***Diagnostic Forensic Solutions, Inc.***

**The Scene**

Local police were called to the scene of a car accident late last night when a newly-purchased car collided with a street light at the intersection of North and Main. By the time the police arrived, the driver had fled the scene. The police couldn’t find any witness.

The Crime Scene Investigation team was called out to collect evidence. The collected the following:

* Glass fragments from the front seat of the car
* Glass fragments from around the outside of the car
* Blood on the broken windshield of the car
* Fingerprints on the outer door handle
* Fingerprints on the steering wheel
* Footprints in the mud under the street light.

Police traced the car back to a local dealership, where the salesman identified the owner of the vehicle – a Mr. James Hatfield, who lives with his wife, 2 miles from the scene of the accident.

When the police questioned Mr. Hatfield, he said his car had been stolen earlier that evening, but he had not yet filed a formal report. Mr. Hatfield claimed he saw his neighbour, Mr. Winston McCoy, use a coat hanger to break into his car earlier that morning. It appears Hatfield and McCoy have been feuding with each other for many months. And the police have been called out on several occasions.

The police questioned Mr. McCoy regarding the matter. Despite his several complaints against Mr. Hatfield and his obvious jealousy over the new car, Mr. McCoy maintains he did not steal the car – he just scratched the exterior paint with a key. He claims he never entered the vehicle.

Police officers were able to obtain DNA samples from both Mr. Hatfield and Mr. McCoy. Mrs. Hatfield refused to give police a DNA sample, but she did allow herself to be fingerprinted along with both men.

Your company, Diagnostic Forensic Solutions, has been brought in to analyze the evidence for the local police department. Before you can begin work, the police department needs to approve the funding for your tests. They only have $1800 to spend on this investigation.

The following individual analyses are available:

1. **DNA Analysis** – *DNA samples from blood, saliva, etc, are compared against each other and CODIS database.*
2. **Fingerprint Compari**son – *Comparison of provided prints against one another and against the entire IAFIS database.*
3. **Glass Analysis** *– Glass fragments are analyzed to determine origin, any chemical treatments, etc.*
4. **Tool mark Comparison** – *Scratches or indentations can be matched to the specific tool that made them.*
5. **Toxicology Analysis** – *Blood, urine, and other biological materials are tested for alcohol, drugs and other substances.*
6. **Impression Evidence Analysis** – *Footprints are compared against possible sources based on class and individual characteristics.*

Before you can begin your proposal, you must assess the value of each of these analyses. Which of the following analyses would you suggest the police purchase for this investigation? Once you have completed your assessment of the analysis you must complete Diagnostic Forensic Solutions Invoice.

Once completed, hand the invoice to me. If I approve your invoice, you will learn the results of your test you have ordered. Remember – you have a strict budget of $1800.

**Assignment**

Based upon the results of your chosen tests, write a letter to the Chief of Police

(that’s me) explaining:

* Which analyses were performed?
* Why they were chosen and their results?
* Which results incriminated or exonerated any of the suspects?
* Do any further analyses needs to be performed and why?
* What is your interpretation of how the crime occurred? – Speculation is ok.

Be creative with your explanation of events, but ensure your interpretation is substantiated by the evidence.

You letter will be marked out of 15, based on your ability to formulate an interesting interpretation of the events, based on the evidence. Feel free to fill in any gaps, as long as it fits the situation.



Diagnostic Forensic Solutions Inc.

INVOICE

**Facilities and Labour**

|  |  |  |  |
| --- | --- | --- | --- |
| **Item** | **Rate** | **Number** | **Total** |
| Facilities | $ 300/day | 1 | $ 300 |
| Protective Equipment | $ 20/day | 1 | $ 20 |
| Testimony | $ 300/day | 1 | $ 300 |
| Clerical Support | $ 60/day | 1 | $ 60 |
| Forensic Scientist Labour | **$ 50/hour** |  | $ |

**Individual Analyses** – The fee for each test will include analysis of all the pieces of evidence of that nature. Hourly scientist labour must also be included in the cost.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Item** | **Rate** | | **Number** | **Total** |
| A. DNA Analysis (4 hrs) | $300 | |  | $ |
| DNA samples from blood, saliva, etc., are compared against each other and CODIS database | | | | |
| B. Fingerprint Comparison (2 hrs) | $300 | |  | $ |
| Comparison of provided prints against one another and against entire IAFIS database | | | | |
| C. Glass Analysis (1hr) | $150 | |  | $ |
| Glass fragments are analyzed to determine origin, any chemical treatment, etc. | | | | |
| D. Tool mark Comparisons (2 hrs) | $200 | |  | $ |
| Scratches or indentation can be matched to the specific tool that made them. | | | | |
| E. Toxicology Analysis (4 hrs) | $300 | |  | $ |
| Blood, urine, and other biological materials are tested for alcohol, drugs, and other substances | | | | |
| F. Impression Evidence Analysis (1 hr) | $150 | |  | $ |
| Footprints are compared against possible sources based on class and individual characteristics. | | | | |
|  | |  | |  |
|  | | **Grand Total** | | **$** |