

CRIME BUSTERS ADDITIONAL INFORMATION

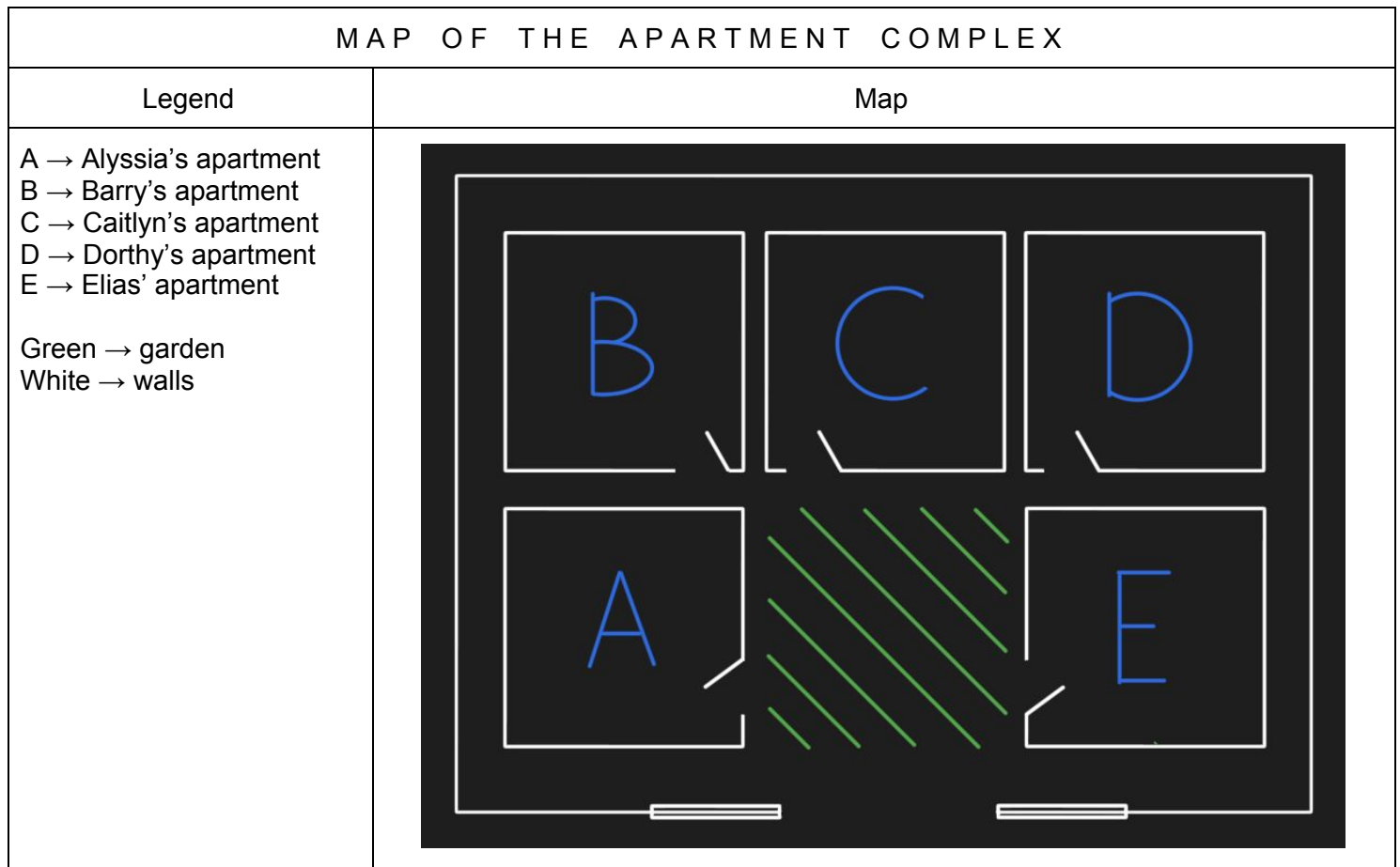
This is the doc with the information needed to complete the test.

NOTE: Alyssia is NOT the culprit, but when a question asks which suspect is implicated, Alyssia can be the answer!!

You are a famous private investigator who has been hired to solve this crime. The police gives you this rundown of the crime:

A lady, Alyssia, called this morning claiming that someone had ransacked her apartment and stole her dog's custom designer water bowls. She claims she was only out of the house for 5 minutes before she heard her dog barking and went to check on him. We went to go investigate, and we found some evidence (which the forensics team will tell you about later). You must identify this burglar before another apartment is ransacked.

You accept the job, intrigued by the speed of the robbery, and get to work. You first visit the apartment complex to interview Alyssia, as well as possible suspects. You find out the following:



SUSPECTS		
Suspect	Description	Alibi
Alyssia (Not the culprit, called a suspect to make question writing easier)	Alyssia is the victim of the burglary and her dog's custom designer water bowls were stolen. She says they are usually stored in a drawer in the kitchen. She is an artist and sells her sculptures. While she is not sculpting, she likes to walk her black Newfie puppy (who is quite loud) or knitting cotton socks for her puppy. She is best friends with Dorthy, who frequently visits her to play with her puppy. For some reason, she is always cold and likes heating pads.	Alyssia says she was going to the store for more yarn but heard her dog barking. She was worried as her dog usually doesn't bark and when he does, something has gone wrong.
Barry	Barry is the owner of the apartment complex and regularly performs inspections of each apartment. He	Barry claims he was out playing soccer with friends before he came home to eat

	also coordinates the scheduling of the cleaner and is very organised. He also works at an auto shop and likes to solder. In his free time, he likes to watch and play soccer.	his yogurt and pretzel snack. He could not find any utensils, so he was using a plastic spoon. His cotton-and-spandex blend jersey seems to have a small tear.
Caitlyn	Caitlyn lives in one of the apartments in Barry's apartment complex. She was recently fired from her job as an accountant and in a fit of pique, broke her phone screen. She now is an amateur cook who likes to watch cooking shows. She tries a new recipe every week and is a big fan of her angora wool apron, but doesn't like live animals. She keeps her hair short and wears glasses for easier cooking.	Caitlyn claims she was trying to perfect her recipe of the week, lemon cake in a cooking pan. She says she cannot figure out the salt to sugar ratios for the cake pieces and was experimenting with them at the time of the crime. Her kitchen (and herself) looks very messy with powders everywhere.
Dorothy	Dorothy lives in the apartment next to Caitlyn's. She is a nurse at the local hospital and has two kids at home. She is mentally and financially stressed because her kids are always sick or have problems. She always wears her polyester and cotton scrubs for the same reason. She is best friends with Alyssia and likes to play with her dog.	Dorothy says she went to the pharmacist to purchase more medicine for one kid's stomach ache and a treatment solution for the other's gingivitis.
Elias	Elias is the last tenant in the apartment complex and is a college student majoring in fashion design. He enjoys tending to the window gardens in his apartment when he is not studying. Alyssia's dog seems to really like him.	Elias claims he was attending a material science class at the time of the crime. They were investigating the pros and cons of synthetic fibers.
Zion	Zion is the cleaner for the apartment complex, but does not live in one of the apartments. He cleans apartments in alphabetical order and cleans them painstakingly well. All the tenants of the complex approve of his work. While off the job, Zion likes to test new cleaning supplies.	Zion says that at the time of the crime, he was at a store purchasing a new bottle of detergent for his spreadsheet with the ratings of different cleaning supplies.

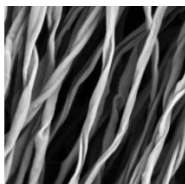
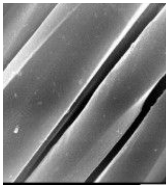
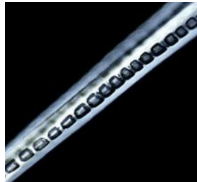
You then talk to the forensics team for evidence:


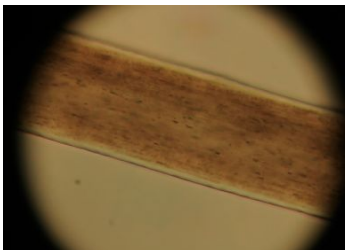
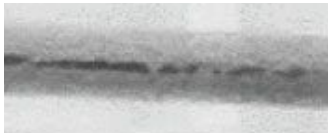
P O W D E R S					
Label	pH	Solubility	HCl	KI	Conductivity (in solution)
P1	7	Yes	No	Pale Yellow	Yes
P2	2	No	No	Clear	No
P3	7	Solidifies	Fizzes	Light Yellow	No
P4	7	No	No	Odor, Pale Yellow	No
P5	7	Yes, with delay	No	Pale Yellow	No
P6	7	No	No	Clumps	No
P7	9	Yes	No	Pale Yellow	Weakly
P8	9	Yes	Fizzes	No	No








P9 (mix of 2)	7	No	No	Pale Yellow Clumps	No
P10 (mix of 2)	7	Yes (completely)	No	Pale Yellow	Yes













LIQUIDS				
Label	pH	Shaking Test	Scent	KI
L1	7	No	Yes	No
L2	4	Cloudy	Yes	No
L3	11	Cloudy	Yes	No

METALS		
Label	Magnetism	HCl
M1	Yes	Fizzes immediately
M2	No	No
M3	No	Fizzes a little immediately

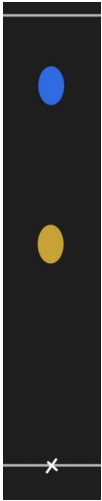
FIBERS		
Label	Burn Test	Photo
F1 (found snagged on hinges of front door)	Grey/white smoke, burning paper smell	
F2 (found snagged on refrigerator door)	Black smoke, sweet chemical odor	
F3 (found caught in dog's toenail)	Little smoke, burning hair smell	

HAIR	
Label	Photo
H1 (found on front door mat)	
H2 (found in drawer)	
H3 (found on kitchen countertop)	

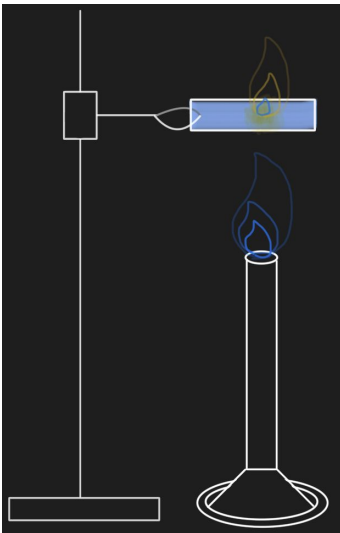
FINGERPRINTS							
Label	Crime Scene	Alyssia	Barry	Caitlyn	Dorothy	Elias	Zion
FP1 (Left thumb, doorknob)							

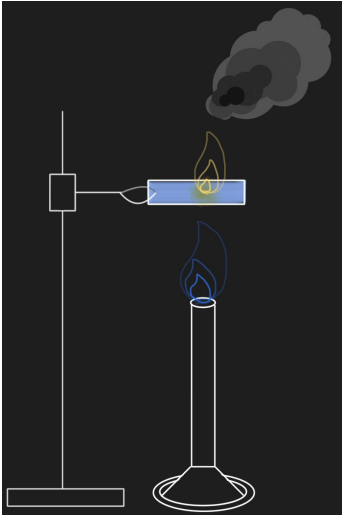
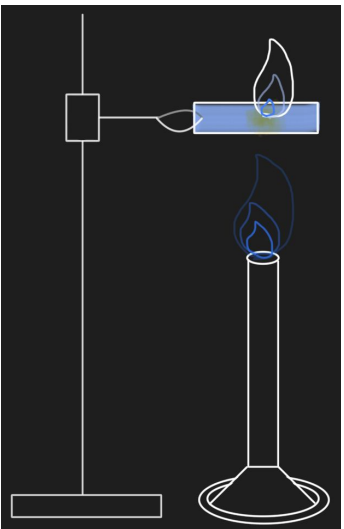
FP2 (Left index, window)							
FP3 (Right pinky, drawer)							

CHROMATOGRAPHY

Label	Crime Scene	Suspects		
C1 (from smudge left on drawer, paper chromatography using isopropyl alcohol) Ballpoint pens are water soluble. Sharpies are alcohol soluble.		Alyssia	Barry	Caitlyn
		Uses a navy blue pencil.	Uses a blue ballpoint pen.	Uses a green sharpie.
		Dorthy	Elias	Zion
		Uses a red sharpie.	Uses a black fountain pen.	Uses a green ballpoint pen.

PLASTICS

Label	Burn Test Picture	Burn Test Smell	Density
PL1 (small piece found near front door)		Acrid smell	0.91 g/cm ³

<p>PL2 (small piece found in drawer)</p>		<p>Sweet smell</p>	<p>1.22 g/cm³</p>
<p>PL3 (shard found under kitchen countertop)</p>		<p>Floral and rotten vegetable smell</p>	<p>1.18 g/cm³</p>

BLOOD								
Label	Test	Crime Scene Blood	Alyssia	Barry	Caitlyn	Dorthy	Elias	Zion
B1 (from drop of blood near drawer)	Anti-Rh serum	Agglutination	AB+	A-	A+	B-	O-	B+
	A antibodies	Agglutination						
	B antibodies	No Agglutination						

EVIDENCE SUMMARY								
Powders	Liquids	Metals	Fibers	Hair	Fingerprints	Chromatography	Plastic	Blood
P1, P2, P3, P4, P5, P6, P7, P8, P9, P10	L1, L2, L3	M1, M2, M3	F1, F2, F3	H1, H2, H3	FP1, FP2, FP3	C1	PL1, PL2, PL3	B1
10	3	3	3	3	3	1	3	1