Biology

Course Syllabus

IDAHO DISTANCE EDUCATION ACADEMY
Educating Through Partnership One Child at a Time

Supervising Teacher

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Course Description:

Biology ***2 semesters*** ***2 credits*** ***Grades 9 or 10***

This course meets the graduation requirement for a laboratory science course. *Students will investigate many aspects of living organisms from the cell and genetics, to individual species and populations.*

Textbook Options:

Harcourt-Holt Option

This option is good for students with an average reading and vocabulary level.

Required Books:

HARCOURT - HOLT Modern Biology Student edition 2006 Edition. Catalog #0000026233

HARCOURT - HOLT Modern Biology Teacher Edition 2006 Edition. Catalog #0000026235

Highly Recommended Optional Items:

HARCOURT - HOLT Modern Biology 2006 Inquiry Skills Development, Student Edition. Catalog #0000032577

HARCOURT - HOLT Modern Biology 2006 Inquiry Skills Development, Teacher's Edition. Catalog #0000032578

HARCOURT - HOLT Modern Biology 2006 Study Guide. Catalog #0000032583

HARCOURT - HOLT Modern Biology 2006 Study Guide Answer Key. Catalog #0000032584

McGraw-Hill Glencoe Biology Option

This option is good for students who are below-grade level readers and need more support – online tests and quizzes are available.

Required Books:

MCGRAW-HILL - GLENCOE Biology 2007 SE. Catalog #0000048562

MCGRAW-HILL - GLENCOE Biology 2007 TE. Catalog #0000048563

McGraw-Hill Glencoe Biology: Dynamics of Life Option

This option is good for students who are grade level readers that need more support – online tests and quizzes are available.

Required Books:

MCGRAW-HILL - GLENCOE Biology: The Dynamics Of Life 2004 SE. Catalog #0000016182

MCGRAW-HILL - GLENCOE Biology: The Dynamics Of Life 2004 TE. Catalog #0000016183

Pearson-Prentice Hall Option

This option is for students with a higher reading ability and are more independent learners.

Required Books:

PEARSON - PRENTICE HALL Biology Student Edition 2008 Edition. Catalog #0000026242

PEARSON - PRENTICE HALL Biology Teacher Edition 2008 Edition. Catalog #0000026243

Highly Recommended Optional Items:

PEARSON - PRENTICE HALL Biology Reading and Study Workbook A. Catalog #0000007545

PEARSON - PRENTICE HALL Biology Reading and Study Workbook A Annotated Teacher's Edition. Catalog #0000007546

Recommended Supplemental Materials or Software:

Software downloaded that will allow you to view .swf and .wmv files (I recommend irfanview.)

Required Supplies:

All biology students must order an I-DEA Biology Lab Kit, #0000054014 from the curriculum catalog PRIOR to the beginning of the semester. Lab kits will be distributed during Fall Semester lab days by the secondary instructor. They will NOT be sent to the home address.

Course Evaluation:

A. Semester Examination: 12% of semester grade

A comprehensive semester examination will be given during exam week each semester. Semester examinations will be given by a supervising instructor at a previously agreed upon location, most often a resource center.

B. Home Participation and Portfolio: 60% of grade

Home participation is to be determined by the home teacher. The participation may include, but is not limited to, textbook activities, quizzes, unit tests, projects, oral reports, or research papers. Grades for home participation will be submitted to the contact teacher who will then forward a copy to the supervising instructor for semester grade tabulation. A portfolio of student work which may include copies of some of the laboratories will be presented to the contact teacher once per semester.

C. Laboratory Expectations: 28% of grade

Students are expected to complete four (4) labs per semester from a selection of eight (8) laboratories as indicated in the moodle course page. All laboratories must be completed only by the student and a full experiment write-up/report must be submitted to the supervising instructor on anchor due dates. All write-ups must contain at least one picture of the student performing the experiment, unless it is performed under supervision of an IDEA instructor at a local resource center. In the case of performing a supervised experiment, the supervising instructor's signature can substitute for the photographic documentation of student participation.

End of Course Assessment:

Since this course is required for high school graduation in the state of Idaho, an assessment piece is required.

A comprehensive examination will be given each semester in addition to required laboratories and the student portfolio.

Pacing Guide

The topics and standards for this course have been divided between the two semesters.

Semester 1(Fall)	**Semester 2 (Spring)**
Scientific Investigation	Change Over Time and Biology
Chemistry and Biology	Classifying Diversity Found in Biology
Cellular Aspects of Biology	Human Systems and Biology
Metabolism and Biology	Ecological Aspects of Biology
Molecular Genetics and Biology	
Heredity and Biology	

In order to fulfill this pacing requirement, the recommended texts have been broken down by chapter. Covering the chapters in the order listed will insure that all topics on the final exam will be covered during the appropriate semester.

Harcourt/Holt: Modern Biology

Semester 1(Fall)	Semester 2 (Spring)
Chapter 1	Chapters 11-12
Chapter 2	Chapters 19-35
Chapters 3-4	Chapters 37-43
Chapter 5	Chapters 15-18
Chapters 6-7, 9-11	
Chapter 8	

McGraw-Hill/Glencoe: Biology

Semester 1(Fall)	Semester 2 (Spring)
Chapter 1	Chapters 14-16
Chapter 6	Chapters 17-30
Chapter 7	Chapters 32 - 37
Chapter 8	Chapters 2-5
Chapters 9, 10.1, 12-13	
Chapters 10.2, 10.3, 11	

McGraw-Hill/Glencoe: Biology: Dynamics of Life

Semester 1(Fall)	Semester 2 (Spring)
Chapter 1	Chapters 14-16
Chapter 6	Chapters 17-32
Chapters 7-8	Chapters 34-39
Chapter 9	Chapters 2-5
Chapters 10-11, 13	
Chapter 12	

Pearson Prentice Hall: Biology

Semester 1(Fall)	Semester 2 (Spring)
Chapter 1	Chapters 15-17
Chapter 2	Chapters 18-32
Chapter 7	Chapters 35-40
Chapters 8-9	Chapters 3-6
Chapters 10-12, 14	
Chapter 11	
Chapter 13	

Additional Information from the Instructor:

Upon successful completion of biology, the student will be able to:

- *Design and conduct quality scientific investigations and be able to accurately communicate the information obtained in mathematic or written (expository) format.*
- *Demonstrate enhanced critical thinking skills.*
- *Develop and demonstrate skills related to observing, measuring, classifying, communicating and inferring.*
- *Identify and understand the inorganic and organic principles that affect biological processes.*
- *Understand the basic unit of life (the cell), and its complexity and diversity. Be able to distinguish various types of cells and cellular organelles and explain their interrelatedness and their functions.*
- *Identify the metabolic processes that occur inside a cell and be able to contrast the two primary processes of photosynthesis and respiration.*
- *Understand the basic principles of heredity and how they relate to inheritance of traits in humans.*
- *Understand the structure and function of DNA as a repository of genetic information and how mutations of the DNA affect cellular function.*
- *Understand how natural selection, mutations, genetic drift, migration and non-random mating affect the frequency of genes from generation to generation (evolution).*
- *Understand the importance of biological cycles and the interdependence that results from these cycles (i.e. the carbon cycle: autotrophs-->heterotrophs-->autotrophs).*
- *Interpret related biological information and evaluate its validity.*
- *Describe the purpose of a classification system and know and apply the characteristics that distinguish the 3 domains, the 6 Kingdoms and the major phyla within each.*
- *Understand the structure and function of human organ systems.*
- *Explain the role of abiotic and biotic factors, niche, habitat, energy flow, trophic structure, biogeochemical cycles, and succession in ecosystems; discuss contemporary problems relating to the environment.*

I-DEA Student Honor Code:

With any form of valid proof of dishonesty with regard to student work or testing, the instructor may elect from a range of actions. Academic dishonesty could lead to a zero grade for the assignment or even failure for the entire course following consultation between the instructor, Secondary Supervisor, and Director.

All students must adhere to the **Honor Code:**

> ***"On my honor, I will maintain the highest possible standards of honesty, integrity and personal responsibility. This means I will not lie, cheat or steal, and as a member of this academic community, I am committed to creating an environment of respect and mutual trust."***

Idaho Content Standards for Biology:

http://www.sde.idaho.gov/site/content_standards/science_standards_docs/ICSGrade9and10science.doc