[name omitted for sample]
6/1/08

Pespi's Effect

Introduction

The purpose of this experiment was to test the effect of a different liquid on the Haines City High school's grass. Many students who eat lunch outside the cafeteria spill their drinks. The spilled drinks can somehow effect the environment causing negative or positive outcomes. This experiment was designed to test what effects could occur with a foreign liquid. The main scientific question this experiment answers is; what type of effect would Pepsi have on the grass? The idea of this experiment came when the experimenter observed a student pouring their Pepsi into the grassy area of the Haines City High school courtyard. They did not wonder about any negative or harmful effects it would cause. The experimenter wanted to see if it would cause any harmful or beneficial effects. Many people buy Pepsi (The New York Times: Company News), and this might threaten the environment if Pepsi is harmful since so much is bought and possibly wasted.

The hypothesis of this experiment was that Pepsi would hurt the growth of the grass. Pepsi, being a soda, has many chemicals. These chemicals are made for humans, not plants. It is also not organic, and has no strong nutrients within it. Pepsi is also known to contain a small level of acidity, for it contains phosphoric and citrus acid (BEVNET). The Pepsi Company itself tries to be environmentally friendly. They use recycled cans and paper (Pepsi World). However, they do not mention anything about the effect of their soda on plants.

This experiment is important because it involes the realtionmship between people and grass. Grass at the High school is very important, because it helps curb erosion, as well as feed other organisms. It also makes the area a lot more pleasant and relaxing (How Grass Works). Not only would effect the environment, but dead grass could also affect the school's budget. The school might want to buy new grass seeds to make the campus look more professional. This takes money out of funds for new books and other things the high school needs. It will also take a lot of time and work from other people (Get Rid of that Dead Grass in Your Yard).

Methods and Materials

1. ruler
2. 8 twigs
3. 3 cans of Pepsi
4. 1 measuring cup
5. 1 note book
6. pen

In order to do this experiment, an area of grass in the courtyard was marked off. This was done so people will not interfere with the experiment. It would also give the experimenters a patch (or box) of grass to work with. The grass was then measured horizontally 1 foot and vertically 1 foot. Four twigs would be used in the corner of the patch to mark off the area. One twig at each of the corners of the patch would be placed. This step was repeated one more time. This was done so that the area was easy to indicate for the experimenter. Then, both patches were labeled A and B. This was done to

distinguish between the two. Patch A was identified as the one tested as Patch B was the control.

Once both patches are finished and indicated, the patches were observed. All the recordings were recorded in a lob book. This included color of grass, abundance of grass, length of grass, and position in courtyard. Each area was rated from 1 to 8 by the experimenter. 1 cup of Pepsi was then poured into patch A. This step was repeated every day for the next two days.

Every day, Pepsi was poured in the beginning of the day at 6:50 am. Observations occurred at 2:05(a total of 9 hours) to see if there was any affect from the liquid. Observation was the only tool that could have been used. Color, texture, abundance, and growth were all factors that needed attention and were recorded. In the logbook, the factors were rated from1 to 8 for each area (color, texture, abundance, and growth).

Results

Patch B (Control)	Day 1	Day 2	Day 3
Coloration	8	8	8
Abundance	8	8	8
Length	8	8	8

Patch A (Pepsi)	Day 1	Day 2	Day 3
Coloration	7.5	6 to 7.5	5 to 6.5
Abundance	8	7.5	5 to 6.5
Length	8	8	6

All points were subtracted from original number (8).

After the 3 days, the results demonstrated that the patch where Pepsi was poured, the grass had altered its color slightly. Compared to the control, the color had more shade of brown mixed in with the green. Not only that, but the grass itself looked a little weaker

than the grass which nothing was done to. The grass looked slightly frailer and more signs of dirt were visible under the grass.

The first day after pouring the Pepsi, not much was affected. According to the data taken, there was maybe a .5 difference of coloration between patch A and patch B. Coloration was the only difference. On the Second day, the coloration was slightly more brown. It was about another .5 to1 difference compared to the other patch. Abundance had changed as well, with a .5 difference. These were the only differences. The third day held the biggest results. The grass had about 2 to 3 difference in coloration, as well as abundance. The abundance of grass itself was a lot less in patch A compared to patch B. The grass looked shorter and thinner, about a 2-point difference.

The results demonstrated there was some harm done to the environment due to the soda. Therefore, the results supported the hypothesis of this experiment. Students on campus who pour out their sodas might be actually harming the environment. The chemicals within the soda are threatening the growth of the grass. A way to avoid the hazardous effect on the environment would be to maybe move the picnic tables closer together so students would not just empty soda cans near grassy areas when walking to class.

However, this experiment had limitations. First, more patches needed to be made covering a wider range. At least 5 control patches and 10 Pepsi patches needed to be indicated. The more patches, the more precise and accurate the results would be. Another factor that could have influenced the results, was that students at the school could have messed with the experiment in some way. Some could have accidentally poured more soda in the patches or stepped on them, altering outcomes. Regardless, this experiment

could open doors to others, like testing the effects of soda to important plants such as orange groves. Overall, according to this experiment, soda could prove to be very bad. The grass dying could have a lot of negative effects. The soil might be poorer, and the school's budget might be cut for having to pay for new grass seeds. If students do not pour their beverages, the negative effect of the Pepsi might not kill the plants. dangerous to the environment. Student's lack of knowledge of this could result in a barren courtyard.

Work Cited Page

1. BEVNET your source for beverage news and reviews. 8/12/04. <http://www.bevnet.com/reviews/pepsione/facts.asp>?>

2. Pepsi World FAQs. Community Information Support. <http://www.pepsi.com/help/faqs/faq.php?viewall=yes&category=community_info>

3. The New York Times. Company News. 1/17/01 <http://query.nytimes.com/gst/fullpage.html?res=9F07E4D9113DF934A25752C0A9679C8B63>

4. Harris, Tom. How Grass Works. <http://home.howstuffworks.com/grass4.htm>

5. Ellerbe, Jerrad. Get Rid of that Dead Grass in Your Yard. Associated Content. 4/6/06. <http://www.associatedcontent.com/article/25197/get_rid_of_that_dead_grass_in_your.html>