California State University of Bakersfield, Department of Chemistry

The Green Lantern

Standards:

3rd grade 1 : energy and matter have multiple forms and can be changed from one to another**.**

Introduction:

Did you ever believe that somehow humans could produce green flames? In this experiment, we discovered that the use of household items such as roach killer (boric acid), ethyl alcohol and a watch glass is all you need to create a green flame. It is know that every element burns a different color including yellow, red, and pink.

Materials:

- Watch glass
- 1tsp. Ethyl alcohol
- Matches
- 1 tbs. boric acid (roach killer)
- Glass stirring rod

Safety:

- Always wear eye protection and gloves when doing chemistry experiments!
- This experiment contains flames so keep flammable objects a reasonable distance away from the open flame.

Procedure:

1. Gather measured boric acid, alcohol, watch glass, and matches

2. Under an exhaust hood, mix boric acid and slowly add small amounts of ethyl alcohol until a paste-like consistency is reached
3. After consistency has been reached, strike a match, and then ignite mixture
4. Take caution as any spilled alcohol is likely to ignite
5. Observe color change within the ignited mixture

Data and Observations:
Record your observations in this space

Questions:
What color did the flames turn from the beginning to the end?

References:
1. Anne Marie Helmenstine, about.com, http://chemistry.about.com/od/funfireprojects/a/greenfire.htm. (Accessed July 23, 2012).