Webinar: 6981 ‑ 4. BLH Training: Document Accessibility: A Basic Overview Incorporating Universal Design   
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>> Johan Rempel: Good afternoon, everyone. This is Johan Rempel from CIDI, and the name of this presentation today is document accessibility: A basic overview incorporating universal design. And Valerie Morrison is going to be the presenter today. I'll be introducing her in a moment. I want to thank you for making time out of your schedules to attend this presentation. This is being recorded and archived and shared with Allie McDougal who will distribute this to the team.

In order to practice what we preach on our end; we are live captioning this. Thank you to Heather.

There are two ways in order to access the captions. One of them is through the chat accessing the StreamText link which Heather has previously dropped into the chat.

And the second way is to access the closed captioning option if you look at the arrow near the bottom right of the screen pointing to the CC. That's an additional way of accessing the captions.

The advantage with StreamText is it works within an additional application that gives people additional options which some people prefer.

And we are also encouraging people to express any questions or thoughts in the chat during the presentation. Valerie will cover a lot of material and feel free to just pose your questions and we'll either address them in real-time or consolidate at the end and take questions and address them near the end of this presentation. Next slide.

So very quickly two powerful features within the Zoom platform for accessibility that I thought was worth mentioning: Spotlighting and pinning. If you have a specific presenter that has their video on or if you have an ASL interpreter and you want to spotlight that for everybody, that is a feature that the host or co‑host can do so that everyone can access that ASL interpreter or particular speaker in speaker view.

And then pinning is more of an individual feature within a person's Zoom features. And that allows customization within the individual's end. It doesn't impact everyone across the board. Very easy to spotlight or pin. Hover over the participant you want to spotlight or pin, select the dot dot dot and then from there you can choose to spotlight for everyone or pin.

Next slide.

And if you've attended the previous ones before, you probably are aware of some of the services that CIDI provides ‑‑ center for inclusive design and innovation. We're at Georgia Tech under the College of Design. We provide a number of different services to a large degree related to assistive technology, training, technical assistance, and disability awareness and accessibility.

And specifically Valerie Morrison who we are going to be hearing from today she oversees our e‑text department and does a lot of work across the country remediating files to make them accessible for people with disabilities.

Next slide.

So the goals for today's presentation: To discuss document accessibility and who uses assistive technology to access content; to review 3 key aspects of document accessibility that include accessible navigation, universal design choices and image description. This will be a series of 5 trainings that Valerie Morrison will provide. Each one will be diving a little more deeply into the various aspects of document accessibility.

Next slide.

So I have the honor of introducing Valerie Morrison. She manages the e‑text department at CIDI making accessible materials for individuals with print related documents. She's /R‑R earned her... [Reading].

She has years of experience training. She is one of CIDI's best trainers.

Valerie and her team find innovative ways to transform course materials... [Reading].

And with that I will go ahead and pass it on to Valerie Morrison.

>> Valerie Morrison: Thank you so much Johan. Welcome everybody to today's training. As John indicated, today's going to be the first in the series of several trainings about document accessibility. Today I'm going to really focus on universal design principles, give you definitions of what I mean by accessibility universal design and go through the major concepts that apply across many programs like Microsoft Word, PDF, PowerPoint, Excel. And then we're going to have follow up trainings where we go more in‑depth and look at examples and talk about how to change something from inaccessible to accessible. But like Johan said, I have a lot of content today because I want to really cover what I consider to be the three core principles of universal design when it comes to document accessibility.

Before we get started, I wanted to just define my terms. What do I mean by accessibility because in the vernacular a lot of people use accessibility in different ways. Some people use the word "accessible" to mean "can I understand the materials?" Is it accessible to someone with a third grade reading level. Is the TV show West World accessible or inaccessible based on having such a complicated plot. That's a great way to use the word accessible but that's not what we're getting at today in our presentation. Can I access the building is another example. Can someone access the building with a buzz card? Will I be granted access to canvas or my LMS in order to view my discussion post? So that's a way people use the word accessibility.

For today I'm focusing on digital accessibility. So when I say a text needs to be accessible, I don't just mean that I can open the file or I know where it is or I can send it to people. When I'm talking about accessibility, I mean that a screen reader or assistive technology can access and read aloud the content.

So it's a different kind of way of thinking about accessibility. It doesn't just mean sharing a file. It means sharing a file that's built in such a way or created in such a way that it can be read aloud, that the text is highlightable and accessible, that someone can listen to the content with their screen reader. So in terms of what needs to be accessible, I would say everything. We are usually dealing with people in an educational environment. That's the primary focus at CIDI. Since we're organized and located at Georgia Tech. We were created in order to make accessible textbooks for students in college and higher ed. I'm usually thinking about course material. But we do operate with ‑‑ we work with state agencies, government groups, corporations, many publishers. Any content it really applies across the board no matter what kind of work you're doing. The goal is to make all material accessible. Both for the people inside your organization and it even becomes more important as a liability issue for external stakeholders, people outside your organization if you share or post files, you want to make sure they are accessible as well.

And in this photo that I have on the slide there's an open laptop computer and a PDF is open. It's very tiny but one line in the PDF is being highlighted and read aloud by a screen reader. And so these screen reader technology is really wonderful. It allows people of all ‑‑ people with all kinds of print disabilities to hear material read aloud, they can choose different voices, different screen readers or different assistive technology, they might have synthetic voices, human voices. Some of the popular ones have robotic voices that people have polarize reactions to. You either love it or hate it. I love it. So this example shows a PDF that is focusing on a particular sentence and reading it aloud so someone who is sighted can read along and focus on the sentence and hear it read aloud and get that extra additional audio input.

In terms of who needs accessible documents, Johan, thank you for introducing me. He mentioned that I used to work in education. I used to be an instructor at the University of Georgia. When I first came to work at CIDI, I really imagined that making accessible text that was read aloud was primarily for people who were blind or had low vision.

But I would say almost 90% of our orders are from students or individuals who have learning disabilities such as dyslexia, dyscalculia or dysgraphia, or ADHD. It helps help hear the audio input and reinforce reading habits. Also individuals with head injuries, cognitive disabilities, trauma. Lots of people who have temporary disabilities. Someone might have broken their arm and may not be able to turn the pages of a text book. There's a huge audience outside of the blind community that need and rely upon assistive technology to access content.

Also people who identify as auditory learners who really love audio books which is more and more. People who are accessing content as books become available on audio tape. More and more people are learning they benefit from that. They can pay attention in a different way than they can by reading a traditional text book.

The aging population as eye sight fails or become older. They may rely upon more assistive technology. I would say every benefits when you make documents accessible.

I'm kind of going to touch upon what I mean by that.

I don't have time today to set aside to watch this video with you all but we will be sending this video out as a resource. It has a link to this wonderful video. It's called Harley's Story. This is the title Harley's story using assistive technology in the classroom. It has great examples of how someone who is sighted uses screen reader technology to listen to their text books, to copy and paste materials from their textbook into a Microsoft Word document and create their own notes, they can create their own bookmarks to go back to important places in the textbook. So it has wonderful real-world examples if you're curious and want to investment more assistive technology in action.

So, today we're going to really focus on the three key concepts. This was in our goals. This is what I'm going to try and stick to today. I want to make sure to cover all three of these ideas about accessibility across many programs.

Some of our future trainings that we're going to do will go program by program. So we have another training coming up on creating accessible documents. And I'll go through what to do with Microsoft Word files, then PDF, then PowerPoint in that training. In this training I want to give an overview of accessibility features that apply across the board to every single program.

So, when I'm thinking about accessible files, the three key things are: Navigation, design, and graphics.

So, in terms of navigation, have I created headings or bookmarks that allow someone to navigate easily with assistive technology?

And we'll go over that.

When I'm thinking about design choices that's huge. That involves font choice, colors, backgrounds, patterns, animation, anything styled, how you use graphics, how you use all kinds of design features that has a huge impact on how accessible something is.

And then finally, your graphics. Are you fully describing your visuals? Are you thinking about and choosing your images carefully. Sometimes people include graphics for a wow factor or purely for design and that can make things inaccessible. So you want to be thoughtful in your approach to using graphics in your document.

And when you do use graphics including captions or alt text descriptions which we'll go into in order to describe it fully and make it accessible to people who can't see the image.

So we're going to go through all three of these today.

So starting with the first one: Accessible navigation. People are using screen readers and assistive technology to access and scroll through your documents. Something who is blind or low vision may use a program such as JAWS or NVDA or there are many, many different examples of text‑to‑speech software screen readers out there. They can pull up using a short cut on the desk top a list of headings and tab through them with their keyboard and hear them all read aloud.

So, if you have created accessible headings in your Microsoft Word file, someone can easily figure out how your document is organized and easily jump from section to section.

So I think instinctively we make titles bold or we want them to stand out to give people an idea of how the document is structured especially if it's a long one.

So this is just asking you to use the built‑in styles on the home ribbon of Microsoft Word to make those different headings functional as well.

So you're not just making them look the same. You're making them act the same with the screen reader. So right in the middle of your home ribbon on Microsoft Word you'll find a style section ‑‑ I have a screen shot of it here on the slide ‑‑ with heading 1 selected. So in order to create a heading level 1 in your document such as the title or the first line of the document, you highlight it or put your cursor on the line and go up and hit heading 1. It will turn that heading into an accessible functional heading in your document.

You can add different levels of headings. You can have heading level 1, level 2, level 3 ‑‑ sounds like someone has their microphone on.

You can have multiple levels of headings. We usually put up to 3 levels of headings. Anything more than that gets confusing for someone. But it really helps people be able to figure out the structure of your document.

In order to see the headings that you put into your document; this is a screen shot that shows you the view tab in Microsoft Word. You click on view and check the box circled here in red that says navigation pane and it will open up this left-hand pane and list all of the different headings that you have entered so you can add them or take them away or edit them in real-time.

Once you add a heading, the way that you take it away is you just turn it back into normal style.

So I will go back a slide. You see in this screen shot I have heading level 1 highlighted. The one on the left is normal. So if I want to take a heading away, I click on normal and it will take it away from the heading pane and turn it into normal text. One thing people ask in trainings is when they do experiment with these headings, people get a little upset understandably that their style changes.

So the default heading 1 is like a large 16-point Calibri font with blue text. You don't have to use that. That's just the default that Microsoft word sets up. You can change ‑‑ this is a screen shot to show you can modify the style. You can change the style of heading 1 or heading 2. You right click on heading 1 or heading 2 in your home ribbon and modify style and say all of my heading 1s I want to look like this and choose a font color and size. You can use that ‑‑ at the bottom there's a radio button that says apply this style only in this document or make all new documents based on this template. So you can set it up once and you're good to go.

For a PDF, it's a similar concept. We don't have headings in a PDF, but we have bookmarks. So we in the e-text department rely on Adobe acrobat pro. This is a screen shot that shows you the bookmarks pane in Adobe Acrobat. If someone has done accessibility work for you and you open up a PDF file in Adobe reader you should be able to use bookmarks and jump from chapter to chapter and you don't have to scroll scroll scroll. You can easily jump from chapter to chapter. So in order to create a bookmark using Adobe Acrobat, you highlight the text and right click and add a bookmark. Or you can press control B at the same time and it will generate a bookmark for you.

Unlike Microsoft Word where you specify this is a level 1 or level 2 heading, with Adobe bookmarks they will all be at the same level. Then you can drag them up and under other bookmarks to create your hierarchy or structure.

I have a screen shot where my heading level 1 is the title of the textbook. All of the front matter such as the acknowledgment, table of contents, introduction, I dragged those bookmarks under that first heading to show they are the front matter. Each chapter I left it alone. So it's like a level 1 bookmark. If there were subsections within those chapters I might drag them under. So you could tell here's chapter 1 and the sections underneath it.

One thing that's great about bookmarks in Adobe for PDF is that you can edit them. So even if it didn't say chapter 1: I could add that in to make it clear and accessible for someone and that's a nice feature.

For PowerPoint, when you're thinking about navigation and someone using assistive technology to access and get around and hear your content read aloud, there are no headings, there are no bookmarks but the comparable feature is the slide titles. The slide titles in your PowerPoint presentation are going to be your organizational structure.

And they're going to help differentiate and walk someone through your presentation or your argument.

So always try to make accessible unique and very descriptive titles for your PowerPoint slides as possible. That's really going to help someone if they want to go back in your PowerPoint and find that one piece of data that they read. It's going to help.

On this slide I have a screen shot of all of the content in a PowerPoint ‑‑ the first few slides. It shows the slide number on the left and then it has in bold the title 06 each slide and then the content or text that's on that slide.

And I would argue as with all of these accessibility tips and tricks that I'm teaching you today, they not only make files more accessible for people who have disabilities, for people using assistive technology, but they make your files more accessible to everyone, right? Having a more descriptive slide title will help focus your argument, focus your presentation, focus your own attention when you're giving your talk and help people in the audience know where you are in your presentation. So, all of these different features are going to different everyone including you.

So, we've talked about navigation. So accessible headings, bookmarks and slide titles.

Next, I'd like to move on to universal design choices. And they're more slides to go through because there's color, font, spacing. All kinds of things when we talk about design. That's huge. That's everything. But I'm going to try to keep us focused and on target.

So before we get started, again, I want to define my terms. What does universal design mean? The definition of universal design is the design and composition of an environment ‑‑ and in this case we're talking about a digital environment ‑‑ so that it can be accessed, understood and used to the greatest extent possible by all people regardless of their age, size, ability or disability.

And down below I included the 7 agreed upon principles of universal design: Equitable use, flexibility in use, simple and intuitive use, perceptible information, tolerance for error, low physical efforts and size and space for approach and use. You can make a case that we're going to cover all of these. Even size and space. Leaving enough white space in your document that you didn't cram it full of graphics. Making things equable. You want to make sure your reading order is clear. That you don't interrupt your text with lots of foot notes and graphics and tables and keep things streamlined for everyone. Perceptible information, making sure it's easy to understand. Using language that's not too full of jargon. As a former academic I'm guilty of sometimes using imperceptible information but I am trying to reform. And also, we're going to talk about flexibility and use. That's important too. When you are making things accessible, when you're focusing on creating accessible files from the very start, when you're creating a Microsoft Word document or a PDF or a PowerPoint, when you make it accessible from the very beginning if you ever need to go back and edit it, it's so much easier. If you're using accessible spacing or accessible headings when you revise your document, you're not making the format go wonky or crazy. I know every time I used to make handouts for my students if I added an image everything would go crazy and suddenly there would be more pages in the documents. If you use these built‑in accessibility tools you should have an easier time of it. First, I'm trying to list out some design and style considerations in general to give you an idea of the things that we're going to cover in this training and then again in the creating accessible documents training down the road. And the PowerPoint training down the road.

You want to think about font size. I recommend for a print document 12 point or larger. And some san serif fonts are the best.

Font styles you want to avoid large amounts of italicize, bold, underlined or capitalized text if at all possible. When you have lots of capitalized words, one it hurts people's feelings sometimes. It looks like you're shouting. Two, it's very hard to read the word quickly because all of the letters are the same size and shape. When you have text in regular title case like on the slide, it's much easier to recognize word shapes like “and” and “the” and “to.” And you don't have to pay as much attention to every letter to read the word. When you italicize, you are adding extra visual information for people and it's making ‑‑ it's adding more complexity and harder for the brain to process the words. I tapped my forehead. You can't see my gestures.

Color choices. We'll talk about color contrast specifically. You always want to make sure you have a high contrast between your text and back ground. So white and black and yellow and black are very high contrast pairs. And so if this actual slide has both of those examples. Those are the most high contrast choices that you could use and that is great. Many, many PowerPoint presentations have been somewhat derailed by someone putting black text on a gray back ground. It looks very elegant but the people in your audience cannot read it. Especially if they're far away.

So you want to think about font size also in terms of what kinds of presentations you're giving. Is this a print page? Then you want to have 12 point or larger. Is this a PowerPoint slide, I would say 24 point or larger. As large as you can get away with so the people in the back and see it. And then think about always trying to send digital copies of your presentations to people so they can read along or revisit the material afterwards and they can use whatever accessible or assistive technology they need to access the content.

And then back ground and images. This comes into play with PowerPoint. People go nuts with all of the design choices, the features in PowerPoint. The latest update to PowerPoint maybe a year ago now they started making design choices in real-time as you were constructing slides in PowerPoint and I fell for it. Even me as someone who has worked in accessibility for almost a decade. I thought wow that's a beautiful design. And then I realized it made my graphics and my text both completely inaccessible. Because it was beautiful and graphically interesting but the text was no longer read aloud on the screen. You want to avoid busy patterns and make sure you're testing to make sure your content is accessible if you design it and we'll go through how to do that.

>> Johan Rempel: I know we want to stay on point and wrap up by 4:15. There was a question. It wasn't public in the chat. It's a good question. Asking about blue with headings if those are always sufficient color contrast. I responded that the different types of headings will sometimes have different shades of blue and that color contrast can be compromised depending on the shade of blue but do you want to comment on those lines?

>> Valerie Morrison: If the blue headings are coming up in the document that I'm creating by instinct I make them bold. There's examples in the screen shot here of the different font sizes and font types. The bottom font example here that says center for inclusive design and innovation in script font is bold. So I agree that sometimes the blue headings on a white back ground pass the color contrast check ‑‑ and we'll look at a tool that will help you analyze the color contrast but I always try to go the extra mile and make it really visible for people. So I might create a bold title or just change it to black to make sure that I'm being as accessible as possible. But to answer the question it's complicated. There's lots of design choices available. The blue does pass the background check. It does pass WCAG guidelines but I would advocate for black on white. It's the most and best practice.

>> Johan Rempel: Excellent. Thank you.

>> Valerie Morrison: This slide goes through some examples of different fonts. The first 3 are san serif fonts. The last 3 are serif fonts. Sans serif fonts some examples of Calibri, Arial, et cetera. You can see on the L's there are little flicks, little extra tops and bottoms to the L's or the N. Whereas the sans serif and much more plain and easier to read. They are much easier for someone to understand the letter shapes. So, I would recommend using sans serif fonts especially for documents that are longer. Avoid using large amounts of bold, underlined, capitalized, or italicized text because it makes it harder to read.

Sometimes the document is not your own and you don't have a choice. But providing digital versions of materials for people if necessary, that's great because if necessary, they could change the font themselves. They could change the color. They could apply their assistive technology to the file.

But you want to give them a head start.

So here's an example of a free color contrast analyzer. This is something that's great to answer those questions. If I've chosen a font with a background color, does it pass the color ratio test or the contrast ratio?

Color contrast, the goal is to reduce eye strain when someone is trying to read text with a colored back ground. I think the worst is when someone has an image background with text on top of T. Even if it's an abstract image with color splashes or something. It's very difficult to pick out what is a letter and what is part of the picture.

So you always want for best practice to have a plain back ground with a high contrast between your text and your back ground color.

In the screen shot you can see there are many examples. I would say all of these are very difficult to read. It says the word sample in every single one of these 8 colors. It says the word sample but it's very difficult to read. Imagine if this were a PowerPoint presentation in a real room. Remember being in real rooms for things? Live presentations. Something on the front row wouldn't even be able to read that. Since we're accessing this remotely, we may be closer to the screen. I think these are all examples of the text not having high enough contrast ratio. So this is a free color contrast analyzer from the Paciello group. I recommend downloading it and playing around with it. The last thing I want to say about color and we'll talk about this more in later trainings, you want to make sure you don't rely on color alone to convey meaning. If you only use the color red to indicate the mandatory parts that someone must fill out of a form or you have the vocabulary on this exam is going to be in green. Not everyone can see colors or perceive colors the same way. So you want to not set yourself up from excluding people. So if you do color coding make sure you have some other way of conveying that material. Such as listing all of the terms at the bottom or having an asterisk in front of it.

Another design feature is white space. It's important to have space in between all the words. If you have a slide that's crammed with words, crammed with graphics it becomes harder for someone to understand it. And screen readers often will announce blank lines or empty space if you use the tab key or the enter key repeatedly.

So if you want to put space in between paragraphs or tab repeatedly, it's much better to use the accessible layout built‑in tools to do that. This screen shot I highlighted the layout ribbon. I've clicked on the layout tab in Word and this layout tab has all of these different options to change the margins, to increase the number of columns, to make 2 or 3 or 4 columns of text, to insert page breaks or section breaks and then to create spacing either vertically or horizontally. To insert spaces to the left of a line or the right of a line or to insert space before or after a line.

So these are wonderful built‑in options for you to create space in a way that doesn't get read aloud by the screen reader.

So if I wanted to create extra white space in between these bullets on the slide I wouldn't hit enter, enter, enter because the screen reader depending on individual settings might say blank line blank line blank line and that's a lot of extra stuff, we're forcing them to listen to. So using the accessible spaces will benefit the person listening to the file and help make your file more flexible if you ever edit it in the future. So how many of us have ever thought this next section it should really be ‑‑ this should start on a new page so we hit enter, enter, enter to bump down to the next page. Sarah said not relying on hard returns and tabs to format your word documents actually makes them easier to edit later too.

If you add a period, it will bump everything down. It will add a weird chunk of white space somewhere letter in your document. If you created a new page break using these layout tools that will remain the same. So figuring out the layout tools is one of the most overlooked accessibility tools in Microsoft Word accessibility. So take a document after this training, practice moving things around, trying to create space, highlight a line of text and create space above and below it and play around with these features.

Inserting accessible page breaks. This walks you through how to do that. You can do it on the layout tab or on the insert tab. So instead of hitting enter multiple times you put your cursor where you want to insert the last line on your page. You go to insert and here again you can insert a page break from this area as well. And that's going to split your content in an accessible way.

In terms of content and organization you want to make sure your material is organized with clear headings or bookmarks. You have a logical structure that's easy for someone to follow and understand. You use headings to create an accessible table of contents. That's a benefit for everyone. Not just people using assistive technology. If you create accessible headings in your Microsoft Word document you have the ability to autogenerate a table of content. That appears at the beginning of your document and people can click on headings and that will jump to that section of the document.

Other design and organization things to think about: Making sure you don't interrupt the main body text with images, footnotes, captions, tables as much as possible. You want to include visual elements if it's educational and a necessity. You'll have something that need to be visual. But try not to interrupt sentences, paragraphs. Put the graphs or tables in between paragraphs or sections. So that someone hears everything read aloud, there's a break, then they hear about the image or the table or the footnote and then go back to the next paragraph. Just try not to be interrupting yourself too much with your design.

Two more key things I want to talk about before we move on to image description. You always want to make sure that you are explaining your acronyms, symbols or abbreviations at the beginning of a document, rather than at the bottom because a screen reader is going to read aloud the document from top to bottom, left to right. If you save your answer key or your cheat sheet of terms until the end of the document, that means someone will have listened to the entire thing and then they get that important helpful information at the end and they will have to go back and listen all over again. So if you use acronyms, try to define them when you first use them. Not a footnote at the bottom. If you use an abbreviation, try and put in parenthesis the whole term the first time you do it and then abbreviate after that. It's very helpful for someone because then you're not relying on someone having sight and knowing they can glance to the bottom of the page and figure out ‑‑ and bounce up and down while reading. Someone who is listening to the content it's much more linear. They have to listen to it from top to bottom. So you don't want them to have to rewind and listen to it over again. And then the final organizational thing for content related piece of advice that I want to give you ‑‑ we'll talk more about this in our creating accessible documents training but when you are including images and tables in your documents, think about providing a caption for both. For figures and for tables. A brief caption that describes the image or describes the content of your table will help everyone decide what to focus on or what to get out of this data, what to get out of this image, and it's read aloud for the person using a screen reader and it's very helpful because the person can decide I want to skip this table, that's not relevant. Or they can decide that sounds like the table for me that I need to listen to that immediately.

So captions make things accessible for everyone. So that's a pro tip for you all.

Briefly I want to talk about accessible tables. And we'll get into this again more in depth in our future trainings. Tables should not be purely for layout purposes. They should be functional tables that have column headings and they need to be in a table.

You should not have a list of information in table cells. There should be a header row that's specified. Go through the structure tab carefully. There should be a clear marked header row because that's going to be announced by the assistive technology to someone navigating the table data. That becomes very important. So lots of times I'll see ‑‑ I was guilty of this myself. If I had vocabulary terms or a list of lit theory authors, a list of poems that I wanted my students to read on my syllabus, I might put them in a table so they were in nice rows and spaced nicely. And when you put something in a table, it makes it more difficult with the assistive technology. So if it doesn't need to be in a table and can just be a list, that's far more accessible for people.

And you want to make sure you're not merging cells. If you have a table with regular rows and regular columns. I have an example here of a table that has two columns and four rows. Every row has two columns. I don't have any merged cells. And this is an example of a table of the different salaries that Keanu Reeves earned for some of his movies.

I have an arrow pointing to the header row. This top row with movie and salary that is my header row. I specified that on the table design tab which you can access by clicking on a table. This table design tab has everything you need to make your table truly accessible. You specify a header row, change the colors, you can choose to have boarders or not. I recommend having boarders. You can also change the shading. Change the colors right from this one tab.

The most accessible thing about a table is making sure that you don't have merged cells and we'll go over examples of that when we have our in‑depth Microsoft Word document training.

Moving on I want to spend the rest of the time together talking about the third accessibility tip. We talked about navigation and creating accessible headings and documents. ‑‑ headings and bookmarks for your documents. And then we talked about design choices. How you organize materials, what it looks like, what graphic and colors. And now I want to talk about that third key feature of an accessible document which is describing your visuals, including image description or I'm going to refer to it as alt text which stands for alternative text.

So in order to create alt text, you want to keep things brief in general depending on the context. If it's educational material and you need to go a bit longer that's fine. I recommend 1‑2 sentences to describe an image. In order to enter alt text there's different ways to do it depending on what type of file you V. In this screen shot I have a Microsoft Word doc. I would right click on the image and it will allow me to edit alt text. Depending on how the document and the picture is formatted in Microsoft Word, you may or may not have edit alt text as an option when you right click. If you do not see the choice to edit alt text then in the right click menu you select picture and then click on the alt text tab. That will get you to something that looks like this. An empty box where you could type in your brief alt text description.

So type in your description using proper grammar, spacing and punctuation. Screen readers do pause for punctuation. They do have a higher pitch for capital letters. So people who use screen readers they really rely on those context clues to understand the grammar and how something is written. So you want to make your alt text kind of like a formal writing. Not use a lot of abbreviations. Make sure you punctuate things correctly. Do not use hard line breaks in your alt text field. As you're typing in your alt text don't hit enter enter and start a new paragraph because depending on the person's assistive technology settings it might skip ahead and think you reached the end of the description. So, don't put multiple paragraphs. Just put a sentence or two or three of description of your image.

If you're adding alt text to a PDF file, this is a screen shot that shows a PDF of a text book on dinosaurs. There's a fossil of a dinosaur and a pterodactyl. I used Adobe Acrobat and turned on the accessibility tools and I selected the reading order tool. So if you don't know how to get to that, you click on tools and then select accessibility and then you should see reading order. And once you click on the reading order tool it will highlight everything on the page and put a giant X on every image and show you if there's any alt text. So in these examples it says figure no alternative text exists. Then I right click on it and write my image description right there on the page but I have to have the reading order tool turned on to do that.

Another way you can add alt text in any file in Microsoft Word, PDF or PowerPoint is run the accessibility checker and it will flag all the images missing alt text and you can add them. I like to look at every page because I'm usually using context from the page to make my description. So if there's a great caption for this image, I don't want to directly repeat the caption when I'm describing the alt text. That's just forcing someone to listen to the same thing twice. So I'm usually looking at the page to determine how I would like to describe the image. Everyone has their own preferred workflow.

So here's an example image of a cute little bubble bee. He's propped up on a window seal and his little legs are dangling below him. The text says I dunno man, what if my knees aren't that great. It's a little meme about a bubble bee. That was a long description of this alt text. How you want to generally approach describing an image is you want to create one general informative sentence that summarizes what you see. So, you want to keep your description neutral and informative. So if I were writing alt text for this, I would probably leave out the parts where I went on and on about it being cute. I wouldn't talk about "I love" the phrase "it's the bee's knees." I would describe it with proper grammar, punctuation and avoid acronyms. I would say a meme showing a bubble bee looking out a window with the text I dunno man what if my knees aren't that great. I started out saying it's a meme because categorizing the type of image is important at the beginning. If you have a bar graph, a pie chart, a flow chart, an infographic I usually start there because that gives the listener an idea of what kind of graphic it is and you build the framework and add more detail as you go.

Here are some examples of sample images when you have an example like this of Martin Luther King, Jr. When you have people. Just the name would suffice. You could go into more depth if you want. If you want to describe how he's sitting. I don't know if that's going to convey any more necessary information to someone. Depending on the context you might want to. Then I use this example for a particular reason. He looks upset. I would not want to speculate or create a story or enter into my own thoughts and feelings about Martin Luther King to describe this image. I feel strongly about his legacy and what he represents to our country and to the world, but I'm going to leave that out of my alt text description and just say Martin Luther King, Jr. On the right I have an image of the coronavirus. I feel strongly about that too. I'm going to leave my alt text neutral and say a magnified image of human coronavirus. If it's ang art book and you want to talk about the colors used you could include that detail in another sentence. If it's a biology text book ‑‑ I googled the coronavirus and learned more. It has a spherical structure and projecting glycoproteins. You could add that depending on the context but keeping things brief is always helpful to people because you don't want to give them too much work to do when listening to the images being described. You don't want to leave out key educational points but depending on your content sometimes less is more.

So here's an example of a bar graph. You're going to want to work from general to specific. Again, begin with that sentence ‑‑ that one general sentence that sums everything up. And I have a very regular approach no matter what kind of graph it is. I name what type of graph, the title of the graph if there is one, and then name what's on the horizontal and vertical axes and then go into further detail in the next sentence. So it becomes very formulaic. It is helpful. It becomes consistent for someone listening to the document. My first sentence is doing all the heavy lifting. It says a bar graph titles U.S. population by race that compares the percentages of black... [Reading]. Then I go into further detail and break down the percentages of each bar. You can add as much detail as you like. But if your aim is just to have brief alt text. That one first sentence might suffice.

If you are providing information and you really want those data points accessible to everyone, another option instead of writing a book report in your alt text description, provide a table of this data underneath the image. And that's what I usually refer to as multiple modality. It is sometimes helpful in educational con text to provide the same information in graphic form and in text form or numerical form in a table. So that's another thing to consider.

You also want to focus on meaning when you are writing your alt text description. A lot of people get hung up on describing what something looks like. And you really want to focus on the content of the image. So, it's irrelevant in this example that some of the arrows are blue and some of the arrows are red and some are squiggly. You want to describe what's happening with this chemical reaction. These are a positron and an electron and gamma rays coming out. I want to use that language instead of a squiggly red arrow.

Your alt text should focus on meaning.

And then finally you want to think about cognitive load when writing alt text and describing images. I will say when you are designing documents think about cognitive load and how someone is going to take in all of this information and retain it and when you overwhelm someone's working memory by adding too many details it never makes it into someone's full time long‑term memory ‑‑ not full‑time memory. That's a different concept. It won't make it into their long‑term memory. So in this example I have a huge very complex infographic titled universe infographic elements. I would keep this brief and just have one sentence that would name what kind of image it is. An infographic, name the title, summarize the content. So probably list all of these subheadings like temperature of planets, mickey way galaxy structure, et cetera. And if I want to include extra information, I might think about adding extra tables or a very robust figure caption that goes before this infographic that points out the key educational content that I want my entire audience to get. Not just people accessing it with assistive technology.

So thinking about cognitive load is something that applies not just to image description but to your design choices, to how many headings you use and how you organize and structure your documents. You want to create something that's easy for people to comprehend and access.

So, that is it for me. I have somehow magically made it through all of that content. So if someone has any questions, we welcome them. We're going to be covering some of this information ‑‑ there will be a little bit of overlap in the creating accessible documents training. But in that training, I hope to provide specific examples from documents that we look at together and strategize how to fix them. We do have an empty or 2 left if anyone has any questions.

>> Johan Rempel: While we're waiting well‑done Valerie. The last several years Valerie has spent a lot of time and energy training people on how to create accessible documents. Clearly her expertise and knowledge in conveying this information is superb.

This is recorded and archived. This will be saved as an accessible PDF. Valerie has covered a lot of information. There are more to come on this top recollect. If you feel like it was overwhelming or drinking from the fire hose a little bit you can go back and review the PowerPoint or the recording itself. I'm not seeing any questions. And I know that our captionist has a hard stop at 4:15.

>> Valerie Morrison: Thank you so much Heather for captioning. I'm always ‑‑ I feel like I'm in the best hands when we have Heather as our captionist. Thank you, Johan, for presenting and moderating. I appreciate you helping out with the questions in the chat that I could focus. Thank you to the attendees. I appreciate your time and participation today and your interest in this. I really hope to look at some more specific examples from actual documents that we look at together in the next training.

>> Johan Rempel: All right. Thank you, Valerie. With that we will close it out. Thank you all for taking time out of your schedule to attend. Enjoy the rest of you day.