

# Crime Busters - Answer Sheet

Part 1 – Powders (Exhibits 2 pts @; Questions 1 pt @)	
Exhibit A	<b>Flour</b>
Exhibit B	<b>Baking soda</b>
Exhibit C	<b>Salt</b>
Exhibit D	<b>Flour</b>
Exhibit E	<b>Calcium carbonate</b>
Exhibit F	<b>Sugar</b>
Exhibit G	<b>Salt</b>
Exhibit H	<b>Sugar</b>
Exhibit I	<b>Yeast</b>
Exhibit O	<b>Calcium sulfate &amp; sugar</b>
Exhibit P	<b>Baking soda &amp; flour</b>
Exhibit Q	<b>Alka &amp; calcium carbonate</b>
Exhibit R	<b>Sodium acetate</b>
Exhibit S	<b>Calcium sulfate &amp; sugar</b>
Exhibit T	<b>Baking soda &amp; flour &amp; salt</b>
1	<b>Baking Soda</b>
2	<b>12</b>
3	<b>Baking Soda</b>
4	<b>Alka-Seltzer</b>
5	<b>Sugar</b>

School Name	
Team #	
Student 1 Print	
Student 1 Sign	
Student 2 Print	
Student 2 Sign	
Supervisor's Use Only	
Safety Penalties (5 pts @) [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]	Score
Cleanup Penalty (1-10 pts) [ ] [ ]	Rank

Part 2 – Metals (Exhibits 2 pts @; Questions 1 pt @)	
Exhibit J	<b>Aluminum</b>
Exhibit K	<b>Aluminum</b>
Exhibit L	<b>Tin</b>
Exhibit M	<b>Zinc</b>
Exhibit N	<b>Zinc</b>
1	<b>Aluminum</b>
2	<b>Zinc</b>

Part 3 - Hair (Exhibits 2 pts @; Questions 1 pt @)	
Exhibit 1	<b>Human</b>
Exhibit 2	<b>Dog</b>
Exhibit 3	<b>Dog</b>
1	<b>Dog has ovoid bodies</b>
2	<b>1/3</b>
3	<b>maximum</b>

Part 4 –Fibers (Exhibits 3 pts @)	
Exhibit U	<b>Vegetable (cotton = 1 pt)</b>
Exhibit V	<b>Vegetable (cotton = 1 pt)</b>
Exhibit W	<b>Synthetic (polyester = 1 pt)</b>
Exhibit X	<b>Vegetable (bamboo = 1 pt)</b>

Part 4 – Fibers (cont) (Questions 1 pt @)	
1	<b>Vegetable (Flax = ½ pt)</b>
2	<b>Vegetable (Ramie = ½ pt)</b>
3	<b>Synthetic (Polyester = ½ pt)</b>
4	<b>Synthetic (Acetate / Rayon = ½ pt)</b>
5	<b>Vegetable (Cotton = ½ pt)</b>
6	<b>Microfiber</b>

7	<b>Synthetic = man made from petroleum</b> <b>Regenerated = man made from natural fibers</b>
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Part 5 – Chromatography (Chromatograms 6 pts @; Questions 1 pt @)	
<b>Attach Chromatograms to Auxiliary Card Provided</b>	
1	<b>Blue</b>
2	<b>F</b>
3	<b>Tad's</b>
Notes on scoring Chromatograms: ½ pt exists    ½ pt start/finish lines ½ pt ran well (no edging etc)    ½ pt labeled	

Part 6 - Fingerprints (Questions 1 pt @)	
1	<b>None of the suspects</b>
2	<b>Arch</b>
3	<b>Tented Arch (Arch – ½ pt)</b>
4	<b>Radial Loop (Loop = ½ pt)</b>

Part 7 – Soils (Questions 1 pt @)	
1	<b>Taj</b>
2	<b>None of the suspects</b>