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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.

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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.