COMMUNITY INTERACTIONS

Group Project: A Poster Session: Create-a-Symbiosis

PART I. CREATING THE INTERACTION
(Write all details of your poster in your class notebooks in a neat and orderly fashion. Everyone in the group should keep a record of this!)

**Step 1.** Choose one group member to select your symbiotic relationship from the Box of Mystery. DO NOT TELL THE MEMBERS OF ANY OTHER GROUP WHAT TYPE OF COMMUNITY INTERACTION YOU HAVE CHOSEN! IT'S YOUR SECRET--AT LEAST UNTIL AFTER THE POSTER SESSION!

**Step 2.** Select two of these groups: Bacteria, "Protista", Fungi, Animalia and Plantae

**Step 3.** Now "create" two organisms, one from each of the groups you selected, to engage in the symbiotic relationship you chose from the Box of Mystery. Be as specific as you can, within your group (For example, make your beast an "insect"--not an "animal", or make your plant a "pine tree"--not just a "plant".). If you wish, you can create an entirely new species that exists only on Planet Imagination--but keep the habitat earthly and the organisms reasonably realistic, for simplicity's sake. The symbiotic relationship should be created by you, and while it can be based on something that actually exists, it should be imaginary. (This is so we can be sure you actually understand the meaning of these symbiotic relationships, and are not just believing something you read on the internet!)

**Example:** if you selected "parasitism" from the box, you might create a species of fungus (Kingdom Fungi) which parasitizes a particular species of ant (Kingdom Animalia). Or if you selected "predation" you might create a species of bird (Kingdom Animalia) which seeks out and devours the seeds of a particular species of plant (Kingdom Plantae) (not all predation is violent!).

Be creative, but as realistic as possible within your chosen taxonomic groups. Write down as much as possible about the relationship and each species' part in it.

**Step 4.** Give each of your symbiotic species a scientific name (Genus and species, Latinized. *BE* Linnaeus.).

**Step 5.** Create a "natural history" for each of your species. (One at a time!) For each of your species, tell us…
   * what it looks like
   * where it lives (What continent? What type of habitat? Where does it exist?)
   * what it eats (or how it gets its nutrients, if it doesn't eat)
   * what's it's size?
   * anything else about it that might be interesting or relevant to the project

**Step 6.** Now describe the interaction between your two species. Designate one of your species as "Population A" and the other as "Population B" (see your handout on Community Interactions for an example of what I mean).

SAVE ALL OF THIS INFORMATION. YOU WILL USE IT FOR PART II
COMMUNITY INTERACTIONS

PART II. CREATING A POSTER SESSION!

At scientific meetings, researchers do not give only auditorium talks. One very important way to transmit your research to other scientists is with a POSTER, a visually clear and informative poster about your topic. The researcher stands beside it while other scientists come by to ask questions about the work.

Step 1. Your poster board has three panels. Use the two side panels, to create an informative, visual display describing each species. Include an image (drawn, created from construction paper cutout or other creative medium available) of each species, as well as all of the information about it. Put appropriate titles on each panel.

Step 2. Use the large, central panel to describe the relationship between the two populations you have created. DO NOT TELL THE "AUDIENCE" WHAT TYPE OF SYMBIOTIC RELATIONSHIP THIS IS!! Create a title for your poster and place it at the top of this center panel. Your Group Name should go under the title. You are the authors of the poster.

   It is important that you only describe what each population does to the other! DO NOT NAME THE TYPE OF SYMBIOSIS! For example, if you have protist parasitizing a mammal, do not say it’s parasitism. Instead, you might say that the protist invades the cells of the host species intestines and absorbs food from the host, and that the host can get sick from this interaction.
   Give only hints! Don’t give away the answer!

PART III. POSTER SESSION: ANALYZING OTHER GROUPS’ WORK.

Step 1. Two members from each group will stand by the group poster for a 10 minute shift, while all class participants move around the room and view other groups' posters. You should view the other posters IN YOUR GROUPS, one at a time. At the end of 10 minutes, two new group members should relieve the first two so that everyone gets a chance to move around and see all the other posters.

   As you read and view a poster, ASK QUESTIONS OF THE GROUP MEMBERS WHO CREATED THE POSTER. Take notes! This is how you learn about their study organisms, and it’s the way it works at real poster sessions at scientific meetings!

Step 2. You will notice that, like your group, none of the other groups has actually NAMED the type of symbiotic relationship they have created. But you should be able to get a pretty good idea of what's going on in the symbiotic relationship from reading the poster and asking questions of the authors.

AS A GROUP, use your "Community Interaction Sheet" to do the following:
   a. Create a Null HYPOTHESIS that you could use to test whether the relationship between the two species is either BENEFICIAL or HARMFUL to each of the species in the relationship. (Remember: only one variable at a time!)
   b. Devise a simple EXPERIMENT that you could use to test whether your Null Hypothesis is correct or incorrect.
   c. Make a PREDICTION about this relationship. How are each of the two Populations (A & B) affected by the relationship?