

Who took Jerrell's iPhone?

Jerrell is a 10th grade student who works at McDonalds on the weekends. While on break, Jerrell was studying for his biology test and listening to music on his new iPhone. There were four other workers taking a break at the same time, each having something different for lunch. Jerrell's girlfriend stopped by near the end of his break and he rushed out to see her and forgot his iPhone and biology book in the break room. When he realized, he hurried back and found only his biology book and some spilled food. His iPhone was gone! At first Jerrell freaked out, but he calmed down when he realized he could use his knowledge of organic compounds to figure out which of his coworkers left the spilled food on his biology book while taking his iPhone.

Part 1. Experimentation and Investigation

Look at the macromolecule test results below. Complete the data table to determine if each food item is a lipid, carbohydrate, or protein.

Food	Lipid Test		Protein Test		Carbohydrate Test	
	Sudan IV Color	Lipid Present (+/-)	Biuret Test Color	Protein Present (+/-)	Iodine Test Color	Complex Carbohydrate Present (+/-)
Pretzel	Clear		Blue		Black	
Butter	Red		Blue		Brown	
Jelly	Clear		Blue		Black	
Fat-free yogurt	Clear		Purple		Black	
Beans	Red		Purple		Black	
Dry part of Jerrell's evidence	Clear		Blue		Black	
Liquid part of Jerrell's evidence	Red		Blue		Black	

1. Compare the test results of Jerrell's Evidence with the test results of each food item. Which possible food(s) match the dry evidence and which possible food(s) match the liquid evidence?

2. Is this enough evidence to without a doubt accuse someone of stealing Jerrell's iPhone? Explain.

3. With the above evidence, who do you think stole Jerrell's iPhone? Explain your answer.

Part 2. Results

The results table shows what each worker in the break room was eating while Jerrell was studying. Use the information from the experiment data table above and write an X in the correct column matching macromolecules for each lunch food and evidence item.

Worker	Lunch Item	Lipid	Protein	Carbohydrate
Jose	Bean burrito with cheese			
Ashley	Fat-free yogurt			
Bruce	Toast with butter and jelly			
Kiara	Pretzel			
Thief Evidence	Dry evidence			
Thief Evidence	Liquid Evidence			

4. Do any of the coworkers' food items match all of the thief evidence?

5. Who took Jerrell's iPhone? Explain the reasoning behind your conclusion.

[illegible]