

# BIOS

## biological Issues and Our Society

### **PURPOSE:**

The purpose of this assignment is twofold: a) to acquaint you more fully with some of issues of our society which arise from biological and technological innovations, and (b) to challenge you to evaluate these issues from a moral and ethical position that is grounded in Scripture.

### **COOPERATIVE LEARNING GROUP COORDINATOR:**

This project will be a cooperative effort by your Cooperative Learning Group, hereafter called "group." First, your group should agree on a group coordinator. He or she should facilitate and coordinate the group effort in the following ways:

- a) lead the discussion necessary to reach group consensus on the choice of topic,
- b) guide group discussion of the topic to identify the major considerations, and information needed,
- c) encourage each group member to contribute to the work,
- d) assure that written/oral communications between the group and instructor are presented on time, e) serve as senior author on the written report.

### **TOPIC SELECTION:**

When you have selected a coordinator, discuss the BIOS topics listed below. Achieve a consensus as to the order of preference, fill out the "BIOS Topic Selection Form", clip, and turn it in. If you elect to suggest one or more topics not found on the list, use the space marked "Alternate Topic". Please include an explicit title and explanatory comments if necessary. Indicate the rank of the "Alternate Topic" in relation to the rank of other topics. Only one group per laboratory section will be assigned a given topic. Forms will be read in random order and topics assigned accordingly.

### **BIOS TOPICS:**

1. Prenatal Testing for Genetic Defects
2. Born Gay? -- Biological Aspects of the Current Debate
3. *In Vitro* Fertilization: When and how should we use this technology?
4. Cloning Humans: Is it possible? Is it ethical?
5. Release of Bio-engineered Organisms into the Environment: Benefits above Risks?
6. Quality vs. Quantity of Life: A Basis for When to "Pull the Plug"
7. Gene therapy: Use for treatment of diseases, genome changes of genetic disorders: where do we draw the line?
8. Antibiotic Resistance -- Are We Losing the Battle With Germs?
9. Animal and Human Rights in Research and the Science Classroom
10. Teaching Origins in Public Schools: Equal Time for Every Model?
11. Oil Drilling in the Arctic National Wildlife Refuge (ANWR): Wise Counsel to President Bush
12. Has the Human Population Exceeded the Carrying Capacity? Considerations and Solutions
13. Fetal Tissue in Research and Treatment of Disease--Limits of Proper Use
14. Re-introducing Predators to their previous natural habitats: Benefits vs. Risk
15. Should Vaccinations be Compulsory? -- New Concerns About Effectiveness?
16. Genetic Screening of Adults: Benefits to Health Care versus Invasion of Privacy
17. Global Politics of Global Warming
18. Viagra: Friend or Foe of Marriage?
19. Anti-Estrogens: Should they be given to prevent breast cancer?
20. A New Kind of Pollutant - - Endocrine Disrupters in Our Drinking Water?
21. Defining Humanness in relation to Prebirth and Mentally Handicapped Individuals
22. Bizarre Science in Communist Russia – Lessons from the Lysenko Affair
23. Acupuncture: Are it's proposed benefits scientifically supportable?
24. Human Embryonic Stem Cell research: Robbing Peter to pay Paul?

**GROUP DISCUSSION:**

Once your topic has been assigned, each group member should give careful attention to the questions below. Then meet as a group to share individual perceptions. Record notes of your discussion for later reference.

1. Identify the two or more positions one might take on the issue. How do group members stand at present? [Please respect one another's positions in Christian love.]
2. What tensions or conflicts make this topic an issue in our society? What is (are) the origin(s) or contributing factors to the conflict? List apparent benefits of taking each position.
3. Is there a clear decision that a Christian must make -- a right or wrong course of action?
4. What are the major considerations one must address in taking a position (the biological, moral/ethical, and scriptural considerations)?

Preliminary group discussion should answer the above questions as nearly as possible; and more importantly, identify areas where more information is needed. When you have finished this "Group Discussion", you should know what information is needed, and "key words" to guide your search. Your BIOS report will include two components as follows:

1. A written report in which you define the scope of your topic and considerations in (4.) above.
2. An oral report which is presented jointly by group members.

**LIBRARY RESEARCH:**

Outline the major questions that require more information, and agree on an approach to library research-- e.g. individuals researching specific aspects; what indexes, references, and periodicals to search, etc. From your discussion of the topic, generate a list of "key words" which can be used to locate relevant sources.

Centennial Library resources are linked to the Centennial Library Home . This will take you to Library Catalog and Library Resources, including Research Databases and Full Text Resources. The databases are organized by periodic titles or by subject area. The most current sources of information will come through periodic indexes to journal articles; whereas, books will often contain helpful reviews.

**FINAL WRITTEN REPORT:**

The report should be written so as to serve as a guide for someone delving into the topic, and should contain the following parts:

**TITLE PAGE:** Include title, authors (Coordinator first), course number, title, and Date.

**INTRODUCTORY PARAGRAPH:** Identify your topic (one sentence) and state its significance.

**BODY OF REPORT:** Four or five paragraphs that present your discussion as outlined in the instructions for GROUP DISCUSSION. Distill your presentation to summarize your logic in a concise, point-by-point fashion. Since the report is a joint effort, represent individual positions if the group is not in complete consensus. Support each position with brief but logical discussion of biological, moral/ethical, or scriptural information. Use reference citations to refer readers to sources of more detailed information.

**REFERENCES:** On a separate final page, list REFERENCES from periodicals, books, or internet. Your report should be based upon at least three recently published (i.e. since 1990, unless of special historical significance) library sources. Although a science encyclopedia may be cited, at least half of your REFERENCES should be from popular and/or scientific periodicals. Any portions of your report that cite data, quotations, or opinions of others should include a reference citation using the style of documentation adopted by the Modern Language Assn. (MLA). The following is an example citation as it should appear in the body of the report (single-spaced here to conserve space):

In 1993, AIDS researchers discovered that, during this time the HIV is being filtered by the lymph nodes (Pantaleo 330). However, because the virus is not being destroyed here, pockets of the increasing viral population eventually spill out into the bloodstream, ending what was thought to be an "inactive period". These results suggest that effective elimination of HIV will have to begin immediately upon detection, and before the accumulation in lymph nodes.

All references should be listed in alphabetical order under "REFERENCES" at the end of the report. Thus, the following reference would appear under REFERENCES because it was cited in the paragraph from the report as given above by way of example:

Pantaleo, G., *et.al.* 1993. The immunopathogenesis of human immunodeficiency virus infection. *New England Journal of Medicine* 328(5): 327-336.

The report is to be typed with double-spacing, about three (3) pages in length, plus References.

#### **GRADING FORM:**

Finally, your approach to this assignment should be such that each group member can truthfully sign the "Grading Form" on page 4. A space is provided beneath each signature line to evaluate the contribution of each member on a scale from 0 to 1. Thus, a "1" indicates a person has contributed his/her share; while a 0.8 will translate into 0.8 times (or 80% of) the points earned for the written report. Meet together to reach a consensus on each person's evaluation. If no percentages are reported, it will be assumed that each contributed equally. Clip and staple the signed form to the last page of your report after References so that the evaluation of your report may be registered. Note the criteria used in grading. Grading points for each category are in parentheses.

#### **ORAL REPORT:**

Oral presentations of topics will be presented by each group. Under the direction of the group coordinator, decide on an approach that will permit a clear, logical presentation of the topic. You may use the outline developed for your written report, but do not "read the report". Allow each member to share in the presentation without jeopardizing the flow. End with some considerations as to how you and your audience could respond and act biblically in light of the issues you raised. A rehearsal of the presentation would be helpful. Role-playing works well for some topics. About 15 minutes will be allowed per report.

## GRADING FORM

We affirm that the content and organization of this report is the result of our collaborative research and writing effort. All parts of this report that are not our own data, interpretations, or conclusions have been acquired directly from the sources cited within the report and listed in the REFERENCES. We also agree to the individual evaluations.

Signed:

\_\_\_\_\_  
1. Group Coordinator

\_\_\_\_\_  
3. Group Member

\_\_\_\_\_  
2. Group Member

\_\_\_\_\_  
4. Group Member

EVALUATION:

1. CONTENT (appropriate coverage; scriptural and horizontal integration) \_\_\_\_\_ (30)

2. COMMUNICATIONS (organization, grammar, neatness) \_\_\_\_\_ (20)

3. REFERENCES (current sources, proper citations) \_\_\_\_\_ (10)

4. TOTAL WRITTEN REPORT SCORE \_\_\_\_\_ (60)

Individ. Score = Indiv. Contrib. (\_\_\_\_) x TOTAL (4. above); record below

Individual Scores: 1. \_\_\_\_ 2. \_\_\_\_ 3. \_\_\_\_ 4. \_\_\_\_ out of (60)

ORAL REPORT (clear, organized presentation; balanced participation by each member) \_\_\_\_\_ (40)

TOTAL POINTS: \_\_\_\_\_ (100)

# Topic Selection Form

Decision of Your Cooperative Learning Group

(Please complete (one per group) and Turn in to Laboratory Instructor)

Group Coordinator (if named at this time): \_\_\_\_\_

Lab Section (day of week/time): \_\_\_\_\_

Group Members \_\_\_\_\_  
\_\_\_\_\_

Topic Selection from List:

Topic #    Title of Topic

Choice # 1 \_\_\_\_\_

Choice # 2 \_\_\_\_\_

Choice # 3 \_\_\_\_\_

Choice # 4 \_\_\_\_\_

Choice # 5 \_\_\_\_\_

Alternate Topic (Give title and choice #)