

2008-2009 BIOLOGY SYLLABUS (Foundations)

School: St Pius X High School
Department: Science
Teacher: Mrs. Norma Johanneson
Course: Biology 26.21
Duration of course: Two semesters

COURSE OBJECTIVES

1. The course is designed to enhance diversity in student's learning style.
2. Students will explore life from the global to the microscopic environment.
3. Students will be able to relate the classroom activities to personal, local, and global events associated with biology.
4. Students will continue to develop problem solving skills, critical analysis of experimental data, research skills, and follow the appropriate use of laboratory equipment.
5. Students will be exposed to hands on lab. and interactive online activities.

Materials required for course

Textbook: Campbell, Williamson, and Heyden, **BIOLOGY-Exploring Life**, Published by Pearson/Prentice Hall. New Jersey. 2006

Other materials

- Three-ringed binder with dividers and colored tags. This must be used only for biology.
- Loose leaf paper(lined and unlined)
- Pens and # 2 pencils
- Appropriate disk for storing computer generated information.

Each student must have all of these materials with them every time they attend classes. **Failure to do so will result in a detention.**

Grading System

40% Tests *
25% Laboratory reports.
15% Quizzes, class work, and homework.
20% Final examination

- These will be based on concepts studied in a chapter, and research projects
- Grades will be made available periodically for parents to access on line.

AN OUTLINE OF THE TOPICS TO BE STUDIED

This outline is based on studying “Ecology” and omits the study of human biology.

First Semester

General Introduction to the course

- § Review of the syllabus, classroom policies, lab safety.
- § Organizing the biology notebook
- § Techniques for drawing biological diagrams.
- § Introduction to the microscope

Unit one: Exploring Life-introducing the subject of biology

- § Ch. 1 The scope of biology
- § Ch.2 The science of biology
- § Ch. 3 The process of science-“ studying animal behavior”

Unit nine: Exploring Ecology

- § Ch. 34 The biosphere
- § Ch. 35 Population and community ecology
- § Ch.36 Ecosystem and conservation

Unit two: Exploring cells

- § Ch. 4 The chemical basis of life
- § Ch. 5 The molecules of life
- § Ch. 6 A tour of the cell
- § Ch. 7 The working cell-‘energy from food’
- § Ch. 8 the working cell-‘energy from sunlight’

Unit three: Exploring inheritance

- § Ch. 9 The cellular basis of inheritance.
- § Ch.10. Patterns of inheritance
- § Ch. 11. DNA and the language of life
- § Ch. 12. Human genetics
- § Ch. 13. Frontiers of Genetics

Additional study material will include, 'how to do scientific research'

End of the first semester examination.

To include only the chapters covered between August and December 2008

Second semester

The course work will begin where we left off prior to the first semester exam.

Unit four: Exploring the history of life

- § Ch.14. Evolution
- § Ch.15. Origins of biological diversity

Unit five: Exploring the microbial world

- § Ch.16. Prokaryotes and viruses
- § Ch.17. Protists
- § Ch. 18. Fungi

Unit six: Exploring plants

- § Ch.19. Plant diversity
- § Ch.20. The life of flowering plants
- § Ch. 21. plant nutrition and transport
- § Ch. 22. Control system in plants

Unit seven: Exploring animal diversity

- § Ch. 23. Invertebrate diversity
- § Ch. 24. Arthropods
- § Ch 25&26. Vertebrates

- § Ch 32. regulation of the internal environment.
- § Ch. 33. Reproduction and development

NOTE!

Not all of the chapters and chapter materials may be covered due to time constraints. How much is covered will depend directly on the student's ability to grasp and understand the concepts.

Final semester examination, to include all the materials studied from January to May

ACADEMIC EXPECTATIONS

(1) Students are expected to bring their notebooks, writing implements and textbook to class each day.

Students will not be allowed to return to their lockers once class has begun.

(2) Students are expected to read the assigned chapters and complete homework assignments **before** each class.

(3) Students are expected to keep a section in their notebooks for listing and defining the appropriate vocabulary of each chapter.

(4) **All written assignments must be in ink.** The correct use of English is expected, headings must be neatly underlined, charts, and data tables should be constructed using a ruler and pencil.

(5) All biological drawings must be done with a #2 pencil and the guidelines given by the teacher must be followed. Drawings must be on unlined paper.

(6) Assignments for grading must be submitted on the dates given by the teacher.

LATE ASSIGNMENTS WILL NOT BE ACCEPTED, unless the student has been absent (due to illness or excused). In these cases the student is responsible for finding out the assignment missed, and make the effort to complete the assignment within two days and then submit it for grading.

Special considerations will be given to students with long term illness.

Students will be advised well in advance of major tests and quizzes. Students who are absent on a test day must **make up the test on the day of their return**. Any student missing a major test due to late arrival, early dismissal or medical appointments must see the teacher during that school day so that arrangements can be made to take the test during a free period, lunch, study hall or after school. Failure to do so, in a timely manner will result in a grade of **zero**.

(7) Tests will be given at the end of each chapter (approximately at 10-12 day intervals).

Announced and unannounced quizzes will be given frequently (a minimum of one each week)

(8) Homework will be assigned daily and will include any one of the following, or a combination of them, reading, writing answers to review questions from the chapter, studying for quizzes and tests, preparing pre-labs or completing lab reports, and completing on-line assignments.

All homework assignments will be checked daily using one of the following methods:

(I) Oral question and answer sessions, and class discussions of the concepts.

(ii) Quiz

(iii) Checking answers from an overhead copy.

A grade will be awarded for all completed chapter homework assignments prior to a test.

You are expected to do your homework when it is assigned.

FAILURE TO DO 100% OF THE HOMEWORK WHEN IT IS ASSIGNED, OR IF THE WORK IS NOT SUBMITTED ON TIME WILL RESULT IN A GRADE OF ZERO

(9) Students are expected to keep an organized and neat notebook with copies of all handouts, lab reports, vocabulary lists, class-work, notes, graded quizzes and tests until the course has been completed.

(10) Students are expected to keep an up to date grade log and must be able to compute their individual grade status at any time.

(11) Students should also have a small notepad/or the St. Pius assignment book for recording homework assignments and dates of various assessments.

(12) A monthly calendar of class activities and homework is available on the school web site in the academic section (Science)

BEHAVIORAL EXPECTATIONS (based on the Science Dept. procedures).

Safety and Care of Equipment

- (1) Students must not touch any science equipment especially the faucet or gas taps without authorization from the teacher.
- (2) Students must follow all of the written safety guidelines at all times
- (3) Laboratory procedures must be followed exactly; students must not use the equipment in any other manner.
- (4) The procedure for handling and caring for the microscopes must be followed.

Classroom Procedures

- (1) Students are expected to arrive on time for class, and be in their assigned seats when the second bell rings. They must be quiet and have the appropriate materials ready to begin class. Late arrivals will only be admitted after presenting the **appropriate late pass** signed by a teacher or an administrator.
- (2) Students are expected to remain in their seats (except during lab exercises or other group activity) and must be attentive at all times.
- (3) Students must raise their hands and wait to be called upon before speaking.
- (4) Students are expected to be respectful and polite at all times to their teacher and peers.
- (5) Students are expected to have a clear understanding of the guidelines regarding student's conduct as stated in the school's handbook (pages - , **please read**)

CONSEQUENCES FOR VIOLATING THE ABOVE PROCEDURES

- (1) Violators of safety and equipment regulations will be referred to the Discipline Office, and a detention will be given.
- (2) Violators of the rules of classroom procedures will first be warned that their behavior interferes with the progress of the class. Continued disregard of these rules will result in a detention and a referral to the discipline office.
- (3) Exceptional disruptive or discourteous behavior will result in detention there will be no warning.
- (4) Laboratory work is an interesting and exciting part of a science course and students Who follow the regulations will be allowed to participate fully and their efforts will be

recognized. Those who **fail to follow** the regulations will not be allowed to participate.
(5) Assignments written in pencil or done without care or thought will be returned to the student ungraded. Students are expected to rewrite the assignment correctly and resubmit for a grade. No points will be deducted as long as it is completed within a reasonable time (a maximum of 3 days).

To the student and their parents:-

Please read carefully the accompanying syllabus, and the Science Department academic and behavioral expectations.

These guidelines are meant to provide a positive learning atmosphere for the student's success in this class.

Please indicate your understanding and willingness to abide by them, by signing the appropriate space below and return by class-time on the next day

The information and signed document must then be kept in the front of the student's biology binder (notebook) for quick reference throughout the year.

Thank you.

N E Johanneson

_____ Parent's / GuardianSignature

_____ Student's Signature

_____ Date