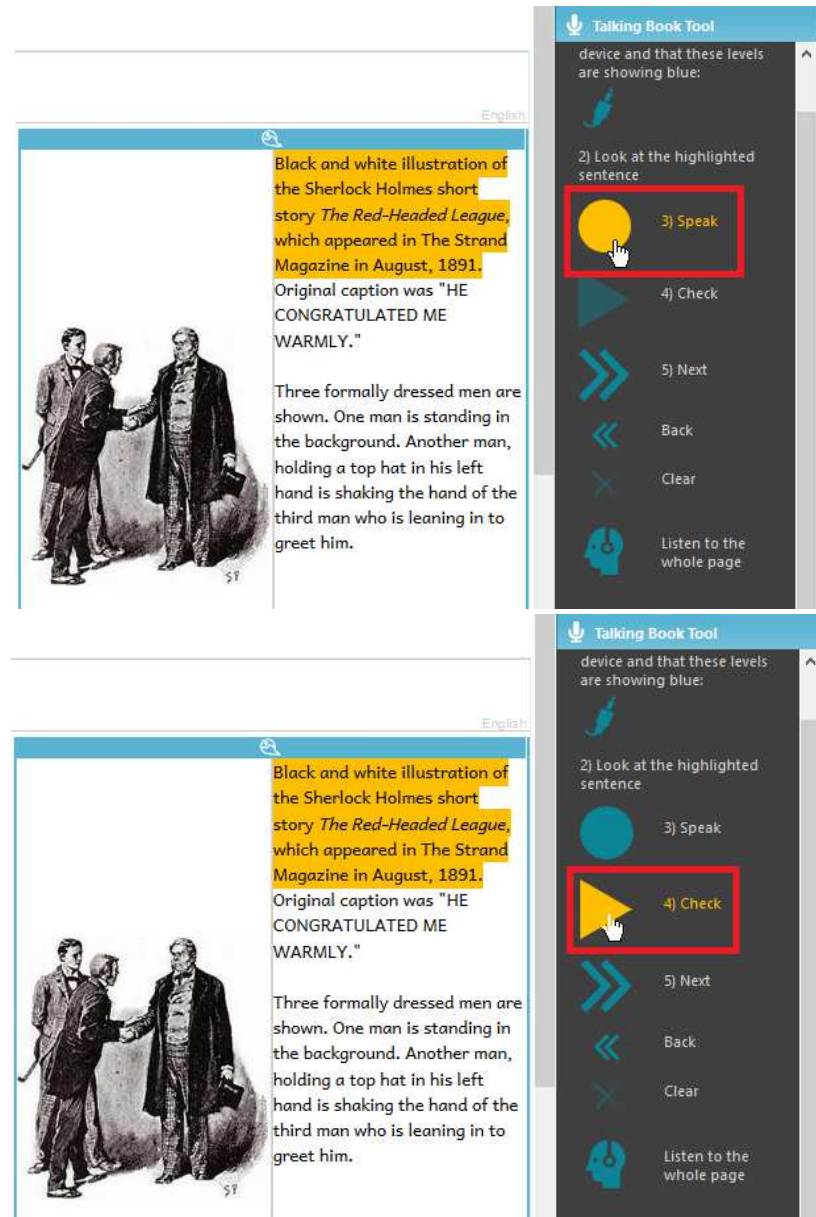
The Talking Book Tool will then open.



Recording Image Descriptions

Look at the highlighted sentence and then click on and hold down the **Speak button** while reading the highlighted text. As soon as you release the Speak button Bloom will stop recording.

Once you have finished recording a sentence, click on on the **Check button**. The recording of the sentence will be played.



Recording Image Descriptions

If you are satisfied with the recording of the sentence, click on the **Next** button.

The next sentence will be highlighted so that you can repeat the process for this sentence.

The image displays two sequential screenshots of the 'Talking Book Tool' interface. Each screenshot shows a page with a black and white illustration of three men in formal attire. The text on the page is as follows: 'Black and white illustration of the Sherlock Holmes short story *The Red-Headed League*, which appeared in *The Strand Magazine* in August, 1891. Original caption was "HE CONGRATULATED ME WARMLY." Three formally dressed men are shown. One man is standing in the background. Another man, holding a top hat in his left hand is shaking the hand of the third man who is leaning in to greet him.'

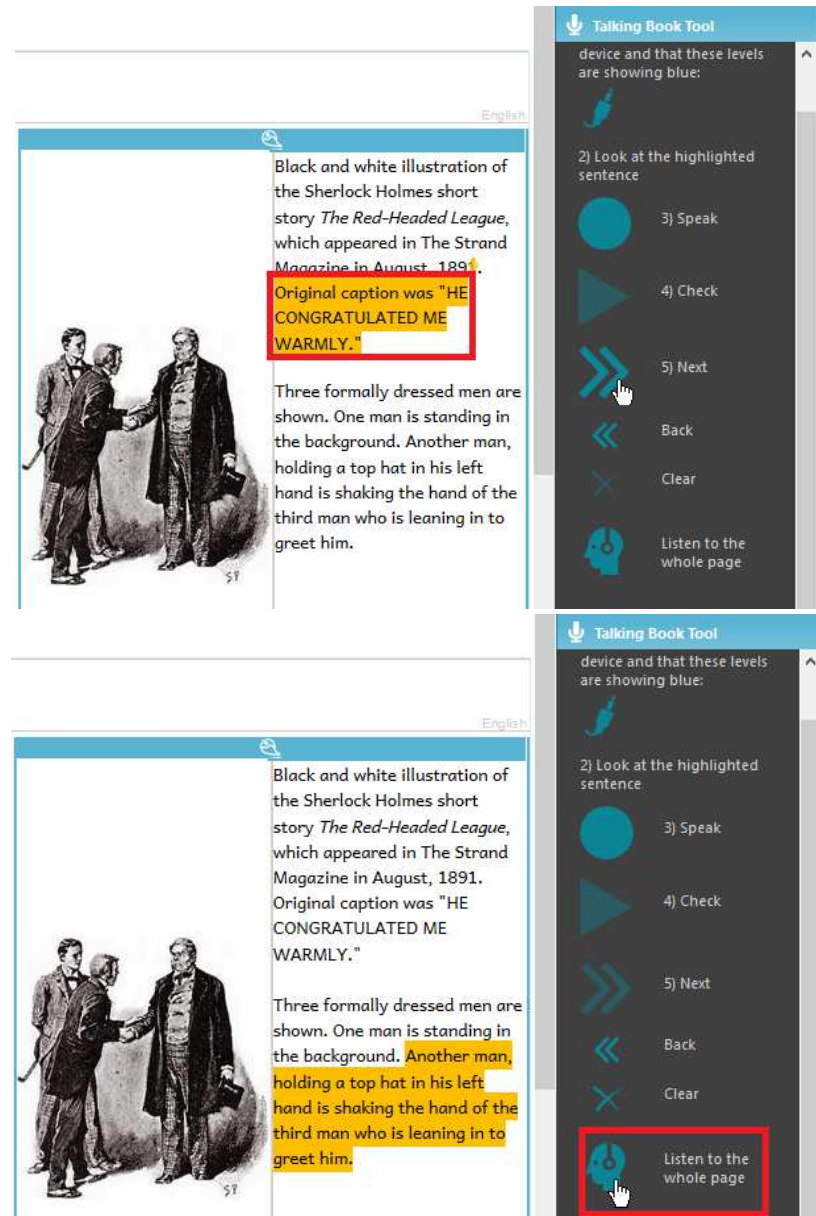
In the first screenshot, the first sentence is highlighted in yellow. The 'Next' button (represented by two yellow chevrons) in the right-hand menu is highlighted with a red box. In the second screenshot, the second sentence is highlighted in yellow, and the 'Next' button in the menu is again highlighted with a red box.

Recording Image Descriptions

If you are satisfied with the recording of the sentence, click on the **Next** button.

Once you have completed recording all of the sentences in the image description, click on **Listen to the whole page** to hear the sentences read consecutively.

You will need to repeat this process for each image in your book.



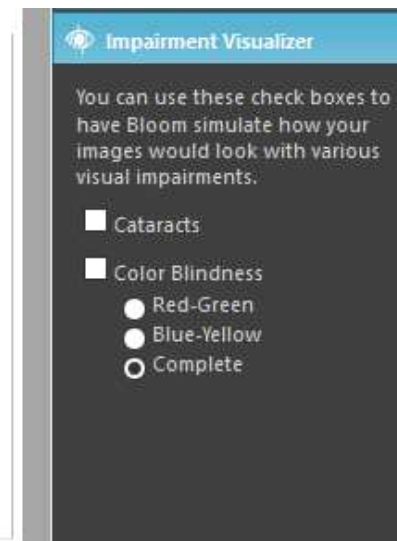
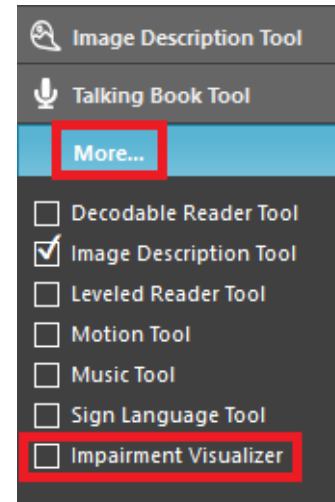
Activating the Image Visualizer

The Impairment Visualizer is another tool for creating accessible books. Activate this tool by clicking on **More...** in the Tool Panel and selecting **Impairment Visualizer**.

This tool allows you to select several filters that will show you what the image might look like to someone with several different kinds of visual impairment.

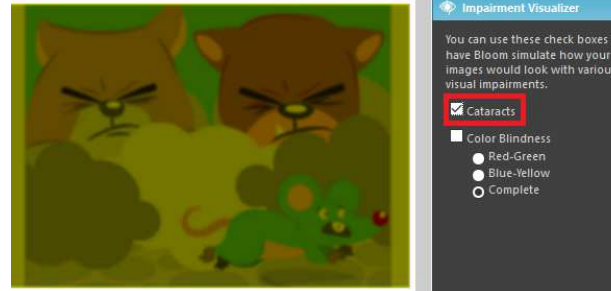
Using this tool, you can evaluate whether an image should be modified so that it is easier to interpret for people with these sorts of visual impairments.

Bloom does not have a tool for editing images. If an image needs to be edited, you will have to use another program to do that.

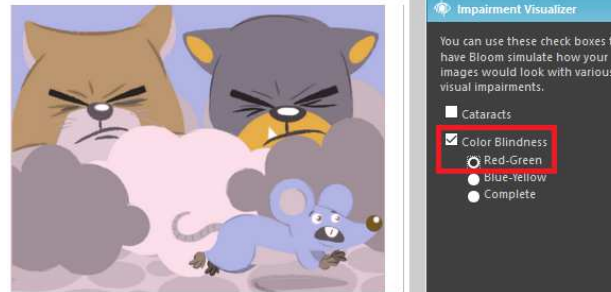


Using the Image Visualizer

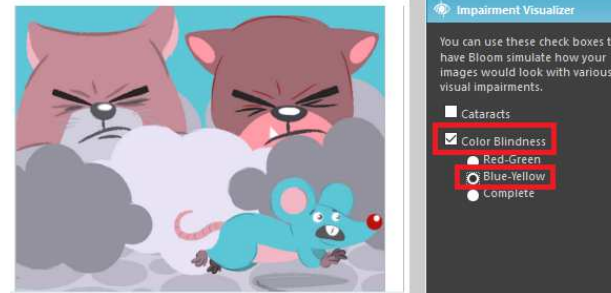
The first choice shows what the image might look like to someone with **cataracts**.



For color blindness, there are three possibilities. The first shows what the image might look like to someone with **red-green color blindness**.



The second option shows what the image might look like to someone with **blue-yellow color blindness**.



The third option shows what the image might look like to someone with **complete color blindness**.



General considerations for choosing images

Choosing images that are appropriate for readers with low vision is a complex subject, but we can consider some general principles.

In general, simple images are preferable.

Graphics should be relatively large to make them easier to see.

It is helpful for objects and key features to have a black outline.

Black and white line drawings (such as come with the Art of Reading) serve well, but even then some have more details than others.

If color is used, they should be colors that contrast well with one another.

In line drawings, the lines should be thick and solid black. Use black and white images rather than grayscale.

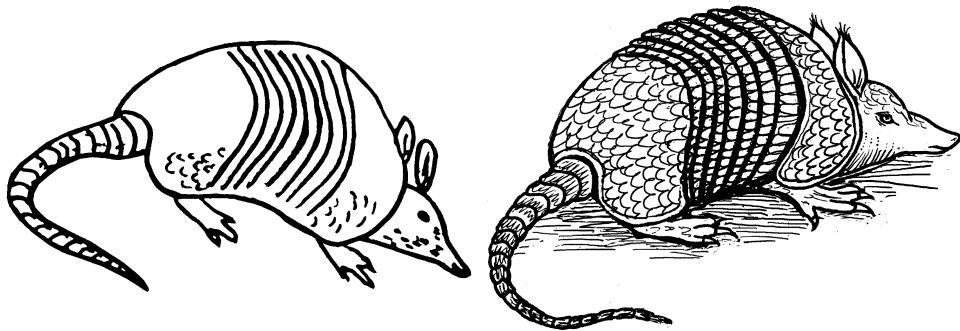
Photographs often have many details that can be hard to distinguish. Only use them if they are simple and not too detailed.

Now we will compare some images to provide some examples of these principles.

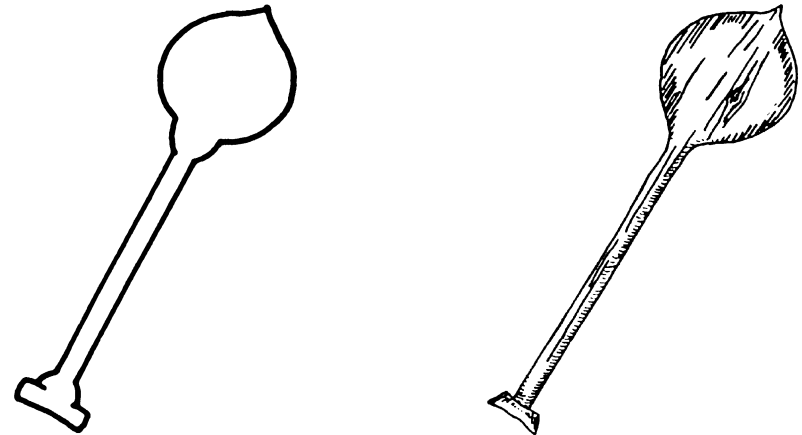
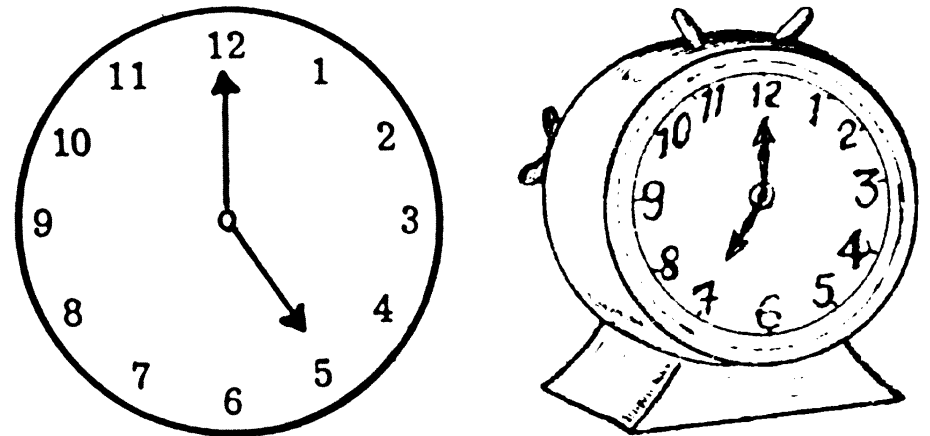
Considerations for choosing images: Amount of detail

Here are some examples of images with more detail compared with images with less detail. All of these images are from the Art of Reading. It will be better to use the images with less detail.

Images with less detail on the left and more detail on the right



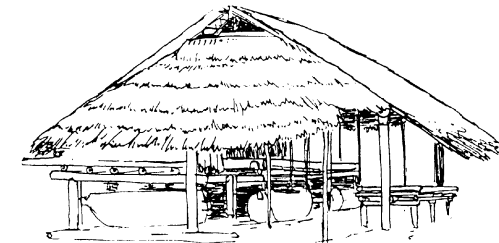
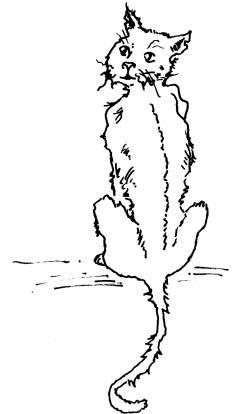
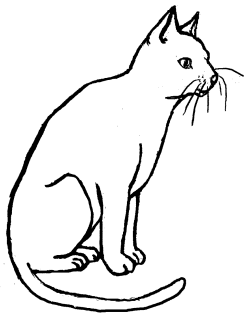
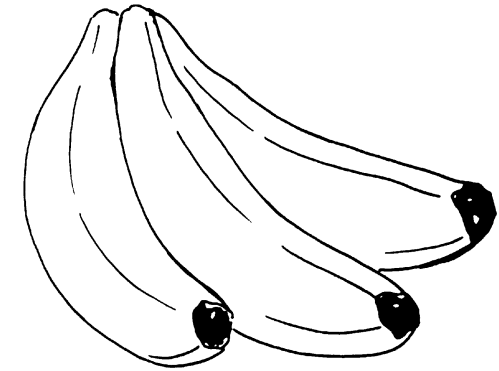
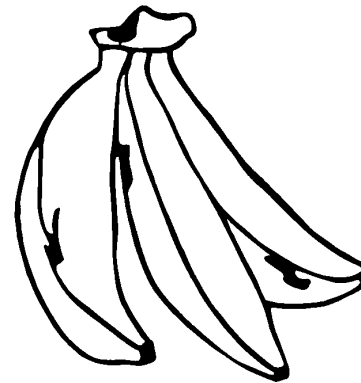
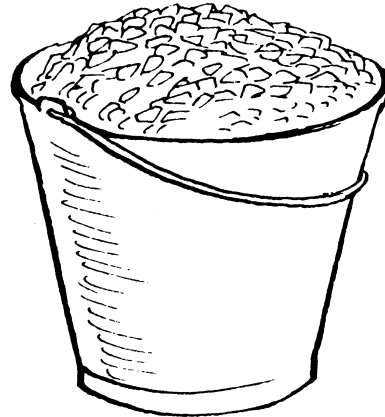
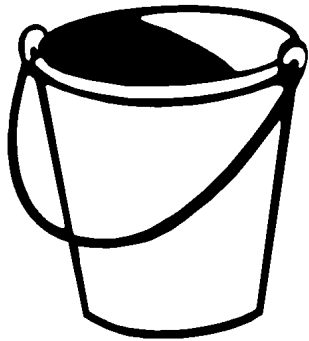
Images with less detail on the left and more detail on the right



Considerations for choosing images: Thick black lines

These images from the Art of Reading illustrate images that have thick, solid black lines compared to images with thinner, less distinct lines. It will be better to use images with thick, solid lines.

Images with thicker, solid lines on the left and thinner, less distinct lines on the right



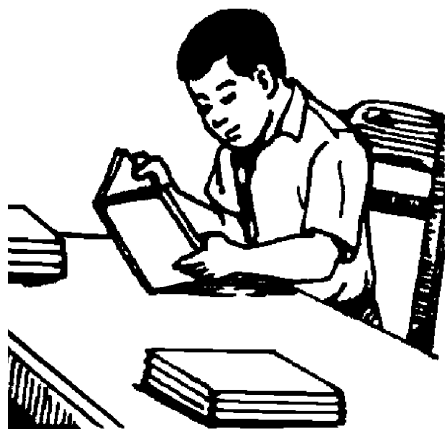
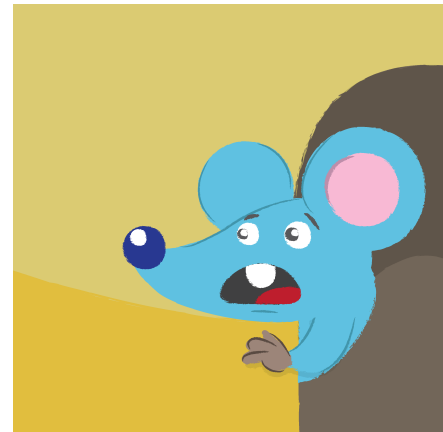
Considerations for choosing images: Color and photos

We all like photos and color illustrations, but they are visually more complex. Below you can compare line drawings to a photo or a color illustration or a simpler color illustration to a more complex one. It will generally be better to use simpler images.

Images that are simpler on the left and more complex on the right



Images that are simpler on the left and more complex on the right



Summary

In this training module, you learned how to:

1. Gain access to accessible book tools in Bloom,
2. Create image descriptions,
3. Record audio of the text in the book and in image descriptions,
4. Evaluate whether images need adjustment for visual impairment, and
5. Choose images that are going to be easier to perceive.

Appendix B

Basic Guidelines for Writing Image Descriptions

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This document is adapted from the *Description Tip Sheet* developed by the Described and Captioned Media Program, which can be found at <https://dcmp.org/learn/227/>, supplemented by information from a variety of other sources.

Because these guidelines are designed for writing image descriptions in local languages, we include information on recording the image descriptions, as Text-to-Speech is not available for such languages.

The most important rule of description is to *describe what you see*.

Preparation

- Review the entire book and consider its purpose and audience. This will influence how you write the descriptions.
- Note the grade levels or ages of the intended audience and write descriptions with that audience in mind.
- If the book is on a particular subject, research the subject and related terminology to ensure accurate definitions and clear descriptions.

What to Describe

- Describe what is most essential for the viewer to follow, understand, and appreciate the book's content.
- Focus on what is the *most significant* and *least obvious* from the narration of the surrounding text. You cannot describe everything, so be sure to describe what the image shows that is significant to the story and that the reader would not know if they cannot see the image.
- Describe shape, size, texture, etc., as appropriate to the comprehension or appreciation of content, but do not describe colors unless the color is important for understanding.
- Consistently identify people and characters by name. If a name is not given, identify the character by some obvious physical attribute (e.g., “the tall man”).
- Describe discernable attributes and expressive gestures, but don't interpret emotion or reasoning. You don't know what the person is thinking; describe what you see.

- If the image contains any text, include that text in the image description exactly as it appears in the image.

What *not* to Describe

- Do not describe any images that are purely decorative and do not communicate any information.
- Do not include in the image description information or details that are already provided to the reader in surrounding text. Only images which convey important information not already described should have a description.
- Do not include details that are not in focus in the book.
- Do not include details that are obvious. For example, you would not need to say, “The man has two eyes, two ears, and a mouth.”
- Do not add your interpretation of the image but only what you see. For example, you may *think* a person is happy, but what you can *see* is that they are smiling.
- Do not add a phrase like, “An image of...” Just describe the image. If you use a different voice for the image descriptions and narration of the text, the reader will be able to distinguish the two. (See **Voicing/Recording**, below.)

How to Describe

- Use plain, simple language.
- Use vocabulary that is meaningful to blind or visually impaired people.
- Use age-appropriate vocabulary and grammar.
- Match vocabulary to the book’s text.
- Wait to use any technical vocabulary until it has been introduced in the book.
- Describe shapes, sizes, and other essential attributes of objects by comparison to objects that are familiar to the intended audience.
- Write descriptions in present tense, active voice, and in third-person narrative style.
- Be sure to include any information that the reader will not otherwise know if they cannot see the picture.
- Describe objectively, without interpretation, censorship, or comment.
- Use vivid language.
- Be succinct. Do not write more text than is needed to adequately describe what is in the image and is also important for the reader to know.

Voicing/Recording

- Choose someone to record the image descriptions whose style and delivery will be similar to but distinguishable from other voices used for narration; be sure that the difference between the voices isn't distracting.
- Practice voicing the description before recording—read it out loud several times, then record. Be sure to review the recording to make sure it is satisfactory. If it isn't, record the text again.
- Read the text clearly and distinctly.
- Speak at a rate that can be understood. Use the existing narration as a guide to how fast to read.