## UEI Lesson Plan

### Getting Yourself Ready

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<th>Materials</th>
<th>Your Preparation</th>
<th>Agenda (w/ times)</th>
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<td>Index cards</td>
<td>Time each section</td>
<td>GYSR: 20 min</td>
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<td>Pens/Pencils</td>
<td>Gather materials</td>
<td>BTS: 45 min</td>
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<td>Handouts</td>
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<td>Closure/IP: 15 min</td>
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### Getting Your Students Ready

*Do Now:* On your index card, write one appropriate person, place, or thing. You have 10 seconds, and give me a thumbs up when you have your word written. Awesome. What we’re going to do is pass the card to the right. Each time a card comes to you, write any new word (it doesn’t have to be a person, place, or thing). You’ll have 10 seconds each time. Alright, pass, 10 seconds, go.

**Students will pass cards 4 times**

Alright, now you should have a card with five words on it. Using all the words, create a sentence. You have two minutes, go.

**Circulate and ask 1 or 2 students individually to share out**

Awesome job. Does anyone think they have a sentence that’s especially wild? Read your words and then the sentence you made.

**Call hands as well as the people pre-selected from circulation**

Wow, y’all came up with some crazy stuff. Alright hold on to your sentences because we’re going to partner up (numbering off if the group is small; free choice if the group is large). Find a spot in the room with your partner, sitting or standing is ok.

**Put up discussion questions**

Take a minute to read these questions and start thinking of answers silently.

1. Would it be easy to make a different sentence with the same words? Why or why not?
2. Do you think other people would have made the same sentence as you?
   a. If not, why do you think others would make different sentences?

Make sure to answer with I think _______________ because _________________

Make sure to respond to your partner with I agree/disagree because _________________

Turn and talk with your partner and introduce yourselves if you don’t know each other yet. You have 3 minutes to discuss. Go.

**Circulate and ask 1 or 2 students individually to share out**

Awesome. Let’s come back together and talk about number 1.

**Guide a group-wide discussion for all the questions**

That was great! If you’re wondering why I had you doing English in a workshop on data, don’t worry. That activity we just did actually connects strongly to what data is and how we use it, because data tells a story. Here’s some data on my weight this semester that I turned into this graph using a free app called MyFitnessPal. The y-axis here has my weight and the x-axis down here has time. This high point right here is New Year’s this year. I’m really proud of this data, my data, because you can see my changes since the peak, good and bad, and understand my story of starting to get in shape. Just like I did here, we are going to see how we can use data to tell our own stories. So...

**Read the SWBAT and the proving behavior**

And now, the million dollar question: why am I here doing this workshop, and why are y’all here listening to me?

**Explain the purpose**

**Objective:** Today you will be able to...

- Learn
  - What data is
  - How to interpret it
  - Why it is important

**Proving Behavior:** By...

- Defining data terms
- Analyzing charts

**Purpose:** We are doing this because...
Data is a part of your lives. People already collect data on you to tell stories about who you are and where you come from. Understanding data will give you the power to tell your own story. It will help you understand the world around you without being fooled by lies and half-truths.

It will also give you important skills for future classes, college, and jobs.

Does that make sense? Y'all still wanna be here? Good. Let’s jump right in.

### Building the Skill (May Be Less or More Than 4 Steps)

<table>
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<tr>
<th>Step 1: Definition of Data</th>
<th>Say: First, let’s see where we’re at as a group in defining data. Turn and talk with a new partner, introduce yourselves, and answer the question, “What words do you think of when you hear the word ‘data’?” Come up with at least three words. You have 30 seconds, go!</th>
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<td></td>
<td><strong>See:</strong> Instructions slide <strong>Do:</strong> Turn and talk, share out one word per pair</td>
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Awesome! We already know a lot about data! It’ll be interesting to see if this list changes by the end of the workshop. So, let’s define data. Data is “facts about people, places, or things”. It’s that simple. Data = facts. If you remember one thing from today, it’s that data = facts. For example, here is some data about me. |

<table>
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<tr>
<th>Step 1 (pt. 2): Qualitative vs Quantitative Data</th>
<th>Say: However, y’all did mention a lot of stuff about numbers and charts and graphs and other math concepts like that. That is a big part of data, specifically quantitative data. There are two types of data. Quantitative is one, qualitative is the other. You might remember these from the pre-assessment.</th>
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<td>The difference between the two is whether or not the facts can be counted in numbers. Inside the word “quantitative” is the word “quantity”, or “amount”. Quantitative data can be measured or counted in numbers. For example, facts about the presenter.</td>
</tr>
<tr>
<td></td>
<td>Inside the word “qualitative” is the word “quality”. Qualities can’t be easily measured in numbers. For example, facts about the presenter.</td>
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<tr>
<td><strong>See:</strong> Slides (picture of the presenter with 4 facts, 2 quantitative and 2 qualitative)</td>
<td><strong>Do:</strong> Alright, let’s see if we can tell the difference. We’re going to play a game I like to call rock, paper, scissors, answer. I’m going to show you pieces of data about you. You will decide whether you think it is more quantitative or qualitative. When it’s time to answer, I’ll say fists up, and we’ll go rock, paper, scissors, shoot! On shoot, you’ll give me 1 for quantitative data, and a 2 for qualitative. Show me quantitative. Show me qualitative. Show me which one cannot be measured in numbers. Show me which one can be counted in numbers.</td>
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Nice. Here’s the first one: “there are more than 10 students in this room.” Alright think about your answer, remember 1 is quantitative and can be counted in numbers, 2 is qualitative and can’t be counted in numbers. Alright, fists up, rock, paper, scissors, shoot! Very nice. I see all 1s! You’re right, because I can count how many students there are, this is an example of quantitative data. Let’s try the next one. |

Repeat for all examples
So, the last one was a bit confusing because it could have been either quantitative or qualitative. That’s because the two types of data often go together, and they’re equally important. Qualitative data says more than quantitative data can. It makes numbers and charts more relevant and exciting. On the other hand, quantitative data can support qualitative data. You need both to tell the whole story.

### Step 2: Understanding charts and graphs

**Say:** Now that we know what data is, let’s talk about the next step: using it. We already know that data = facts. The simplest way to look at your facts all together is to use a chart. A chart is any way to combine related data in the same place. One example is a t-chart, like this one. Take a few seconds to look this over. T-charts have two columns. Each column, X and Y, is a different kind of fact. My X column is names, and my Y column is height in inches.

**See:** Definition slide, example t-chart slide

**Do:** Alright, take 1 minute with your partner to discuss these charts and answer the question. What do they tell you, and what story was I trying to tell with this data? Turn and talk, share out

Very nice, I was, in fact, trying to show that my height is similar to NBA players. Maybe I was trying to say that I could have been in the NBA.

### Step 2 (pt. 2): Graphs

**Say:** You might have noticed that even though I said “these charts”, the image on the right is a graph. Don’t worry, that wasn’t a mistake. We know that a chart is any way to combine data. A graph also does that. A graph is a type of chart that is nicer to look at. Graphs take t-charts, which are boring lists of numbers, and turns them into pictures which are easier to understand. But in the end, a graph is a chart. Graphs can do two things. First, graphs can show comparison.  
**Examples**  
Second, graphs can show change over time  
**Examples**

**See:** Definition slide, example graphs

**Do:** Ask questions about interpreting the graphs, turn and talk, cold call

### Step 3: Understanding data without getting tricked

**Say:** We know that data tells a story and we know that data is facts, but you should also know that data can be wrong. Data can lie. It's easy to twist data a little bit to tell the story you want to tell. Let’s look at that Fortnite vs Apex Legends data again.  
**Current players t-chart**

If I just gave you this chart, COLD CALL, which game looks more successful?  
**Answer Fortnite.**  
That’s right. But remember we saw that Apex has been out barely a month. Fortnite has been around much longer. Lemme zoom in on a section of the graph and ask you this: “which game has grown faster?” COLD CALL. Just like this example, it’s possible to take the same data and tell completely different stories, just like we saw in the index card activity we did at the beginning.  
**Stay Woke slide**

Hopefully, this workshop has introduced you to data and how to understand it. It’s up to you to watch out for people trying to lie to you using data. Especially when people try to tell your story using data, try to ask questions and look at the data yourself. You might be surprised at what you find.

**See:** Slides

**Do:** Ask questions about interpreting the graphs, cold call
<table>
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<td>Now that you have the knowledge and skills to use data, it’s time to put it into practice. There is a ton of data out there on the 5th Ward. However, a lot of it was collected by people who don’t live here, and don’t tell the whole story. In this project, you will pick a chart of data on 5th Ward (quantitative data) and interview people to tell a more complete story using qualitative data. All the instructions are on this handout. Take some time to read it over and ask questions.</td>
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<td><strong>Closure</strong>: Thank you for having me. Data is important because it’s everywhere, and I really believe that understanding data is power. I hope y’all can look at the data around you and make it your own. I’m excited to see the stories you can tell with data.</td>
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