WRITING ASSIGNMENT
INTRODUCTORY BIOLOGY COURSE—CENTRE COLLEGE
FALL 2002

PART 1:

Sign up for one of the major taxonomic groups of organisms that we will study in this class: there is a signup sheet outside my office door. The topics are grouped according to their evolutionary phylogenies: Prokaryota, Protista, Fungi, Plantae, and Animalia (Lower Invertebrates, Protostomes, and Deuterostomes). I will only permit one student to sign up for each individual topic and I will expect a certain amount of group work from students signed up for the same evolutionary phylogeny. Sign up early-- the sign up sheets are outside my office door (Y220).

As a group, you will be responsible for researching the following information relevant to your evolutionary phylogeny:

- Major characteristics common to organisms classified in your taxonomic group
- The evolutionary history of your group-- what are its closest relatives, what evidence exists to support these relationships, did any other major taxonomic groups evolve from your group, what are the major evolutionary trends within your taxonomic group, what are the major taxonomic groups that have evolved within your taxonomic group

Since there will be several students working on each major phylogenic group, you would benefit from getting together with other students in your group to discuss the results of the above group research-- remember that science is a field that benefits when the scientific researchers share their information and communicate their results with other scientists. Much, if not all, of this preliminary information is found in your book (Chapters 22-27).

PART 2:

After doing the general research on your phylogenic group, you will each be expected to work individually to collect the following information on your specific organism(s):

- what are some examples of organisms classified in your specific group? where do they live (their geographical range worldwide)? is there any evidence that some of the species in this group are threatened or endangered?
- what are the general features of the life cycle for organisms classified in this specific group (life span, age at reproduction, number of offspring produced, nutrient requirements, habitat requirements, etc)-- you may find it useful to use examples of specific species to discuss these characteristics
- describe some interesting adaptations that organisms in your specific group possess that make them especially well adapted to their environment
- find 2-3 current research articles (from the scientific literature) that have been published within the past 2-3 years that describe current areas of research on your specific group of organisms. Briefly describe the research results that are presented in these articles.

Based on your group and individual research, I will expect that each of you will become an expert on a specific aspect of the Diversity section of the course. During this part of the course, we will spend some class time working in small groups. Each of you will be expected to briefly share the results of your research in the form of a poster presentation to the members of your group. The final result of your group and individual research will be a 6-8 page written paper. Due dates are as follows:

Sign up for topic : Sept. 16
Bibliography Due: Oct. 11
Research Completed (Poster Presentations): Oct. 28
Final Paper Due: Nov. 20

Although I do encourage you to work together as small groups (especially in the first part of the assignment), I expect that everyone will do their own individual work. That means that everyone turns in their own bibliography, their own poster, and their own written paper. All written work will be graded both on content and writing style. I expect that the final paper will be written (including proper scientific citation format) following the APA (NOT the MLA) guidelines provided in the New Bedford Handbook (on reserve in the library). Late papers will be penalized by one-half letter grade for each day late.

I will expect that you will use a variety of **scientific** resources in writing your paper. Use the following guidelines as indicators of acceptable vs non-acceptable resources. You are encouraged to use the electronic databases available through the Centre College home page to locate appropriate journal articles. Aside from these electronic databases, you are NOT permitted to use any other Internet sources without first obtaining my approval.

Examples of Acceptable Sources: **Science, Discover, Nature, Natural History, Science News, TREE, National Geographic**, Books on the shelves (that were published within the past 10 years), ONE scientific encyclopedia

Examples of Unacceptable Sources: Non-scientific encyclopedias, More than One encyclopedia, Newspapers, **Time**, **Newsweek**, Any non-science magazine, Internet sites (excluding the electronic databases available through the Centre College library home page

BIO 110 PAPER TOPICS

MAJOR TAXONOMIC GROUP	SPECIFIC YOUR (YOUR INDIVIDUAL TOPIC)	YOUR NAME
Superkingdom: Prokaryota	Archaebacteria	
	Gram Negative Eubacteria	
	Gram Positive Eubacteria	
Kingdom: Protista	Fungi-like protists (water molds and slime molds)	
	Animal-like protists (ciliated, amoeboid, and flagellated protozoans)	
	Plant-like protists (algae)	
Kingdom: Fungi	Bread molds (Zygomycetes)	
	Sac Fungi (Ascomycetes)	
	Club Fungi (Basidiomycetes)	
Kingdom: Plantae	Bryophytes (mosses, liverworts, hornworts)	
	Seedless vascular plants (whisk ferns, horsetails, club mosses, ferns)	
	Vascular plants with naked seeds (cycads, gingkos, conifers)	
	Flowering Plants-- the Monocots (grasses, corn, lilies)	
	Flowering Plants-- the Dicots (dogwood, daisies, tomatoes)	
Kingdom: Animalia		
The Lower Invertebrates	Sponges	
	Cnidarians (jellyfish, anenomes, hydra)	
	Flatworms (Platyhelminthes)	
	Roundworms (Nematoda)	
	Rotifers	
The Protostomes	Segmented Worms (Annelida)	
	Molluscs (clams, snails, squid, octopus)	
	Arthropoda-- the Crustaceans (shrimp, lobster, crayfish)	

	Arthropoda-- the Insects	
	Arthropoda-- the rest (millipedes, centipedes, spiders)	
The Deuterostomes	Echinodermata-- starfish, sea urchins, sea cucumbers	
	Chordata-- the invertebrate chordates (tunicates, lancets)	
	Chordata: fish, amphibians	
	Chordata: Reptiles, birds	
	Chordata: Mammals	