Science 9

Investigatory Project

“Can pigmented chalk dust be a substitute for ink?”

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**Chapter One**

1. **Introduction**

Chalk dust is dust resulting from writing with a piece of chalk. In our group’s Investigatory Project, we are using pigmented chalk dust. Ink is a pigment used for numerous things such as writing utensils, stamp pads and more.

1. **Statement of the Problem**

Students nowadays rely on pens for their school tasks, these pens require ink pigment which in some cases may run out quick depending on the thickness of the pen. Pens can be costly when an average high school student changes their pens 2-3 times a month. We try to find a substitute to fill these ink cartridges with a lower budget and ability to do it at home by yourself.

1. **Formulation of the Hypothesis**

Can pigmented chalk dust be modified to be an alternative substance for ink?

1. **Significance of the Study**

The study focuses on finding a solution to refill or replace a pen with more ink for student with a budget. A good pen can cost P17.00 and above making it already costly for students. Why not look for a cheaper option?

**Chapter Two**

**Related Literature**

Chalk has existed and used since prehistoric times. Later, artists around the globe used chalk mainly for sketches, and some such drawings. Black Boards existed because it is hard to find smooth surfaces of woods for chalk to write on. Chalk dust is formed when chalk is used on a wood. The Raw Materials of chalk is calcium carbonate (CaCO3), a form of limestone.

Inks are found in almost every aspect of human activity. Ink is an organic or inorganic pigment or dye dissolved or suspended in a solvent, almost the same as paint. While dyes, pigments or both are used to give ink its colors, CCMR claims that the coloring ingredients is mainly mixed with water.

**Chapter Three**

1. **Methodology**
2. **Subject of the Study**

The researchers will conduct a survey for the students and teachers that experienced substituting ink from any of these: pigmented chalk dust, charcoal, etc. The survey will be held specifically in St. Mary’s Academy of Pasay City.

1. **Procedure**
2. The subjects will be asked if they experienced substituting ink from any of the listed above.
3. The researchers will provide the subjects a survey form if procedure one is true.
4. The researchers will analyze the survey regarding their research topic.
5. The researchers will do the experiment on which the subjects most answered on.
6. The researchers will analyze if the subjects most answered substitute is effective.
7. **Statistical Treatment**

The researches will provide a survey form for each subject of the study consisting of different types of substitutes for ink such as: pigmented chalk dust, charcoal, etc.

# Bibliography

Adkins, M. (2017, April 24). Retrieved from https://sciencing.com/ink-made-6635280.html

*How Products are Made*. (2007). Retrieved from http://www.madehow.com/Volume1/Chalk.html