# Accessible Graphs, Charts and Maps

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We will discuss in this video how to make data in graphs, charts and maps accessible by writing long text descriptions and by putting the data into tables. We will also talk about a few other changes that can help people who are blind or have low vision. We will not discuss the creation of Braille materials. For that you'll need to talk to someone from your disability office directly. How do you make data in graphs, charts and maps accessible? Most graphs charts and maps are just images. So to get information from them you have to be able to see the graph, chart or map. The only way to make this information accessible to users who are fully blind is to translate the data into a format that assistive technology, like screen readers, can read. According to the American Foundation for the Blind web site, screen readers are software programs that allow blind or visually impaired users to read the text that is displayed on the computer screen with a speech synthesizer or Braille display. One way to make this data more accessible to screen reader users is to write a long text description for graphs, charts and maps. These descriptions are often too long to add to the alt tag of an image, which is the alt attribute in the image section of the HTML code. If your description is too long, then you can also add it to the body of a corresponding article or in a linked separate page. Let's say we have an article with a bar graph and the information in the bar graph is important to readers to understand the full content of the article. In this case we would need a text description for the bar graph because it's a complex image. We would describe each of the bars and the numbers and percentages displayed. When students are required to answer questions based on a graph it can be a little tricky to describe the data without giving away the answers to the questions. If you cannot describe the image in a way that does not give away answers, then the educational framework Universal Design for Learning recommends adjusting an activity slightly to give students more options on how they can demonstrate their knowledge. Once finished writing a description we would save it as an HTML document and create a link to it next to the article in the course. A text description alone is sometimes not comparable to a complex image. If possible, in addition to the text description, putting the data from the graph or chart into a table will make the resource completely accessible. Make sure it's an actual table though and not an image or a screenshot. The table should be properly created with a table caption and column and row headers. As a final note, people who are not fully blind but have low vision benefit from charts, graphs and maps that use high contrasting color combinations. In summary, when you have a graph, chart or map the best way to make the data accessible is to write a long text description of the image and if possible, put the data into a table. It is also important to use high contrast color combinations and to adapt activities to give students more options on how to demonstrate knowledge.