Data Visualization   2 Weeks

Lesson Overview

This lesson introduces data visualization techniques to analyze and communicate findings from your computing innovations survey data set. Throughout the lesson, you will learn how to create various types of visualizations that support your data story.

In the assignment, you will use Google Sheets to create meaningful visualizations from your survey data set to identify trends and patterns. You will reflect on the entire data science process and communicate your data story by creating an infographic using Canva.
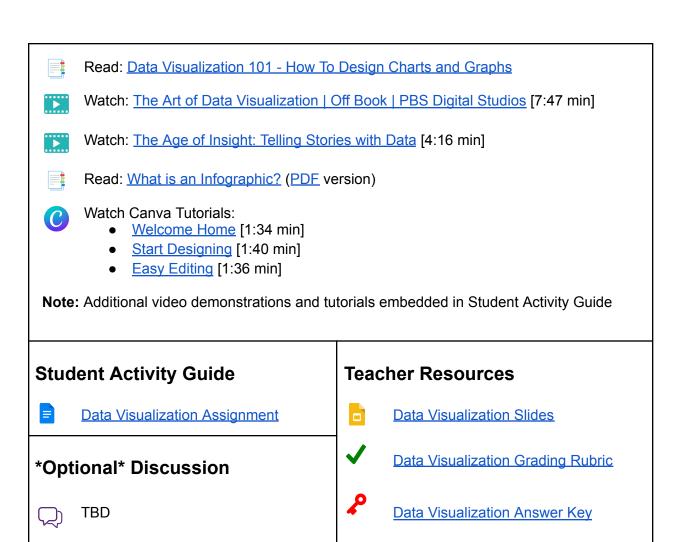
Learning Objectives

- Explain the role of data visualization in effectively communicating a data story.

- Use computational tools to create meaningful visualizations.

- Create different chart types (scatter, line, bar) to explore trends and patterns in a data set.

- Interpret insights gained from data visualizations.

- Reflect on the data science process to draw conclusions and summarize data analysis results.

- Create an infographic to visualize and communicate a data story.

RI CS Education Standards

- 3-CT-CD-1: Systematically design and implement computational artifacts for targeted audiences by incorporating feedback from users.
- 3-DA-CVT-1: Select appropriate data-collection tools and presentation techniques for different types of data.
- 3-DA-IM-1: Create computational models that represent the relationships among different elements of data collected from a phenomenon or process.
- 3-DA-IM-3: Evaluate the ability of models and simulations to test and support the refinement of hypotheses.
- 3-DL-CU-1: Select appropriate software tools or resources to create a significant artifact or solve a problem.

Lesson Material

The following course material will help you learn the skills and concepts necessary to complete the Data Visualization assignment.

Read: Data Visualization 101 - How To Design Charts and Graphs

Watch: The Art of Data Visualization | Off Book | PBS Digital Studios [7:47 min]

Watch: The Age of Insight: Telling Stories with Data [4:16 min]

Read: What is an Infographic? (PDF version)

Watch Canva Tutorials:
- Welcome Home [1:34 min]
- Start Designing [1:40 min]
- Easy Editing [1:36 min]

Note: Additional video demonstrations and tutorials embedded in Student Activity Guide

Student Activity Guide

Data Visualization Assignment

Optional Discussion

TBD

Teacher Resources

Data Visualization Slides

Data Visualization Grading Rubric

Data Visualization Answer Key

MLL Resources