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K-12 Science Coordinator

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Dear A.P. Environmental Student:

We hope you have already begun to enjoy your summer and wish to welcome you to our A.P. Environmental Science program, commonly known as "APES". As you will soon come to experience, the APES curriculum is a blend of many different disciplines that fall both in and beyond the realms of the natural and applied sciences. During your program planning last year, your guidance counselor should have informed you that one of the requirements of A.P. Environmental Science is to complete a summer assignment; this is also indicated in the course catalog. The assignment will take you back to many of the concepts that you have already learned about the topic of ecology, most of which you explored most deeply in Regents Biology, but it is a topic that you have consistently be learning about since introduced to you in our 4th grade science curriculum. The summer assignment will be clearly posted as a pdf on the homepage of www.mrromano.com and will remain there all summer for you to download. You will notice that the due date for the assignment is two weeks into school, but we highly recommend that you get to work on it before school starts when your schedule once again becomes filled with other academic and extra-curricular commitments.

On the homepage of mrromano.com, proceed to the webpage set up for your APES teacher. On each page you will find the following: the entire ecology notes packet for your class, a multiple choice question packet, a link to a Google form to submit multiple choice answers before midnight on Friday, September 15th, and a free response section to be submitted as per the directions that your individual teacher will provide when classes start. You can choose to print out your own hardcopy of the notes packets, but we will also have them available for you when you return in September.

If you run into any technical problems with the website over the summer whatsoever, please do not hesitate to contact Mr. Romano. Any other questions you may have can be directed toward your specific teacher. We understand schedules are bound to change. If you make a schedule change into a different APES section, make sure to familiarize yourself with that teacher's style of notes. If one of your friends switches into APES over the summer, it would be greatly appreciated that you pass information on to him or her regarding the APES summer assignment. If you decide to change your schedule and switch into a different science AP class, it is obvious that you will not be responsible for this assignment, but you should check the school website for a possible summer assignment in the class that you enrolled in.

Have a great summer!

Mrs. Schneck kschneck@syossetschools.org

Mrs. Kearon lkearon@syossetschools.org

Mr. Romano romano@syossetschools.org

Name: _____

Mrs. Schneck / Mrs. Kearon / Mr. Romano

AP Environmental Science Summer Assignment

Course Overview:

A.P. Environmental Science is course designed to be the equivalent of a one-semester introductory college course in Environmental Science. The goal of this course is to provide students with the scientific principles required to understand interrelationships of the natural world and analyze environmental problems. An introduction to ecological community concepts and the influence of chemical, geological, atmospheric and physical factors on living systems will be considered. The course provides a study of the effect of human activities on the worldwide ecosystem and provides an examination of the issues of human over-population, atmospheric change, chemical pollution and agriculture.

Topic Outline:

- I. *Ecology, Climate, and Biomes*
- II *Evolution and Biodiversity*
- III. *Problem Solving in Environmental Science*
- IV. *Nutrient Cycles and the Human Impact*
- V. *Sustainability and Understanding the Environment*
- VI. *Population: Population Dynamics and the Human Population*
- VII. *Toxicology*
- VIII. *Human Health and Pesticides*
- IX. *Geology and Mineral Resources*
- X. *Nonrenewable Energy Resources*
- XI. *Renewable Energy Resources*
- XII. *Air and Water Pollution*
- XIII. *Waste*

Many of the concepts learned previously in your Earth Science, Biology, and Chemistry coursework will appear in the topics listed above. Although you are not expected to remember every detail of each of those topics, you are expected to have a working knowledge of the basic scientific principles inherent in each. The first topic that is covered in APES is Ecology, Climate, and Biomes. The notes packets that are provided focus on the ecology part of the topic. The notes reflect the unique styles of each teacher and may be organized differently, but each covers the same content. Your task is to read over your teacher's notes and complete the questions and response packet as per instructions provided below. **This assignment is an individual effort and any work submitted should reflect as such.**

Assignment Part 1: Terminology Check and Multiple-Choice Questions

To be submitted on a Google Form by midnight on Friday, September 15th

30-point assignment based on accuracy.

Breakdown is as follows: 95-100 questions correct = 30 points, 85-94 questions correct = 27 points,
65-84 questions correct = 25 points, < 65 = 15 points

Terminology Check: After reading through the notes provided by your teacher, you will have reviewed many of the terms and concepts that you have already learned in previous coursework. Keep in mind that the hybrid structure of school during your 8th and 9th grade years may have created some gaps in learning. You may not remember some of this material, while some of your previous teachers may also have adjusted/truncated curricula because of changes in course requirements during those years. Use the information in the notes provided to fill in the Google form with the correct term from the “word box” provided. To be very clear: **Make sure that you spell each term correctly and do not use any capital letters or your answer will be marked incorrect.** For the multiple-choice questions, make sure that you do not omit any of the questions and only choose one answer to each question.

Assignment Part 2: Free Response and Review Math

To be submitted as per teacher instructions provided upon return to school.

20-point assignment based on completion as per instructions.

Appropriate points will be deducted for any incomplete part of the assignment or for disregarding instructions.

This part of the assignment provides you with a few free response questions, including a chart to fill in regarding the invasive species case studies you read about. There also questions to review scientific notation, calculating rate of change, and calculating percent change. Remember, whenever you do a math problem, you must show all work. This means that you must write the out complete formula, substitute the data into the formula, and then show your answer with the correct units attached (round to whatever you feel is appropriate – whole #, tenths or hundredths place).

When you return to school, we will we give you the answers to both parts of the assignment. We will then have a general review and do some supplementary assignments that will give you the opportunity to ask questions and to clarify the material that you have worked on. You will be assessed on your mastery of the concepts covered on your first exam when we complete the entire topic together.