

Ridgeway High School
Science Department 5th Six Weeks Syllabus

Teacher: Mr. Feaster

Course: Biology

Starting: February 20

Ending: April 10

Student Materials:

As described

1. Scientific Concepts/Content:

A. Ecosystems

1. abiotic and biotic factors
2. energy pyramids
3. trophic levels
4. human interactions

B. Populations and interactions

1. population growth curves
2. environmental factors
3. relationships
4. behaviors

C. Environments

1. adaptations
2. biomes

D. Invertebrates

1. sponges
2. cnidarians
3. flatworms
4. roundworms
5. annelids
6. mollusks
7. crustaceans
8. chelicerates
9. insects
10. echinoderms

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| 2. | <u>Projects/Labs/Major Assignments:</u>
1. lab simulated DNA mapping
2. chapter test chap 4
3. chapter test chap 5 | <u>Projected Dates:</u>
02-20-08
03-08-08
03-28-08 |
| 3. | <u>Assessments:</u> | <u>Projected Dates:</u> |
| 4. | <u>Class Procedures:</u>
Students are to take notes and keep them in their notebooks. Notes are used on Monday quizzes.
Adherence to all school/MCS policies is mandatory, including proper uniform.
Food and drink are not allowed in the classroom. | |

Ridgeway High School
Biology
Mr. Feaster

Required Materials:

- 1 a three ring binder (2 or 3 inch)
- 2 graph paper (20 pages or more)
- 3 notebook paper (100 pages or more)
- 4 dividers (6)
- 5 pencils
- 6 pens, and colored pencils
- 7 calculator optional
- 8 ruler (6-12 inch)
- 9 clear sheet protectors (20 or more) optional to keep notes

Six Weeks Student Evaluation:

Written tests	25%
Homework	10%
Class work	10%
Lab Activities	10%
Project(s)	20%
Weekly quizzes	25%

Written tests will be administered upon completion of each major topic for each Six Weeks Scope and Sequence. For example, during the First Six Weeks written tests will be administered after each of the following topic are completed (i.e. Chemistry of Life, Cell Structure and Function, Mitosis, and Biosphere).

Weekly quizzes on the previous week's notes will be administered on each Monday (or the first day of the school week in case of holidays). These quizzes are open note.

First Six Weeks Scope and Sequence:
(Chapters 1, 2, 7, 10)

Cell Chemistry

- 1 Biomolecules
- 2 Chemical test
- 3 Regulation and control

Cell Structure and Function

- 1 Cellular organelles
- 2 Plant and animal cells
- 3 Transport
- 4 Water movement
- 5 Homeostasis
- 6 Microscopy

Mitosis

- 1 Chromosome movement
- 2 Cell cycle

Second Six Weeks Scope and Sequence
(Chapters 8, 9, 40)

Photosynthesis and Respiration

- 1 Energy transfer
 - A. Products and reactants
 - B. Oxygen and carbon dioxide cycle
 - C. Interdependence
 - D. Aerobic and anaerobic

- 2 Uses of Energy
 - A. Experimental design
 - B. ATP

3 Immune System

- A. Infectious Diseases
- B. Koch's postulates
- C. Specific defenses
- D. Nonspecific defenses
- E. Disorders
- F. HIV and AIDS
- G. Cancer

Third Six Weeks Scope and Sequence (Chapters 11, 14)

Genetics and Biotechnology

1 Reproduction

- A. Continuity and variability
- B. Chromosome numbers
- C. Method
- D. Meiosis

2 Heredity

- A. Punnett squares
- B. Dominant traits
- C. Genotypes and phenotypes
- D. Dihybrid crosses
- E. Modes of inheritance
- F. Sex chromosomes and sex-linked traits
- G. Genetic diseases
- H. Pedigrees and sex-linked inheritance

Fourth Six Weeks Scope and Sequence (Chapters 12, 13, 15, 16, 17)

Genetics and Biotechnology

1 Nucleic Acids

- A. Functions
- B. Models
- C. Replication and protein synthesis

- D. Mutations
- E. Base sequences
- F. DNA bands

Biological Evolution

1 Evidence

- A. Fossil
- B. Homologous structures
- C. DNA

2 Mechanisms

- A. Speciation
- B. Environmental
- C. Selection

Fifth Six Weeks Scope and Sequence

(Chapters 4, 5, 6, 26, 27, 28)

Ecological Interactions

1 Ecosystems

- A. Abiotic and biotic factors
- B. Energy pyramids
- C. Tropic levels
- D. Human Interactions

2 Populations and interactions

- A. Population growth curves
- B. Environmental factors
- C. Relationships
- D. Behaviors

3 Environments

- A. Adaptations
- B. Biomes

4 Invertebrates

- A. Sponges

- B. Cnidarians
- C. Flatworms
- D. Roundworms
- E. Annelids
- F. Mollusks
- G. Crustaceans
- H. Chelicerates
- I. Insects
- J. Echinoderms

Sixth Six Weeks Scope and Sequence
(*Chapters 18, 19, 20, 21, 22, 29, 30, 32, 33*)

Diversity

- 1 Classification system
 - A. Dichotomous keys
 - B. Linnaean system

- 2 Structure, Function and Development
 - A. Symmetry
 - B. Organs and systems
 - C. Metamorphosis
 - D. Life cycles
 - E. Homeostasis

Chordates

- 1 Fish
 - A. Agnatha
 - B. Chondrichthes
 - C. Osteichthyes
- 2 Amphibians
 - A. Urodela
 - B. Anura
 - C. Apoda
- 3 Reptiles
 - A. Dinosaurs
 - B. Squamata
 - C. Crocodilia
 - D. Chelonia
 - E. Tuataras

4 Aves

- A. Feathers
- B. Diversity
- C. Systems

5 Mammals

- A. Systems
- B. Marsupials
- C. Monotremes
- D. Placental
- E. Primates