Field Study Report Essay, Research Paper

Field Study ReportIn the field study report the class was broken down into four groups, parking lot, grass, forest, and shrub areas. In this study students were asked to take 20 minutes out of every lab period and make a one meter plot that all measurements will be taken from. This one meter area represents our entire sub-plot. Then students were asked to take readings in their perspective sub-plots. The students were asked to record four temperature readings, (2 meters, above the ground, 15 cm. above the ground, ground level, and 15 cm. below ground level). In addition to the temperature readings students were also asked to observe humidity readings ( 2 meters above ground level and ground level ), wind speed and direction, depth of ground litter and the condition of the near by trees, I.E. percent covered by leaves, color of leaves etc. In addition to temperature and humidity and wind direction students were also were asked to examine faunal observations, that is animals and their signs , when they are found and what activities they are doing. ( feeding, resting, etc. ) This field study and all of the readings are important in making detailed reasons for undertaking such a study . With the temperature readings you can find the temperature differences in certain areas and what effects it has on the environment . With the humidity readings you can find the humidity effects animals, plant growth, and tree growth. With the animal observations you can see what animals live in which sub-plot. Finally with the faunal observations you can see what plants and animals live in certain sub-plots. This experiment is taking place in western Massachusetts, at Westfield State College the start of the experiment was at the beginning of the spring season. With this in mind many changes will take place over the time of the experiment. From plant and tree growth to animal sightings to wether and humidity changes, all of tease factors will help the student in making statements concerning the four sub-plot field study environments. Based on the data taken from the four sub plots it can be hypothesized that the amount of sunlight has a direct influence on plant and tree growth. Without sunlight plant growth is kept to a minimum. Soil and humidity play a significant role in the development of vegetation. Humidity is a contributing factor of plant growth according to the charts and temperature readings. The temperature reading of the shrub area was recorded at 53.5 for two meters and 48.6 for ground level. This suggests that the soil around the shrubs requires a warm and moist environment. DATAFor the data concerning this lab refer to the following pages. SUMMATION OF DATA AND HYPOTHESISWind speedsThe wind for this experiments is broken down into categories from 0 being calm( smoke rises vertically ) less than one m.p.h. 30 feet above the ground. To 12 being a hurricane ( above 70 m.p.h. ) 30 feet above the ground this scale is referred to as the “Beaufort scale of wind force.”Week one ” 3″ , Gentle breeze, leaves and small twigs moving consistently; small flags extended. Aprox. 8-12 m.p.h. Week two ” 2 “, Light breeze, wind felt on face;levees rustle; wind vanes move. Aprox. 4-7 m.p.h. Week three ” 3 ” Gentle breeze, leaves and small twigs moving consistently; small flags extended. Aprox. 8-12 m.p.h. Week four ” 4 ” Moderate breeze, dust and loose paper raised; small branches moved . Aprox. 13-18 m.p.h.

Week five ” 3 ” Genial breeze, levees and small twigs moving consistently; small flags extended. Aprox. 8-12 m.p.h. In this section it could be said that the wind in the shrub area was between 4-18 m.p.h. This consistently in the wind speed might have to do with the surrounding tall trees that block some of the wind force. Soil analysisThe shrub area near the back of Wilson Hall had a very large amount of humus, a mixture of porous mixture of partially decomposed organic matter and some inorganic mineral particles. The only reason I came to this conclusion was the large amount of dark soil or humus in the ground. This might have been built up around the school at the time when it was built. Floral and faunal changesThe leaf and plant growth within the shrub area increased with every week that measurements were taken. Some examples of this would be the yellow flowering tree near the shrub area, this tree was specifically watched by the group. The tree increasingly produced flowers at every data collecting session. At the end of the experiment the tree was in full bloom . Animals and Invertebrates The shrub group overturned rocks and shrub limbs to discover many groups of insects. What was most noted was the number of ant and flea-like colonies or mites. These insects play a role of the shrub enviroment because they are involved with plant respiration. Also the group noticed the number of bees around the yellow shrubs. The group concluded that the bees acted as a pollen carrier which helps in the production of new plants. Many birds and squirrel were noticed by the shrub group and the near-by forest. These animals help in the fertilization of the plants in which they live. Temperature The temperatures taken from the average temperature graph indicates a variety of items. By analyzing the data in the line graphs, it is evident that the temperature is generally highest at ground level, and is lowest at -15 cm below ground level. By this conclusion you can assume that the temperature is greatest at ground level and then is absorbed into the ground. An example would be the parking lot sub-plot. In this sub-plot the asphalt absorbs the heat from the sun at ground level, but is transferred into the ground. The ground is coldest because like water it takes the ground many months of hot weather to raise the temperature below ground level. Humidity The humidity was measured at both 2 meters ground level. All four groups across the board with one accepting had approximately the same humidity at ground level. The one group that had an increase was the grass group. The grass group had an increase in humidity at ground level. This is due to the water contained within the first soil level. When this water evaporates, because the lack of trees, it is in direct sunlight area. Therefore, it can be assumed that the humidity in the air is greater at ground level due to water evaporation. With these temperature changes in mind, one can attempt to determine the relationship between the amount humidity with the steady increase of temperature. To conclude, the four sub-plot groups that participated in the field study came to the same conclusion; when you take measurements from shrubs, parking-lot, forest, and grass sub-plots, you will find different temperatures. Animals, trees, shrubs, and insects within a small confined area around the college will be different and diverse in relationship to one another.