 **Lab Report 6:**

**Pigments and Filters for the Stage**

***Question:***

How can you create different filters to establish moods for a performing arts stage?

***Hypothesis:* (2)**

***Materials:***

Plain White Paper Water-Based Coloured Markers

Colour Filters Black Pencil

Colour Splotches Materials as Needed for Simulation

***Procedure:***

1. Choose two of the colour markers and predict the colour that will result when you overlap the pigments on white paper. Test your prediction by making overlapping marks with each colour of marker. Record your observations.
2. Repeat step 1 using various colour combinations. Predict which set of three pigments produce black (or nearly black) when mixed and which sets of two pigments produce black when mixed. Test your predictions and record your results.
3. Predict what colour you will see when you look at each of the splotches through the red filter. *See Nelson Science and Technology: Optics* page 49 for more details. Record your predictions.
4. Repeat step 3 with the other filters, one at a time. Record your predictions.
5. For the mood your group is creating, design a combination of costume pigments, set pigments, and colour filters. Prepare your storyboard, working model, or simulation.
6. Study the storyboards presented by the other groups. Predict which will best create the desired mood.

***Observations:***

1. Design a chart to record your predictions and observations. **(10)**

***Analysis:***

1. Do the models or simulations create a mood that could be used in a real stage setting? **(5)**
2. What colours would you change and where would you change them to improve the final result for each presentation? **(5)**

***Conclusion:***

How can you create different filters to establish moods for a performing arts stage? **(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 |