**Data Recording Sheet Answer Key**

1. Complete the following table with the data gathered from the test strips.

|  |  |  |  |
| --- | --- | --- | --- |
| **Solution Type** | **Concentration** | **Color Change** | **Notes** |
| 10% glucose solution | 10% | dark green (high) | expected high glucose reading |
| 10% sugar solution | 10% | light green (moderate) | glucose detected, but lower than pure glucose |
| 10% artificial sweetener solution | 10% | no change | no glucose detected |
| 20% glucose solution | 20% | darker green (higher) | higher glucose reading compared to 10% solution |
| 20% sugar solution | 20% | medium green  (moderate-high) | higher glucose reading compared to 10% solution |
| 20% soda | 20% | light green (moderate) | moderate glucose level detected due to high sugar content |
| 20% sports drink | 20% | light green (moderate) | moderate glucose level due to sugar and other carbohydrates |

2. What do you observe in your data? What conclusions can you draw?

I think the glucose test strips accurately detect glucose levels in solutions, with higher concentrations yielding higher readings. The soda and the sports drink showed moderate glucose levels, reflecting their sugar content.

3. How is this experiment connected to the devices people with diabetes use to monitor glucose in their bloodstream?

I see the importance of glucose monitoring for diabetes management. I wonder how engineers and scientists use similar methods to design medical devices and conduct biomedical research. Some strips use a little blood to test it. These are now digital. Other apps measure glucose in the blood.