Spot the Bias Answers

**Data Management**

**Unit 1 Line Master 6c**

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| **Scenario** | **Where is the bias?** |
| An amusement park designer would like to know how much people weigh to establish safety protocols for a new ride. They decide to ask people standing in line for the Ferris wheel, “How much do you weigh?” | **Privacy:** people may not want to openly talk about their weight  **Location:** Ferris-wheel riders might not be representative of all those who go to the fair |
| The Maple Park High School Sports Association is considering a rule change for Varsity Volleyball. They hand out surveys to teenagers at a mall. | **Location:** teenagers at a mall may not be familiar with the rules of volleyball or play volleyball  **Time:** teenagers at a mall may not want to spend their time doing a survey |
| The Student Council is going to host a Thanksgiving Dinner as a fundraiser for a local charity. To determine what food they should serve, they ask all the science teachers to hand out a survey that asks, “What is your favourite Thanksgiving food?” | **Cultural Sensitivity:** not everyone celebrates Thanksgiving  **Timing/Location:** some students may not be enrolled in science class  **Wording:** assumes students have a favourite food |
| A local butcher asks each customer, “Do you prefer hamburgers or hot dogs?” as they are leaving the store. | **Wording:** there is no option to say you don’t like hamburgers or hot dogs |
| Your phone rings at 8 a.m. on a Saturday.  It is a company hired to conduct random surveys to assess how happy people are with service received at their favourite bookstore. They promise it won’t take more than 20 minutes. | **Timing:** no one wants to receive a phone call about a survey early on a Saturday morning  **Time:** 20 minutes is a long time for a phone survey  **Wording:** assumes that people are happy with the service; and that the respondent has a favourite bookstore |
| A classmate approaches you with a question for their class project: “At what age did you finally stop sucking your thumb?” | **Privacy:** people may not want to admit they sucked their thumb  **Wording:** assumes that everyone did suck their thumb at some point |
| To receive 10% off your bill at *Wing Ding Restaurant*, you are asked to answer this survey question: “Don’t you agree that our wings are the best?” | **Wording:** the question is leading, directing people to answer in a specific way  **Ethics:** people are being compensated financially for participating |

Spot the Bias Answers (cont’d)

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**Unit 1 Line Master 6d**

For example:

1. Find a way to collect these data anonymously.   
Survey a greater variety of people.   
Include a question on the survey that assesses whether someone is likely to ride   
the new ride or not.

2. Survey volleyball players, parents, and coaches only.

3. Ensure there is a representative sample, no matter which teachers are asked   
to hand out the survey.   
Change the theme of the fundraiser to be culturally inclusive (e.g., a fall dinner, rather than a Thanksgiving dinner).  
Allow people to suggest foods that fit the theme.

4. Ask the question in a way that allows for a ‘neither’ response.

5. Shorten the length of the survey.  
Call at a better time of day.

6. Reword the question to allow people to say that they never sucked their thumb.  
Find a way to collect these data anonymously.

7. Reword the survey so it does not ask a leading question; for instance, ask respondents to rate the wings on a star basis.   
Consider removing the financial incentive, or have the incentive be that your name will be entered into a draw to receive a small reward. Perhaps if the reward is not guaranteed, there is less of a concern about ethics.