Curriculum Map
Biology #213H
Saugus High School
Saugus, MA 01906

Week 1

Performance Standards

Unit/Topic./Lesson

The Science of Life
Themes of Biology
Characteristics of Life

Objectives (Students Will...)

List the six unifying themes of Biology
List the six characteristics of life

Essential Question

What is Biology?

Labs/Demonstrations/Activities

Lab: Lab Safety

Teacher Resources

- Glencoe Biology (2009) Chapter 1
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 1 Vocabulary and Questions
Quizzes
Chapter 1 Test

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster

Week 2

Performance Standards

Biology 1.1: Recognize that biological organisms are composed primarily of very few elements. The six most common are C, H, N, O, P, and S

Biology 1.2: Describe the basic molecular structures and primary functions of the four major categories of organic molecules (carbohydrates, lipids, proteins, nucleic acids).

Biology 1.3: Explain the role of enzymes as catalysts that lower the activation energy of biochemical reactions. **Identify** factors, such as pH and temperature that have an effect on enzymes.

Unit/Topic./Lesson

Chemistry in Biology
Atoms, Elements, and Compounds
Chemical Reactions

Objectives (Students Will...)

Identify and **diagram** the particles that make up atoms.
Compare covalent and ionic bonds.
Identify the parts of a chemical reaction.
Summarize the importance of enzymes in living things.

Essential Question

What types of chemical bonds can atoms form with one another?
How do enzymes mediate chemical reactions?

Labs/Demonstrations/Activities

Activity: Building molecular models
Lab: Catalase

Teacher Resources

- Glencoe Biology (2009) Chapter 6
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 6 Vocabulary and Questions
Quizzes

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster

Week 3

Performance Standards

Biology 1.1: Recognize that biological organisms are composed primarily of very few elements. The six most common are C, H, N, O, P, and S

Biology 1.2: Describe the basic molecular structures and primary functions of the four major categories of organic molecules (carbohydrates, lipids, proteins, nucleic acids).

Biology 1.3: Explain the role of enzymes as catalysts that lower the activation energy of biochemical reactions. **Identify** factors, such as pH and temperature that have an effect on enzymes.

Unit/Topic./Lesson

Chemistry in Biology
Water and Solutions

Objectives (Students Will...)

Describe how the structure of water makes it a good solvent.
Describe the difference between acids and bases.

Essential Question

In what ways is water important to living things?

Labs/Demonstrations/Handouts

Lab: pH of common substances

Teacher Resources

- Glencoe Biology (2009) Chapter 6
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 6 Vocabulary and Questions
Quizzes

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster

Week 4

Performance Standards

Biology 1.1: Recognize that biological organisms are composed primarily of very few elements. The six most common are C, H, N, O, P, and S

Biology 1.2: Describe the basic molecular structures and primary functions of the four major categories of organic molecules (carbohydrates, lipids, proteins, nucleic acids).

Biology 1.3: Explain the role of enzymes as catalysts that lower the activation energy of biochemical reactions. **Identify** factors, such as pH and temperature that have an effect on enzymes.

Unit/Topic./Lesson

Chemistry in Biology
The Building Blocks of Life

Objectives (Students Will...)

Describe the role of carbon in living organisms.
Summarize the four major families of biological macromolecules; including their structure and function.

Essential Question

What are the building blocks and functions of carbohydrates, lipids, proteins, and nucleic acids?

Labs/Demonstrations/Handouts

Lab: Carbohydrates

Teacher Resources

- Glencoe Biology (2009) Chapter 6
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 6 Vocabulary and Questions
Quizzes
Chapter 6 Test

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster

Week 5

Performance Standards

Biology 2.1: Relate organelles (plasma membrane, nuclear envelope, nucleus, nucleolus, cytoplasm, mitochondrion, endoplasmic reticulum, Golgi apparatus, lysosome, ribosome, vacuole, cell wall, chloroplast, cytoskeleton, centrioles, cilium, flagellum, pseudopods) to their functions.

Biology 2.1: Explain the role of cell membranes as a highly selective barrier (diffusion, osmosis, facilitated diffusion, active transport).

Biology 2.2: Compare and **contras**t, at the cellular level, the general structures and degrees of complexity of prokaryotes and eukaryotes.

Unit/Topic./Lesson

Cellular Structure and Function
Cell discovery and theory

Objectives (Students Will...)

Relate advances in microscopes to discoveries about cells.
Summarize the principles of the cell theory.
Differentiate between a prokaryotic and eukaryotic cell.

Essential Question

Can you describe similarities between prokaryotic and eukaryotic cells?

Labs/Demonstrations/Handouts

Lab: Using the Light microscope

Teacher Resources

- Glencoe Biology (2009) Chapter 7
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 7 Vocabulary and Questions
Quizzes

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal

Week 6

Performance Standards

Biology 2.1: Relate organelles (plasma membrane, nuclear envelope, nucleus, nucleolus, cytoplasm, mitochondrion, endoplasmic reticulum, Golgi apparatus, lysosome, ribosome, vacuole, cell wall, chloroplast, cytoskeleton, centrioles, cilium, flagellum, pseudopods) to their functions.

Biology 2.1: Explain the role of cell membranes as a highly selective barrier (diffusion, osmosis, facilitated diffusion, active transport).

Biology 2.2: Compare and **contras**t, at the cellular level, the general structures and degrees of complexity of prokaryotes and eukaryotes.

Unit/Topic./Lesson

Cellular Structure and Function
The Plasma Membrane
Cellular Structures and Organelles

Objectives (Students Will...)

Describe the structure and function of the plasma membrane.
Identify the structure and function of the parts of a typical eukaryotic cell.
Compare and contrast plant and animal cells.

Essential Question

What are the functions of the nucleus, ribosome, Golgi body, endoplasmic reticulum, vacuole, lysosome, mitochondria, chloroplast, and centrioles found in a eukaryotic cell?

Labs/Demonstrations/Handouts

Lab: Basic unit of life

Teacher Resources

- Glencoe Biology (2009) Chapter 7
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 7 Vocabulary and Questions
Quizzes
Cell City Project

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal

Week 7

Performance Standards

Biology 2.1: Relate organelles (plasma membrane, nuclear envelope, nucleus, nucleolus, cytoplasm, mitochondrion, endoplasmic reticulum, Golgi apparatus, lysosome, ribosome, vacuole, cell wall, chloroplast, cytoskeleton, centrioles, cilium, flagellum, pseudopods) to their functions.

Biology 2.1: Explain the role of cell membranes as a highly selective barrier (diffusion, osmosis, facilitated diffusion, active transport).

Biology 2.2: Compare and **contras**t, at the cellular level, the general structures and degrees of complexity of prokaryotes and eukaryotes.

Unit/Topic./Lesson

Cellular Structure and Function
Cellular Transport

Objectives (Students Will...)

Explain the three types of diffusion.
Predict the effect of a hypotonic, hypertonic, or isotonic solution on a cell.
Compare and **contrast** passive and active transport.

Essential Question

What are the three main differences between active and passive transport?

Labs/Demonstrations/Handouts

Teacher Resources

- Glencoe Biology (2009) Chapter 7
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 7 Test

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal

Week 8

Performance Standards

Biology 2.4: Identify the reactants, products, and basic purposes of photosynthesis and cellular respiration. **Explain** the interrelated nature of photosynthesis and cellular respiration in the cells of photosynthetic organisms.

Biology 2.5: Explain the important role that ATP serves in metabolism.

Unit/Topic./Lesson

Cellular Energy
How Organisms Obtain Energy

Objectives (Students Will...)

Summarize two laws of thermodynamics.
Compare and **contrast** autotrophs and heterotrophs.
Describe how ATP works in a cell.

Essential Question

How is energy important to living things?

Labs/Demonstrations/Handouts

Launch Lab: 8.1

Teacher Resources

- Glencoe Biology (2009) Chapter 8
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 8 Vocabulary and Questions
Quizzes

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal

Week 9

Performance Standards

Biology 2.4: **Identify** the reactants, products, and basic purposes of photosynthesis and cellular respiration. **Explain** the interrelated nature of photosynthesis and cellular respiration in the cells of photosynthetic organisms.

Biology 2.5: **Explain** the important role that ATP serves in metabolism.

Unit/Topic./Lesson

Cellular Energy
Photosynthesis

Objectives (Students Will...)

Summarize the two phases of photosynthesis.
Explain the function of a chloroplast during the light reactions.
Describe and diagram electron transport.

Essential Question

What energy conversion occurs during photosynthesis?

Labs/Demonstrations/Handouts

Lab: Cell energy

Teacher Resources

- Glencoe Biology (2009) Chapter 8
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 8 Vocabulary and Questions
Quizzes

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal

Week 10

Performance Standards

Biology 2.4: **Identify** the reactants, products, and basic purposes of photosynthesis and cellular respiration. **Explain** the interrelated nature of photosynthesis and cellular respiration in the cells of photosynthetic organisms.

Biology 2.5: **Explain** the important role that ATP serves in metabolism.

Unit/Topic./Lesson

Cellular Energy
Cellular Respiration

Objectives (Students Will...)

Summarize the stages of cellular respiration.
Identify the role of electron carriers in each stage of cellular respiration.
Compare lactic acid and alcoholic fermentation.

Essential Question

How do living organisms obtain energy during cellular respiration?

Labs/Demonstrations/Handouts

Teacher Resources

- Glencoe Biology (2009) Chapter 8
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- Overhead projector Notes
- Interactive Explorations on CD-ROM
- Internet labs and resources
- Videos

Assessment Activities

Chapter 8 Test

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal

Week 11

Performance Standards

Biology 2.6: **Describe** the cell cycle and the process of mitosis. **Explain** the role of mitosis in the formation of new cells, and its importance in maintaining chromosome number during asexual reproduction.

Biology 2.7: **Describe** how the process of meiosis results in the formation of haploid cells. **Explain** the importance of this process in sexual reproduction, and how gametes form diploid zygotes in the process of fertilization.

Biology 4.6: Recognize that the sexual reproductive system allows organisms to produce offspring that receive half of their genetic information from their mother and half from their father, and that sexually produced offspring resemble, but are not identical to, either of their parents.

Unit/Topic./Lesson

Cellular Reproduction
Cellular Growth

Objectives (Students Will...)

Explain why cells are relatively small.
Describe the stages of interphase.
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Essential Question

What are dominant and recessive genes?

Labs/Demonstrations/Handouts

Lab: Chromosome simulation of mitosis

Teacher Resources

- Glencoe Biology (2009) Chapter 9
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 9 Vocabulary and Questions
Quizzes

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal

Week 12

Performance Standards

Biology 2.6: **Describe** the cell cycle and the process of mitosis. **Explain** the role of mitosis in the formation of new cells, and its importance in maintaining chromosome number during asexual reproduction.

Biology 2.7: **Describe** how the process of meiosis results in the formation of haploid cells. **Explain** the importance of this process in sexual reproduction, and how gametes form diploid zygotes in the process of fertilization.

Biology 4.6: Recognize that the sexual reproductive system allows organisms to produce offspring that receive half of their genetic information from their mother and half from their father, and that sexually produced offspring resemble, but are not identical to, either of their parents.

Unit/Topic./Lesson

Cellular Reproduction
Mitosis and Cytokinesis

Objectives (Students Will...)

Describe the main events of each stage of mitosis.
Explain the process of cytokinesis

Essential Question

Why does Mitosis alone not produce daughter cells?

Labs/Demonstrations/Handouts

Teacher Resources

- Glencoe Biology (2009) Chapter 9
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 9 Vocabulary and Questions
Quizzes

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal

Week 13

Performance Standards

Biology 2.6: **Describe** the cell cycle and the process of mitosis. **Explain** the role of mitosis in the formation of new cells, and its importance in maintaining chromosome number during asexual reproduction.

Biology 2.7: **Describe** how the process of meiosis results in the formation of haploid cells. **Explain** the importance of this process in sexual reproduction, and how gametes form diploid zygotes in the process of fertilization.

Biology 4.6: Recognize that the sexual reproductive system allows organisms to produce offspring that receive half of their genetic information from their mother and half from their father, and that sexually produced offspring resemble, but are not identical to, either of their parents.

Unit/Topic./Lesson

Cellular Reproduction
Sexual Reproduction and Meiosis

Objectives (Students Will...)

Explain the reduction in chromosome number that occurs during meiosis.
Recognize and **summarize** the stages of meiosis.
Analyze the importance of meiosis in providing genetic variation.

Essential Question

Why is the reduction of chromosome number essential to sexual reproduction?

Labs/Demonstrations/Handouts

Lab: Chromosome simulation of meiosis

Teacher Resources

- Glencoe Biology (2009) Chapter 10
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 10 Vocabulary and Questions
Quizzes

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal

Week 14

Performance Standards

Biology 2.6: **Describe** the cell cycle and the process of mitosis. **Explain** the role of mitosis in the formation of new cells, and its importance in maintaining chromosome number during asexual reproduction.

Biology 2.7: **Describe** how the process of meiosis results in the formation of haploid cells. **Explain** the importance of this process in sexual reproduction, and how gametes form diploid zygotes in the process of fertilization.

Biology 4.6: Recognize that the sexual reproductive system allows organisms to produce offspring that receive half of their genetic information from their mother and half from their father, and that sexually produced offspring resemble, but are not identical to, either of their parents.

Unit/Topic./Lesson

Cellular Reproduction
Sexual Reproduction and Meiosis

Objectives (Students Will...)

Distinguish normal karyotypes from those with abnormal numbers of chromosomes.
Relate the effect of non-disjunction to Down syndrome and other disorders.

Essential Question

What type of information can be obtained from a karyotype?

Labs/Demonstrations/Handouts

Lab: Karyotype

Teacher Resources

- Glencoe Biology (2009) Chapter 11
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Cell Division Test

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal

Week 15

Performance Standards

Biology 3.4: Distinguish among observed inheritance patterns caused by several types of genetic traits (dominant, recessive, co-dominant, sex-linked, polygenic, incomplete dominance, multiple alleles).

Biology 3.5: Describe how Mendel's laws of segregation and independent assortment can be observed through patterns of inheritance (e.g., dihybrid crosses).

Biology 3.6: Use a Punnett Square to determine the probabilities for genotype and phenotype combinations in monohybrid crosses.

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Unit/Topic./Lesson

Mendel and Genetics

Objectives (Students Will...)

Summarize Mendel's two laws of genetics.
Predict the possible offspring from a cross using a Punnett square.

Essential Question

When crossing two heterozygous individuals for a given trait, what are the genotypic and phenotypic ratios of the offspring?

Labs/Demonstrations/Handouts

Lab: Human traits
Lab: Finding genotypes and phenotypes for one trait

Teacher Resources

- Glencoe Biology (2009) Chapter 10
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 10 Vocabulary and Questions
Quizzes

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal

Week 16

Performance Standards

Biology 3.4: Distinguish among observed inheritance patterns caused by several types of genetic traits (dominant, recessive, co-dominant, sex-linked, polygenic, incomplete dominance, multiple alleles).

Biology 3.5: Describe how Mendel's laws of segregation and independent assortment can be observed through patterns of inheritance (e.g., dihybrid crosses).

Biology 3.6: Use a Punnett Square to determine the probabilities for genotype and phenotype combinations in monohybrid crosses.

Unit/Topic./Lesson

Mendel and Genetics
Basic Patterns of Human Inheritance

Objectives (Students Will...)

Distinguish between incomplete dominance, co-dominance, and multiple alleles.
Analyze sex linked inheritance patterns.

Essential Question

How are the heterozygotes of incomplete dominance and co-dominance different from those that follow the Mendelian laws?

Labs/Demonstrations/Handouts

Lab: Finding genotypes and phenotypes for two traits

Teacher Resources

- Glencoe Biology (2009) Chapter 11
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 11 Vocabulary and Questions
Quizzes

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal

Week 17

Performance Standards

Biology 3.4: **Distinguish** among observed inheritance patterns caused by several types of genetic traits (dominant, recessive, co-dominant, sex-linked, polygenic, incomplete dominance, multiple alleles).

Biology 3.5: **Describe** how Mendel's laws of segregation and independent assortment can be observed through patterns of inheritance (e.g., dihybrid crosses).

Biology 3.6: **Use** a Punnett Square to determine the probabilities for genotype and phenotype combinations in monohybrid crosses.

Unit/Topic./Lesson

Mendel and Genetics
Complex Patterns of Inheritance

Objectives (Students Will...)

Summarize examples of dominant and recessive disorders.
Construct human pedigrees from genetic information.

Essential Question

Construct a pedigree that traces the incidence of cystic fibrosis in a family with two "normal" parents that have three children; one of which has the disease?

Labs/Demonstrations/Handouts

Lab: Pedigree studies

Teacher Resources

- Glencoe Biology (2009) Chapter 11
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Mendelian Genetics Test

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal

Week 18

Performance Standards

Biology 3.1: **Describe** the basic structure (double helix, sugar/phosphate backbone, linked by complementary nucleotide pairs) of DNA, and **describe** its function in genetic inheritance.

Biology 3.2: **Describe** the basic process of DNA replication and how it relates to the transmission and conservation of the genetic code. **Explain** the basic processes of transcription and translation, and how they result in the expression of genes. **Distinguish** among the end products of replication, transcription, and translation.

Biology 3.3: **Explain** how mutations in the DNA sequence of a gene may or may not result in phenotypic change in an organism. **Explain** how mutations in gametes may result in phenotypic changes in offspring.

Unit/Topic./Lesson

Molecular Genetics
DNA: The Molecular Material

Objectives (Students Will...)

Summarize the experiments leading to the discovery of DNA as the genetic material.
Diagram and **label** the basic structure of DNA
Summarize the process of DNA replication.

Essential Question

What the major components of a DNA molecule and how are those components arranged?

Labs/Demonstrations/Handouts

Lab: DNA and RNA

Teacher Resources

- Glencoe Biology (2009) Chapter 12
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 12 Vocabulary and Questions Quizzes
GATTACA project (3 days)

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal

Week 19

Performance Standards

Biology 3.1: Describe the basic structure (double helix, sugar/phosphate backbone, linked by complementary nucleotide pairs) of DNA, and **describe** its function in genetic inheritance.

Biology 3.2: Describe the basic process of DNA replication and how it relates to the transmission and conservation of the genetic code. **Explain** the basic processes of transcription and translation, and how they result in the expression of genes. **Distinguish** among the end products of replication, transcription, and translation.

Biology 3.3: Explain how mutations in the DNA sequence of a gene may or may not result in phenotypic change in an organism. **Explain** how mutations in gametes may result in phenotypic changes in offspring.

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Unit/Topic./Lesson

Molecular Genetics
Replication of DNA

Objectives (Students Will...)

Summarize the role of enzymes involved in the process of DNA replication.
Explain how the leading and lagging strands are synthesized differently

Essential Question

Explain why DNA replication is more complex in eukaryotes than in bacteria.

Labs/Demonstrations/Handouts

Teacher Resources

- Glencoe Biology (2009) Chapter 12
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 12 Vocabulary and Questions
Quizzes

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal

Week 20

Performance Standards

Biology 3.1: Describe the basic structure (double helix, sugar/phosphate backbone, linked by complementary nucleotide pairs) of DNA, and **describe** its function in genetic inheritance.

Biology 3.2: Describe the basic process of DNA replication and how it relates to the transmission and conservation of the genetic code. **Explain** the basic processes of transcription and translation, and how they result in the expression of genes. **Distinguish** among the end products of replication, transcription, and translation.

Biology 3.3: Explain how mutations in the DNA sequence of a gene may or may not result in phenotypic change in an organism. **Explain** how mutations in gametes may result in phenotypic changes in offspring.

Unit/Topic./Lesson

Molecular Genetics
DNA, RNA, and Protein
Gene Regulation and Mutation

Objectives (Students Will...)

Explain how mRNA, tRNA, and rRNA are involved in the transcription and translation of genes.
Describe how the code of DNA is transcribed into messenger RNA and is utilized to synthesize a protein.
Summarize the various types of mutations

Essential Question

What steps make up the central dogma of biology?

Labs/Demonstrations/Handouts

Lab: tRNA and protein building

Teacher Resources

- Glencoe Biology (2009) Chapter 12
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 12 Vocabulary and Questions
Quizzes

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal

Week 21

Performance Standards

Biology 5.1: Explain how evolution is demonstrated by evidence from the fossil record, comparative anatomy, genetics, molecular biology, and examples of natural selection.

Biology 5.3: Explain how evolution through natural selection can result in changes in biodiversity through the increase or decrease of genetic diversity within a population.

Unit/Topic./Lesson

Evolution
Darwin's Theory of Evolution by Natural Selection

Objectives (Students Will...)

Discuss the evidence that convinced Darwin that species could change over time.
List the four principles of natural selection.
Show how natural selection could change a population.

Essential Question

What are the essential elements to Darwin's theory of evolution by natural selection?

Labs/Demonstrations/Handouts

Teacher Resources

- Glencoe Biology (2009) Chapter 15
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 15 Vocabulary and Questions
Quizzes

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal

Week 22

Performance Standards

Biology 5.1: Explain how evolution is demonstrated by evidence from the fossil record, comparative anatomy, genetics, molecular biology, and examples of natural selection.

Biology 5.3: Explain how evolution through natural selection can result in changes in biodiversity through the increase or decrease of genetic diversity within a population.

Unit/Topic./Lesson

Evolution
Evidence of Evolution

Objectives (Students Will...)

Describe how fossils provide evidence of evolution.
Discuss anatomical evidence of evolution.
Explain how biochemistry provides evidence of evolution.

Essential Question

What do all lines of evidence of evolution indicate about the history of organisms?

Labs/Demonstrations/Handouts

Lab: Biochemical evidence of evolution

Teacher Resources

- Glencoe Biology (2009) Chapter 15
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 15 Vocabulary and Questions
Quizzes

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal

Week 23

Performance Standards

Biology 5.1: Explain how evolution is demonstrated by evidence from the fossil record, comparative anatomy, genetics, molecular biology, and examples of natural selection.

Biology 5.3: Explain how evolution through natural selection can result in changes in biodiversity through the increase or decrease of genetic diversity within a population.

Unit/Topic./Lesson

Evolution
Shaping Evolutionary Theory

Objectives (Students Will...)

Discuss patterns observed in evolution.
Describe factors that influence speciation.
Compare gradualism with punctuated equilibrium.

Essential Question

Which pattern of evolution is **Show**n by many species of finches on the Galapagos Islands?

Labs/Demonstrations/Handouts

Lab: Primate evolution

Teacher Resources

- Glencoe Biology (2009) Chapter 15
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 15 Vocabulary and Questions
Chapter 15 Test

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal

Week 24

Performance Standards

Biology 5.2 Describe species as reproductively distinct groups of organisms. **Recognize** that species are further classified into a hierarchical taxonomic system (kingdom, phylum, class, order, family, genus, species) based on morphological, behavioral, and molecular similarities.

Biology 2.3: **Use** cellular evidence (e.g., cell structure, cell number, cell reproduction) and modes of nutrition to **describe** the six kingdoms (Archaebacteria, Eubacteria, Protista, Fungi, Plantae, Animalia).

Unit/Topic./Lesson

Organizing Life's Diversity
The History of Classification

Objectives (Students Will...)

Compare Aristotle's and Linnaeus's methods of classifying organisms.
Explain how to write a scientific name using binomial nomenclature.
Summarize the taxa used in biological classification.

Essential Question

What are the seven taxa of classification in order from broadest to most specific?

Labs/Demonstrations/Handouts

Teacher Resources

- Glencoe Biology (2009) Chapter 17
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 17 Vocabulary and Questions
Quizzes

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal

Week 25

Performance Standards

Biology 5.2 Describe species as reproductively distinct groups of organisms. **Recognize** that species are further classified into a hierarchical taxonomic system (kingdom, phylum, class, order, family, genus, species) based on morphological, behavioral, and molecular similarities.

Biology 2.3: **Use** cellular evidence (e.g., cell structure, cell number, cell reproduction) and modes of nutrition to **describe** the six kingdoms (Archaebacteria, Eubacteria, Protista, Fungi, Plantae, Animalia).

Unit/Topic./Lesson

Organizing Life's Diversity
Modern Classification

Objectives (Students Will...)

Compare and contrast species concepts
Describe methods used to reveal phylogeny
Explain how a cladogram is constructed

Essential Question

How has the changing species concept affected classification systems?

Labs/Demonstrations/Handouts

Teacher Resources

- Glencoe Biology (2009) Chapter 17
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 17 Vocabulary and Questions
Quizzes

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal

Week 26

Performance Standards

Biology 5.2 Describe species as reproductively distinct groups of organisms. **Recognize** that species are further classified into a hierarchical taxonomic system (kingdom, phylum, class, order, family, genus, species) based on morphological, behavioral, and molecular similarities.

Biology 2.3: **Use** cellular evidence (e.g., cell structure, cell number, cell reproduction) and modes of nutrition to **describe** the six kingdoms (Archaebacteria, Eubacteria, Protista, Fungi, Plantae, Animalia).

Unit/Topic./Lesson

Organizing Life's Diversity
Domains and Kingdoms

Objectives (Students Will...)

Compare the major characteristics of the three domains.
Differentiate among the six kingdoms.

Essential Question

Which kingdoms include organisms that are prokaryotic and which are eukaryotic?

Labs/Demonstrations/Handouts

Lab: Using a dichotomous key (shark lab)

Teacher Resources

- Glencoe Biology (2009) Chapter 17
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 17 Vocabulary and Questions
Chapter 17 Test

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal

Week 27

Performance Standards

Biology 4.5: **Explain** how the muscular/skeletal system (skeletal, smooth and cardiac muscles, bones, cartilage, ligaments, tendons) works with other systems to support the body and allow for movement. **Recognize** that bones produce blood cells.

Unit/Topic./Lesson

Skeletal, Muscular, and Integumentary system
Skeletal system
Muscular system
Integumentary system

Objectives (Students Will...)

List the four tissue types that are in the integumentary system
Explain the function of the integumentary system
Summarize the functions of the skeletal system.
Describe the composition of the two layers of skin
Describe events that occur when skin is repaired
Describe the three types of muscle tissue.
Explain how the skeletal and muscular systems work together to support and move the body.

Essential Question

How are the skeletal system and the muscular system related in function?

Labs/Demonstrations/Handouts

Teacher Resources

- Glencoe Biology (2009) Chapter 32
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 32 Vocabulary and Questions
Quizzes

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal

Week 28

Performance Standards

Biology 4.4: **Explain** how the nervous system (brain, spinal cord, sensory neurons, motor neurons) mediates communication among different parts of the body and mediates the body's interactions with the environment. **Identify** the basic unit of the nervous system, the neuron, and **Explain** generally how it works.

Unit/Topic./Lesson

Nervous System
Structure of the Nervous System
Organization of the Nervous System

Objectives (Students Will...)

Identify the major parts of a neuron and **Describe** the function of each part.
Differentiate between the functions and organs of the central nervous system and the peripheral nervous system.

Essential Question

What is the basic unit of the nervous system and how does it work?

Labs/Demonstrations/Handouts

Teacher Resources

- Glencoe Biology (2009) Chapter 33
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 33 Vocabulary and Questions
Quizzes

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal

Week 29

Performance Standards

Biology 4.2: **Explain** how the circulatory system (heart, arteries, veins, capillaries, red blood cells) transports nutrients and oxygen to cells and removes cell wastes. **Describe** how the kidneys and the liver are closely associated with the circulatory system as they perform the excretory function of removing waste from the blood. **Recognize** that kidneys remove nitrogenous wastes, and the liver removes many toxic compounds from blood.

Biology 4.3: **Explain** how the respiratory system (nose, pharynx, larynx, trachea, lungs, alveoli) provides exchange of O_2 and CO_2)

Unit/Topic./Lesson

Circulatory and Respiratory systems
Circulatory system
Respiratory system

Objectives (Students Will...)

Identify main functions of the respiratory and circulatory systems.
Trace the flow of blood through the heart and body.
Summarize the path of air through the respiratory system.

Essential Question

How are the functions of the circulatory and respiratory systems related?

Labs/Demonstrations/Handouts

Lab: Frog dissection

Teacher Resources

- Glencoe Biology (2009) Chapter 34
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 34 Vocabulary and Questions
Quizzes

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal

Week 30

Performance Standards

Biology 4.2: **Explain** how the circulatory system (heart, arteries, veins, capillaries, red blood cells) transports nutrients and oxygen to cells and removes cell wastes. **Describe** how the kidneys and the liver are closely associated with the circulatory system as they perform the excretory function of removing waste from the blood. **Recognize** that kidneys remove nitrogenous wastes, and the liver removes many toxic compounds from blood.

Unit/Topic./Lesson

Excretory System
Urinary system

Objectives (Students Will...)

Summarize the function of the kidneys in the body
Sequence the steps of the excretion of wastes from the Bowman's capsule to the Urethra
Distinguish between filtration and re-absorption in the kidney

Essential Question

How do the kidneys help maintain homeostasis?

Labs/Demonstrations/Handouts

Teacher Resources

- Glencoe Biology (2009) Chapter 34
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 34 Vocabulary and Questions
Quizzes

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal

Week 31

Performance Standards

Biology 4.1: Explain generally how the digestive system (mouth, pharynx, esophagus, stomach, small and large intestines, rectum) converts macromolecules from food into smaller molecules that can be used by cells for energy and for repair and growth.

Unit/Topic./Lesson

Digestive system

Objectives (Students Will...)

Summarize the three main functions of the digestive system.
Identify the structures of the digestive system and their functions.
Describe the process of chemical digestion

Essential Question

Describe the process that breaks down food so nutrients can be absorbed by the body.

Labs/Demonstrations/Handouts

Lab: Earthworm dissection

Teacher Resources

- Glencoe Biology (2009) Chapter 35
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 35 Vocabulary and Questions
Quizzes

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal

Week 32

Performance Standards

Biology 4.7: Recognize that communication among cells is required for coordination of body functions. The nerves communicate with electrochemical signals, hormones circulate through the blood, and some cells produce signals to communicate only with nearby cells.

Biology 4.8: Recognize that the body's systems interact to maintain homeostasis. **Describe** the basic function of a physiological feedback loop.

Unit/Topic./Lesson

Endocrine system
Hormones
Endocrine glands
Feed back mechanisms

Objectives (Students Will...)

Identify and **describe** the function of glands that make up the endocrine system
Explain the role of the endocrine system in maintaining homeostasis.
Describe negative feedback mechanisms that regulate hormone levels in the body.

Essential Question

What molecules of the endocrine system controls communication within the body?

Labs/Demonstrations/Handouts

Teacher Resources

- Glencoe Biology (2009) Chapter 35
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 35 Vocabulary and Questions
Quizzes

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal

Week 33

Performance Standards

Biology 6.3: Use a food web to **Identify** and **distinguish** producers, consumers, and decomposers, and **explain** the transfer of energy through trophic levels. **Describe** how relationships among organisms (predation, parasitism, competition, commensalism, mutualism) add to the complexity of biological communities.

Unit/Topic./Lesson

Principles of Ecology
Organisms and their Relationships
Flow of Energy in an Ecosystem
Cycling of Matter

Objectives (Students Will...)

Explain the difference between biotic and abiotic factors
Describe the levels of biological organization
Differentiate between an organisms habitat and niche
Describe the flow of energy through an ecosystem.
Identify the ultimate energy source for Earth.
Differentiate between food chains and food webs.

Essential Question

What is the ultimate source of energy for life on Earth?

Labs/Demonstrations/Handouts

Teacher Resources

- Glencoe Biology (2009) Chapter 2
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 2 Vocabulary and Questions
Quizzes

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal

Week 34

Performance Standards

Biology 6.4: Explain how water, carbon, and nitrogen cycle between abiotic resources and organic matter in an ecosystem, and how oxygen cycles through

Unit/Topic./Lesson

Principles of Ecology
Cycling of Matter

Objectives (Students Will...)

Describe how nutrients move through the biotic and abiotic parts of an ecosystem.
Compare the biogeochemical cycles of nutrients (carbon, nitrogen, water, and oxygen.)

Essential Question

Why is it important to living organisms that nutrients cycle?

Labs/Demonstrations/Handouts

Lab: Pedigree studies

Teacher Resources

- Glencoe Biology (2009) Chapter 2
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 2 Vocabulary and Questions
Quizzes

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal

Week 35

Performance Standards

Biology 6.1: Explain how birth, death, immigration, and emigration influence population size.

Biology 6.2: Analyze changes in population size and biodiversity (speciation and extinction) that result from the following: natural causes, changes in climate, human activity, and the introduction of invasive, non-native species.

Unit/Topic./Lesson

Population Ecology
Population Dynamics
Human Population

Objectives (Students Will...)

Describe the characteristics of populations
Understand the concepts of carrying capacity and limiting factors
Describe the ways in which populations are distributed
Explain the trends in human population growth
Compare the age structure of representative non-growing, slowly growing, and rapidly growing countries

Essential Question

What are changes in human population over time?

Labs/Demonstrations/Handouts

Teacher Resources

- Glencoe Biology (2009) Chapter 4
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 4 Vocabulary and Questions
Quizzes

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal

Week 36

Performance Standards

Biology 6.1: Explain how birth, death, immigration, and emigration influence population size.

Biology 6.2: Analyze changes in population size and biodiversity (speciation and extinction) that result from the following: natural causes, changes in climate, human activity, and the introduction of invasive, non-native species.

Unit/Topic./Lesson

Biodiversity and Conservation
Biodiversity
Changes to Biodiversity
Conserving Biodiversity

Objectives (Students Will...)

Explain the importance of biodiversity.
Describe several factors that could limit or decrease biodiversity.

Essential Question

What are some ways that humans threaten biodiversity on Earth?

Labs/Demonstrations/Handouts

Teacher Resources

- Glencoe Biology (2009) Chapter 5
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS
- Foldables

Media Resources

- Power Point Presentations
- On-line Text book
- Virtual Labs CD-ROM
- Interactive Chalkboard CD-ROM
- Internet labs and resources
- Overhead projector

Assessment Activities

Chapter 5 Vocabulary and Questions
Quizzes

Completion date:

Completed by:

Comments: ***Alternative Evaluation:***
Paper, Project, Poster, Journal