**Our Class Data - Visualized:**
**4th Grade Computer Science**
**Lesson Plan**

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Overview: As a whole group, the class customizes a survey to gain a better understanding of each other by collaboratively visualizing student interests & preferences.

Click here for the Google Slides Presentation to accompany this lesson plan (coming soon!)

**Introduction:**

Teacher: *What do you know about your classmates?* Allow students to give some answers.

*Turn & talk with a partner: What are some ways that we could learn more about the group as a whole? Allow time for some groups to share some answers.*

*Today we're going to learn more about our group of learners by collecting data on everyone and creating a visualization that helps us understand the data.*

**Engagement**

*Our first step for collecting data is deciding on what we want to know about our classmates. There are two types of data we will collect: quantitative and qualitative. Quantitative data is data that has a numerical value or we can count. Qualitative answers are word answers that are heard to assign a number or quantity to.*

*What are some questions we might want to ask?* (Field student questions and classify questions as quantitative or qualitative.)

Here are some [ideas for questions](#) you might want to ask.

Enter questions into a [Google Form](#) as a whole group, encouraging students to give input as to what type of question (multiple choice, check boxes, short/long answers, linear scale).

**Survey students**

Once the form is populated with several questions, share the link with students for them to complete the quiz independently.

Be sure the settings of the form are set to not collect student email addresses, so that the data remains anonymous.

**Visualize the data**

In Google Forms, the responses tab is pretty helpful by automatically creating visuals for the quantitative data. You should see pie charts and perhaps horizontal bar graphs.

The for qualitative data, you can ask students how we can visualize this type of data.

One way to do this is to put it into a [word cloud](#).

**Reflect (Whole Group discussion, Seesaw Reflection, or small group discussion)**

How do data visualizations help us understand more about our classmates? What do they not help us do?

So what does this have to do with computer science? The data our class collected is a tiny amount of data. If we had data from the whole school or our whole district, it would be a lot more confusing to make sense of. That's what computers are really good at, taking a large amount of data, and through human created algorithms, they help make sense of the data, like creating models & visualizations.

**Extend (Optional)**

[Watch this video about the US Census Bureau](#) and how they create and share data visualizations so that people understand their data. Bonus content on the what and why behind the Census!