The scientific method analysis argumentative

ASSIGN BUSTER

I have used the scientific method in my case study to prove my hypothesis, if a plant is grown in light it will grow faster than a plant grown in the dark.

To conduct my experiment, you will need lima beans, potting soil, and styrofoam cups. First, put three inches of potting soil into each styrofoam cup. Then plant the lima bean seed about one inch below the surface of the soil. Next add three tablespoons of water to each cup. Put one cup in a window seal or where there will be bright light. Place the other cup in a closet or in a box sealed off from light.

Keep a daily diary on how each plant is growing. Each day should be recorded by height, number of leaves, and by the color of the leaves each day. This experiment will probably involve a week to ten days of plant growth. Seeds generally require two to three days to germinate (when they break through the soil) and another week to grow tall enough to have leaves so that the effects of light become evident.

Once germinated, the plants in the dark will grow faster than the plants in the light. However, they will be spindly and will have fewer leaves. If the experiment were stopped before the plants in the dark condition die, the experiment will be left with the alternative conception that light is not necessary for plants to live and grow. Even though the plants in the dark grew faster before they started dying they did not look healthy. They did not have a very green color and they had very few leaves. Sunlight is necessary for the health of green plants.

It is needed by green plants in order to make green chlorophyll and to make additional food. Without this additional food production, the green plant’s

food sac soon becomes used up and the green plant dies because it lacks the materials and the energy that the food provides for growth and maintenance. Light is not necessary for seeds during the germination phase of growth. It is necessary following germination for health and continued growth. Through my everyday life, I have used the scientific method to help me have my fruits and vegetables last longer.

Fruits and vegetables last longer when placed in the refrigerator than left on a counter at room temperature. I have purchased fruits and vegetables and when I got home I placed them on my counter until I was going to use them. With placing fruits and vegetables on the counter, they are at room temperature. Fruits and vegetables can last up to five to six days in room temperature. Some fruits and vegetables may last a little longer than others. When I place the fruits and vegetables in the refrigerator after purchasing, they last longer.

Fruits and vegetables placed in the refrigerator last about a week and a half to two weeks. Depending on the fruit or vegetable, some may last longer than others. Fruits and vegetable should be separated so that fruit-produced ethylene doesn’t encourage rotten vegetables. Most fruits can be left unwrapped, again excepting fragile items, such as peaches and berries. Sealed plastic bags keep vegetables crisp longer—leaves such as spinach and lettuce will keep longer if wrapped first in dry paper towel, which absorbs moisture.

Unless you’ll be using your root vegetables within three days, trim the leafy tops so they don’t leach moisture from the roots. Scientific method is based

on the principle of cause and effect. One of the fundamental prerequisites of a healthy scientific method is the quality of experimentation that is designed to test a hypothesis. Scientific method refers to the body of techniques for investigating phenomena, acquiring new knowledge, or correcting and integrating previous knowledge. It is based on gathering observable, empirical and measurable evidence subject to specific principles of reasoning.

A scientific method consists of the collection of data through observation and experimentation, and the formulation and testing of hypotheses. Although procedures vary from one field of inquiry to another, identifiable features distinguish scientific inquiry from other methodologies of knowledge. Scientific researchers propose hypotheses as explanations of phenomena, and design experimental studies to test these hypotheses. These steps must be repeatable in order to dependably predict any future results.

Theories that encompass wider domains of inquiry may bind many hypotheses together in a coherent structure. This in turn may help form new hypotheses or place groups of hypotheses into context. Among other facets shared by the various fields of inquiry is the conviction that the process be objective to reduce a biased interpretation of the results. Another basic expectation is to document, archive and share all data and methodology so they are available for careful scrutiny by other scientists, thereby allowing other researchers the opportunity to verify results by attempting to reproduce them.

This practice, called full disclosure, also allows statistical measures of the reliability of these data to be established. References: Axia College of University of Phoenix. (2008) Retrieved July 24, 2008, from Axia College, Appendix B reading, aXcess, SCI 230- Introduction to Life Science Denise Balkissoon, Washing and Storing Your Fruits and Vegetables Dennis W. Sunal, Sunlight and Plants, The University of Alabama Wikipedia, http://en.

wikipedia. org/wiki/Scientific_method