

Pre-AP GT Biology



Summer Assignment 2011

Pre-AP **GT** Biology students,

In order to receive credit for Pre-AP GT biology, you must complete a summer assignment that is not required in the regular biology course. You will also be required to participate in the dissection, complete a novel study, and present at a product fair as part of the preAP GT biology course.

In order to complete the summer assignment, you are to locate, identify, and observe two different organisms that live in your backyard. The *preference* is that the organisms not be domesticated. The organism that you select will be observed for the entire school year, so cautiously select an organism that is of interest to you.

Over the summer, you are to keep a journal of the activities, development, and changes in the **two** organisms. The observations are to be recorded in a bound composition or laboratory notebook. Both organisms should be compared on the same notebook. Number the right hand pages of your notebook, and write only on the right hand side (front of the page). Handwrite in pen and white out is NOT permitted. Additional specifications for the journal are included on the data table on the following page.

During the first week of school, you will only submit your journal which will count as a test grade. Throughout the school year, you will develop a presentation to accompany the data that you collected during the summer and additional research that you will complete throughout the school year. The format of the presentation will be discussed in class so please do not worry about working on this part of the project during the summer. In the spring, your final project will be presented at a product fair for faculty, administrators, parents, and community members of Carroll High School.

If you have any additional questions, feel free to contact me via email at keeley.lowery@southlakecarroll.edu or keeley_lowery@yahoo.com. Questions can be answered regarding the expectations of preAP GT biology as well as the summer assignment. In addition, samples of projects from 2010 will be placed in the front office if you are interested in seeing what the final product should look like. I will be checking my email weekly during the summer, so do not stress if you do not hear back immediately.

Mrs. Lowery

Pre- AP GT Summer Assignment

Page #	Description	Point Value
1-2	Table of Contents	
3	Identification of organisms Kingdom, Phylum, Class, Order, Family, Genus, Species	5
3	Species – Introduced or Native Are the organisms introduced species or is it native to this area in Texas? If it is an introduced species, where is it's native home and does it have the potential to become an invasive species?	5
4	Habitat description Describe the organism's habitat in detail . What does it live in, on, or around? Describe the other organisms living in its community.	5
5	Food Web Design a food web that includes your organism. What does it eat and what eats it? Then continue the food web out to at least 8 organisms. The web should also have the sun as the major source of energy.	10
	Journal entries There must be at least 15 entries spread over the summer . These will <i>include your data and detailed observations</i> . You cannot have 15 entries within the last 2 ½ weeks of summer. Entries should describe what the organism is doing, mention the changes in habitat, record of data that you are taking and thoughts/reflections about what you are observing.	15
	Data Table Gather <u>MEASUREABLE</u> data on your organisms. Create a data table to summarize all of the data that you collected over the summer. Some examples of measureable data include height of organism, number of leaves, or number of organisms.	10
	Photographs - Photos must have a DATE stamp on photo. There are to be a minimum of 10 photographs of your actual organism placed in your journal. These are <u>not</u> to be images from the internet of an organism like yours. The photos should be taken at different points over the summer. Insert the photos alongside the corresponding journal entry and attach the photo to the left hand side of the page.	20
	Graph of DATA Use the data that you have collected to create at least one graph comparing the two organisms. Be sure to include titles and subtitles. Additional graphs of data will be awarded additional points.	20
	Venn Diagram Create a Venn Diagram comparing and contrasting at least five characteristics of your organisms.	5
	Enhancements – You must complete any two.	10
	Biological Drawings of each organism - You MUST use the attached directions for this!	
	Interview - Interview an <u>expert</u> on the organism that you are observing. This should not be a parent or neighbor. Your interview can be online via email.	
	Volunteer hours - Volunteer at a local nature center, garden, or park.	
	Video - Short video of your organisms in action.	
	Essay – Two page, handwritten essay about your organism. It should be placed into your laboratory notebook.	
	Professional Photo – Select one of your photos that you would consider of professional quality. Print the photo as an 8 ½ x 11. Framing is completely optional.	
	Your choice - Any other idea that is preapproved by Mrs. Lowery. Print out approval email.	

Due Date : During the 1st week of school
*all summer assignments are individual projects

Rules for Sketching a Biological Diagram

1. Always draw in pencil. Begin drawing lightly, in case you have to erase. Try to erase as little as possible. Use colored pencils to make complex drawings easier to read.
2. Always print.
3. Leave at least 2.5 cm (1 inch) margin on all four sides of the paper. (Only the heading should be written within the margin).
4. Always title your drawings using all capital letters.
5. Center your drawing on the paper (Don't forget to leave room for your labels).
6. Always use a ruler to label the parts of your sketch.
7. Do NOT underline your labels.
8. Take care to keep the words horizontal; label lines, however, do not need to be kept horizontal.
9. Never allow two label lines to cross.
10. Place one end of the label line directly on the object you are labeling and the other end at the start of the word. Do NOT use an arrow.
11. Use the singular form of a word when pointing to a single object or part. If you need to point to two of the same parts (for clarity), use the plural form of the word.
12. In places other than the title, capitalize the first letter of the genus (or first word) of a scientific name when using the scientific name of an organism. The species (or second word) of a scientific name should never be capitalized. For example, *Canis familiaris* is the scientific name for a dog. In a title, it would be written *Canis familiaris* or Canis familiaris because it should be written in italics or be underlined.

