**Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Lab Fibers**

**Microscopic Fiber Analysis- Comparing Evidence from a Crime Scene**

**Statement of the Problem (Scenario):**

Carpet Fibers were found on a murder victim along a roadside. It is speculated that the victim was carried to the location using a car belonging to one of the suspects. Some of the carpet fibers from the floor of the car were transferred to the victim’s body. Your task is to match the carpet sample found on the victim’s body with one of the carpet samples taken from the cars of 3 different suspects.

**Hypothesis:** By looking at the carpet samples with my naked eye, I think \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ matches the carpet sample at the crime scene.

Collect Data That Includes:

* Sketch
* Single or Multicolored
* Color of Fiber
* Relative Number of Fibers
* Relative Thickness
* Shape of Fiber (Twisted or Straight)

**Data:**

|  |  |
| --- | --- |
| CARPET SAMPLE | OBSERVATIONS |
| Carpet Sample Found at Crime Scene |  |
| Carpet Suspect Sample 1 |  |
| Carpet Suspect Sample 2 |  |
| Carpet Suspect Sample 3 |  |

**Analyzing Data:**

Which Suspect Carpet Sample matched the Crime Scene Carpet Sample?

What evidence did you collect that supports this?

**Conclusion:** (Write a Conclusion Referring Back to Your Hypothesis and Data)

**Follow Up:**

1. **Suppose you found a carpet fiber from a suspect’s car that did match the fiber found on the victim. What arguments could the defense attorney cite to demonstrate that the matching of the car fibers alone does not necessarily prove that his or her client murdered the victim?**
2. **What other tests are performed on fiber samples to help match a fiber found at the crime scene with fiber found on a suspect?**