



Edna Karr Secondary School



A Nationally Recognized Blue Ribbon School of Excellence

2007-2008

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Welcome to Biology at Karr! We want to commend you for taking the challenge of a life-long learning. The following information will help you complete the course successfully.

COURSE SYLLABUS

Instructors: S. Lumod
T. Booth

Course Title: Biology 1 Honors

Textbook: Biology by Prentice Hall

Time/ Length: One Year

Credit: .5 unit per semester

Course Weight: 1.0

COURSE DESCRIPTION:

This course includes investigations of the living environment. Students conduct these activities to establish further observations, measurements, and classifications of the various life forms. Patterns of similarities and differences within the diversity of life establish the basis for understanding the special relationships among living things in ecosystems. (*Louisiana Department of Education*)

COURSE OUTLINE:

FIRST SEMESTER

First Quarter

Unit 1: Scientific Inquiry/Safety

Laboratory Safety and Procedures

Scientific Tools and Equipment

Data Gathering and Analysis

Scientific Method

Science Project

Unit 2 Biochemistry

Inorganic Compounds

Organic Compounds (Carbohydrates, Proteins, Lipids, Nucleic Acids)

Unit 3 The Cell

Prokaryotic and Eukaryotic

Cell Organelles

Plant Cell vs. Animal Cells

Cell Theory

Cell Structure and Function

Cellular Transport

Unit 4 Photosynthesis and Cellular Respiration

Reactants and Products

Balancing Equation

Energy Transfer

Aerobic and Anaerobic Respiration

ATP

Second Quarter

Unit 5 Cell Reproduction

Mitosis

Meiosis

Unit 6 Genetics

Mendelian Genetics

Non-Mendelian Genetics

Human Genetics

- 1. DNA Replication*
- 2. Protein Synthesis*
- 3. Chromosomes*
- 4. Karyotyping*
- 5. Pedigree Analysis*
- 6. Genetic Engineering*
- 7. Biotechnology (Forensic Science)*

Unit 7 Changes Over Time

Origin of Life

Theories of Evolution

Fossils and Radioactive Dating

Evidences of Evolution

Mechanisms of Evolution

Diversity of Life

SECOND SEMESTER

Third Quarter

Unit 8 Classification

Dichotomous Key

Taxonomy (Binomial Nomenclature)

Unit 9 Organismal Survey

Viruses

Eubacteria and Archaeobacteria

Protists

Fungi

Plants

Animals

Unit 10 Patterns of Behavior

Plant Responses

Animal Behavior

Fourth Quarter

Unit 11 Ecology

Energy Flow (Food Chain/Food Web)

Biogeochemical Cycles

Levels of Organization

Biomes

Human Impact

Population Dynamics

Unit 12 Human Biology

Hierarchy of the Structures of Organisms

Structure and Functions of the Organ Systems

Immune Response

Unit 12 Health and Diseases

Classification and Transmission of Diseases

MAJOR ACTIVITIES:

Daily Lessons are focused on science concept development and enhancement of science inquiry skills. The students will engage in investigative activities which are appropriate to their level using techniques which include experimentation, interpreting diagrams/models/charts/graphs/film/video clips/video documentary, world wide web research, group discussion, creative journal/reflective writing and problem-solving.

Science Project – The students choose a topic and design a science investigation based on the topic. This project must follow the scientific method. The students present the project using PowerPoint.

Learn Excel and PowerPoint – The students will create graphs and tables using excel program and develop PowerPoint slide show on science career.

DNA Profiling or DNA Fingerprinting provides students with experiences to help convict suspects in criminal cases using techniques like gel electrophoresis.

Blood Typing provides the students with basics in identifying the blood type by analyzing samples.

Field Trips will allow the students to experience wildlife ecosystem. Details will be disseminated by the teacher.

Dissection provides the students experiences in studying the internal physiology of vertebrates and invertebrates using preserved earthworm, frog, fetal pig and sheep brain.

Plant Taxonomy enables the students to identify the plants in the school campus using dichotomous key.

RESOURCES:

1. Biology Textbook by Prentice Hall
2. Online Textbook at www.phsuccessnet.com
Username: *slumod*
Password: *slumodkarr*
3. On line Lessons: <http://algiers-J7th4v6/moodle>

LABORATORY ACTIVITIES:

The students will be using the PASCO probeware system to conduct laboratory investigations. Sensors will be connected either to Xplorer GLX or to computer using the USB link. Students simply plug in a sensor to one of the PASPORT interfaces and data collection software is automatically launched.



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4. Other resources will be provided at a later date

EVALUATION:

Assessment of student progress for a particular unit will be evaluated using

Tests and Quizzes

Classwork/Participation

Laboratory Investigations

Homework

Project Presentations

Semester Exams

LAB FEE (DUE by August 16, 2007)

A lab fee of \$15.00 is collected from each student to purchase a Tyvek laboratory coat and consumable materials such as gloves, live and preserved specimens, chemicals and the like.



Tyvek \$5.25
(disposable and water repellent)



Cloth \$35.00
(durable poly/cotton)

Any student who wishes to order poly-cotton lab coat will need to add \$30.00. The lab coat will be a property of the student and he/she is responsible of keeping it in the locker, ***not in the classroom.***

CLASSROOM MATERIALS

You need to bring the following items to class EVERY DAY:

Pocket folder with clips for loose-leaf paper

The folder assigned to the students will contain student information, course syllabus, notes/handouts, enrichment readings, checked lab reports/quizzes/tests/exams, and other important information. The students are responsible for keeping the folder neat and orderly.

USB Flash Drive

Technology will be integrated into classroom instruction. Students need to store lab and other data on a flash/jump drive. Students are required to bring a USB flash drive with a memory of at least 1 gigabyte.

School Supplies

Students are required to bring a ***black or blue*** ink pen, ***sharpened*** pencil and loose-leaf paper. Spiral notebook paper will not be accepted !!!!! Students must obtain a cover for their textbook (Books must be covered at all times)
Other supplies will be identified based on planned classroom assignments/activities

HOMEWORK

Homework is expected to be assigned at least 3 times per week. Students must review work completed in class on a daily basis.

GRADING SCALE

A	90-100
B	80-89
C	70-79
D	65-69
F	Below 64

Student grades will be based on a semester of work. Students will earn ½ units of credit at the end of each semester this year. Quarters one and three will be progress reports only.

KNOWLEDGE THEFT

Be sure that the work that you turned in is your own work. Please understand that even in “group work”, your own contribution is expected. Students caught CHEATING will receive no credit for that assignment.

The **Academic Honesty Policy** will be strictly enforced:

Type of Offense	Major: <i>Exam, Chapter/Unit Test, Research/Term Paper</i>	Minor: <i>Quiz, Class work, Homework</i>
1 st Offense	F on assignment, parent-teacher conference	F on assignment, phone call to parent
2 nd Offense	F on assignment, in-school counseling, removal from elected office/position, unable to represent the school at outside academic or leadership functions	F on assignment, parent-teacher conference

3rd Offense	F on assignment, Saturday School, recommendation for non-retention	F on assignment, in-school counseling, removal from elected office/position, unable to represent the school at outside academic or leadership functions
4th Offense	F on assignment, non-retention	F on assignment, Saturday School, recommendation for non-retention
5th Offense	F on assignment, suspension	F on assignment, non-retention
6th + Offense	F on assignment, suspension	F on assignment, suspension

ABSENCES

Regular Days

Students will be given a week to make up for the assignments missed due to excused absences. After a week, no extensions will be given. Students are responsible for scheduling an appointment with the teacher.

Quiz/Exam Days

If you miss a class on a quiz/exam day, you have until the *FOLLOWING Thursday* to make up the quiz/exam. Make ups will be more difficult.

You must schedule an appointment to make up your quiz/exam. You may schedule before or after school.

BEFORE Exam Days

If a student misses a class before an exam, the student must still take the exam on the scheduled day.

TARDINESS

If a student comes to class late, the student will be given a School Wide Detention Form stating the period and time when the student enters the classroom. If the reason for the tardiness is valid, then the student will be excused.

FOOD/DRINK

No food or drink will be allowed in the classroom.

TRASH

The classroom area must be kept clean at all times. Trash should be placed in the garbage can when the students leave the room.

PENCIL SHARPENER

An electric sharpener will available for students' use in the classroom. However, sharpener will only be used **BEFORE** or **AFTER** but not **DURING** the class (when the teacher is in the middle of a learning instruction).

RESTROOM

Each student is expected to have gone to the restroom before coming to the class. If there is any health problem that requires going to the bathroom periodically, students are required to bring a doctor's slip. Passes will be given sparingly.

LAB SAFETY

Each student will receive a Student Safety Contract and a copy of the Safety Rules. Students and Parents are required to read and sign the contract. If the safety rules are not followed, the following sanctions represent the minimum response to violations of our health and safety policy:

First Offense – a verbal warning with a record of the warning

Second Offense – a written warning with the rule reviewed and a statement signed by both the student and the student's parents that the rule is understood and will be followed.

Third Offense – a suspension from all lab activities until a conference is held with the student, parents, the teacher and the administrator.

Fourth Offense – suspension from all lab activities for the remainder of the year.

Alternate assignments will be provided