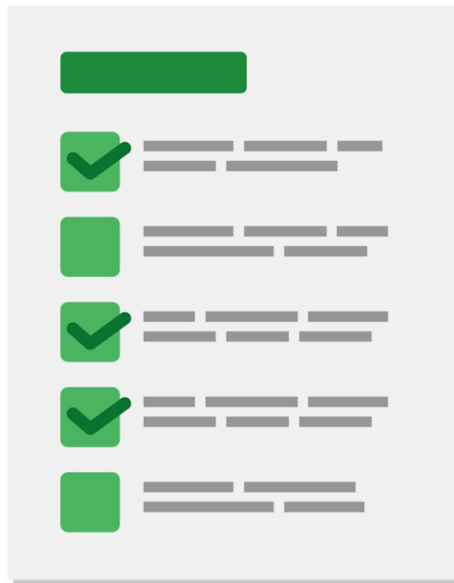




## Reading: Design resource guide

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If you completed the **Google Data Analytics Certificate**, then you have already spent a lot of time considering how to create data visualizations. Many of the same principles will apply as you begin to create visualizations and dashboards for business intelligence work. That's why, in this reading, you're going to get a checklist of tips and tricks that you can use to guide your design process.



- **Use a visualization framework:** Frameworks like [the McCandless Method](#) and [Kaiser Fung's Junk Charts Trifecta Checkup](#) can help you organize your thoughts about data visualization and give you a useful checklist to reference.
- **Choose the right chart:** Part of creating effective charts is choosing which type of data visualization works best for your needs.
- **Organize your process with design thinking:** Design thinking breaks down the design process into five stages: empathize, define, ideate, prototype, and test.
- **Consider pre-attentive attributes:** Pre-attentive attributes like marks and channels are the elements of a data visualization that people recognize automatically without conscious effort.
- **Avoid misleading or deceptive charts:** It's important that the visualizations you create are communicating your data accurately and truthfully.
- **Prioritize accessibility:** Make your visualizations accessible and useful to everyone in your audience by using labeling, text alternatives, text-based formats, and distinguishing and simplifying elements.
- **Apply design principles:** There are nine principles of design that you should consider when designing your visualizations: balance, emphasis, movement, pattern, repetition, proportion, rhythm, variety, and unity.

## Resources

If you're interested in reviewing any of these concepts, you can check out these resources from the Google Data Analytics Certificate and more:

- Reading: **[Optional] Effective data visualizations** covers some basics about creating visualizations.
  - [This guide to selecting the right visualization](#) has a detailed encyclopedia of chart types and when to use them.
  - [The Financial Times Visual Vocabulary poster](#) includes a guide for choosing chart types based on the relationship you're trying to visualize; there is also [a plain-text version on GitHub](#).
  - Reading: **[Optional] Design thinking for visualization improvement** breaks down each step of the design process in more detail.
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