 **Lab Report 3:**

**The Nature of Fluids**

***Question:***

How can you demonstrate that gases flow?

***Hypothesis:* (2)**

***Materials:***

A variety of easily obtainable materials, such as:

Sheet of paper Chalk Dust

Straw Pencil

Balloon Beaker

Slide Projector Flashlight

Others

***Procedure:***

1. Choose a group of 4-6 students in each group.
2. Before you design your demonstration, discuss with your group the following questions:
   1. What sense tells people that water is falling close by if they can’t see it? How could you use this sense to show that a gas is moving?
   2. What other senses do individuals have to know that water is flowing?
   3. How could you use those senses to show that a gas is flowing?
3. Use an idea from members of your group to design a demonstration to show that gases flow.
4. Prepare an experiment, and design the procedures to your experiment, so that others could test your theory.

***Procedure to your experiment:* (5)**

1.

2.

3.

4.

5.

6.

7.

8.

***Observations:***

1. Draw what you saw in your experiment. **(3)**
2. Label any important information in your drawing that would help understand what was going on in the experiment. **(2)**
3. Describe what you saw in your experiment. **(5)**

***Analysis:***

1. How successful was your demonstration? How could you have improved it? If members of your group are still unconvinced, explain why they are. **(2)**
2. Are you convinced? Explain why or why not. **(2)**
3. In your own words, describe what the word “flow” means. **(3)**
4. What kinds of matter flow? **(3)**

***Conclusion:***

How can you demonstrate that gases flow? **(3)**

***Evaluation:***

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| --- | --- | --- | --- | --- | --- |
| **Category** | **Level 4** | **Level 3** | **Level 2** | **Level 1** | **%** |
| **Observations** | The relationship between the procedure and what was observed is discussed in detail. All information is accurate. | The relationship between the procedure and what was observed is discussed. Most information is accurate. |  |  | 25 |
| **Diagrams** | Clear, accurate diagrams are included and make the experiment easier to understand. Diagrams are labeled neatly and accurately. | Diagrams are included and labeled neatly and accurately. |  |  | 25 |
| **Analysis** | The patterns in the observations are discussed and logically analyzed. Predictions are made about what might happen if part of the lab were changed or how the experimental design could be changed. | The patterns in the observations are discussed and logically analyzed. Some predictions are made. |  |  | 25 |
| **Conclusion** | Conclusion includes whether the findings supported the hypothesis, possible sources of error, and what was learned from the experiment. | Conclusion includes whether the findings supported the hypothesis and what was learned from the experiment. |  |  | 25 |