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| **10th Grade Biology**  **Tentative Pacing Guide** | | | **Weiner High School**  **weiner_cardinal.jpg**  **2010-11** | | |
| **Mrs. Smith** | | | | | |
| **First Semester** | | | | | |
| Timeline | Topic | Unit/Chapter | Standards | Skills | Resources |
| ***1st Nine weeks*** | | | | | |
| ***Introduction to Biology*** | | | | | |
|  | **Nature of Science** | ***Chapter 1***  C:\Program Files\Microsoft Office\MEDIA\CAGCAT10\j0301076.wmf | **6 Days** | **NS.10.B.1 Explain** why science is limited to natural explanations of how the world works  **NS.10.B.2 Compare and contrast** hypotheses, theories, and laws  **NS.10.B.3   Distinguish** between a scientific theory and the term “theory” used in general conversation  **NS.10.B.4 Summarize** the guidelines of science:   * *explanations* are based on observations, evidence, and testing * *hypotheses* must be testable * understandings and/or conclusions may change with additional empirical data   **NS.11.B.1   Develop and explain** the appropriate procedure, controls, and variables (dependent and independent) in scientific experimentation  **NS.11.B.2 Research and apply** appropriate safety precautions (refer to ADE Guidelines) when designing and/or conducting scientific investigations  **NS.11.B.3   Identify** sources of bias that could affect experimental outcome  **NS.11.B.4   Gather and analyze** data using appropriate summary statistic  **NS.11.B.5   Formulate** valid conclusions without bias  **NS.11.B.6   Communicate** experimental results using appropriate reports, figures, and tables  **NS.12.B.1 Recognize** that theories are scientific explanations that require empirical data, verification, and peer review  **NS.12.B.2 Understand** that scientific theories may be modified or expanded based on additional empirical data, verification, and peer review  **NS.15.B.1 Research and evaluate** science careers using the following criteria:   * educational requirements * salary * availability of jobs * working conditions | Powerpoint:  [Scientific Method](Mrs.%20Smith/Biology/Powerpoints/1-Scientific%20Method.ppt) |
| [***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)Chapter Study Guide***](http://biologyjunction.com/study_guides_bi.htm) | | | ***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)***[***Practice Test for Chapter***](http://biologyjunction.com/quizzes.htm) | | |
| ***Chemistry of Organisms*** | | | | | |
| **2 Days** | **Chemistry** | ***Chapter 2***   * [**Energy, Enzymes, Water**](http://biologyjunction.com/chapter_2_chemistry_notes.htm)   C:\Documents and Settings\Administrator\Local Settings\Temporary Internet Files\Content.IE5\C2YJITX6\MC900268956[1].wmf | ***Molecules & Cells***  **Standard 1:** Students shall demonstrate an understanding of the role of chemistry in life processes. | Stan  **MC.1.B.2 Describe** the relationship between an enzyme and its substrate molecule(s).  **MC.1.B.3**  **Investigate** the properties  (surface tension, cohesion, adhesion, polarity, pH) and importance of water and its significance for life.  **MC.1.B.4****Explain** the role of energy (activation, endergonic, & exergonic) in chemical reactions of living systems. | Powerpoint: |
| ***Biochemistry of Organisms*** | | | | | |
| **7 Days** | **Cellular Chemistry** | ***Chapter 3***   * [**Biochemistry**](http://biologyjunction.com/biochemistry_notes_bi_ch3.htm)imagesCAN9N8Q8.jpg | ***Molecules & Cells***  **Standard 1:** Students shall demonstrate an understanding of the role of chemistry in life processes. | **MC.1.B.1   Describe** the structure and function of the major organic molecules found in living systems:   * ***Carbohydrates*** * ***Proteins*** * ***Lipids*** * ***Nucleic Acids*** |  |
| [***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)Chapter Study Guide***](http://biologyjunction.com/study_guides_bi.htm) | | | ***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)***[***Practice Test for Chapter***](http://biologyjunction.com/quizzes.htm) | | |
| ***Cells*** | | | | | |
| **10 Days** | **Cellular Structure** | ***Chapter 4***   * [**Cell Structure & Function**](http://biologyjunction.com/cell%20%20notes%20bi.htm)   imagesCAL3O7HI.jpg | ***Molecules & Cells***  **Standard 2**: Students shall demonstrate an understanding of the structure and function of cells. | **MC.2.B.1   Construct** a hierarchy of life from cells to *ecosystems.*  **MC.2.B.2 Compare and contrast** *prokaryotes* and *eukaryotes.*  **MC.2.B.3** **Describe** the role of sub-cellular structures (organelles, ribosomes, & cytoskeleton) in the life of a cell.  **MC.2.B.4 Relate** the function of the *plasma* (*cell) membrane* to its structure.  **MC.2.B.5    Compare and contrast** the structures of an animal cell to a plant cell.  **MC.2.B.11 Discuss** *homeostasis* using *thermoregulation* as an example.  **MC.3.B.1**  **Compare and contrast** the structure and function of *mitochondria* and *chloroplasts .* |  |
| [***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)Chapter Study Guide***](http://biologyjunction.com/study_guides_bi.htm) | | | ***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)***[***Practice Test for Chapter***](http://biologyjunction.com/quizzes.htm) | | |
| **7 Days** | **Cell Membranes** | ***Chapter 5***   * [**Homeostasis & Transport**](http://biologyjunction.com/homeostasis_notes_bi.htm)   imagesCAN2N78G.jpg | ***Molecules & Cells***  **Standard 2**: Students shall demonstrate an understanding of the structure and function of cells. | **MC.2.B.7   Compare and contrast** *active transport* and *passive transport* *mechanisms:*   * **Diffusion** * **Osmosis** * **Endocytosis** * **Exocytosis** * **Phagocytosis** * **Pinocytosis** |  |
| [***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)Chapter Study Guide***](http://biologyjunction.com/study_guides_bi.htm) | | | ***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)***[***Practice Test for Chapter***](http://biologyjunction.com/quizzes.htm) | | |
| ***Cellular Processes*** | | | | | |
| **4 Days** | **Cellular Energetics** | ***Chapter 6*** [**Photosynthesis**](http://biologyjunction.com/photosynthesis_notes.htm)  imagesCAEMZ2U9.jpg | ***Molecules & Cells***  **Standard 3:** Students shall demonstrate an understanding of how cells obtain and use energy. **(Energetics)** | **MC.2.B.6 Compare and contrast** the functions of *autotrophs* and *heterotrophs*  **MC.3.B.1    Compare and contrast** the structure and function of *mitochondria* and *chloroplasts.*  **MC.3.B.4** **Describe and model** the conversion of light energy to chemical energy by photosynthetic organisms (light dependent & independent reactions).  **MC.3.B.5   Compare and contrast** *cellular respiration* and *photosynthesis* as energy conversion pathways**.** |  |
| [***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)Chapter Study Guide***](http://biologyjunction.com/study_guides_bi.htm) | | | ***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)***[***Practice Test for Chapter***](http://biologyjunction.com/quizzes.htm) | | |
| **5 Days** | **Cellular Energetics** | ***Chapter 7***[**Cellular Respiration**](http://biologyjunction.com/cell_respiration_bi.htm)  imagesCALZ1FIW.jpg | ***Molecules & Cells***  **Standard 3:** Students shall demonstrate an understanding of how cells obtain and use energy. **(Energetics)** | **MC.3.B.1 Compare and contrast** the structure and function of *mitochondria* and *chloroplasts.*  **MC.3.B.2   Describe and model** the conversion of stored energy (glycolysis, citric acid cycle, electron transport chain) in organic molecules into usable cellular energy (ATP).  **MC.3.B.3   Compare and contrast** *aerobic* and *anaerobic respiration* (lactic acid and alcoholic fermentation).  **MC.3.B.5**    **Compare and contrast** *cellular respiration* and *photosynthesis* as energy conversion pathways. |  |
| [***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)Chapter Study Guide***](http://biologyjunction.com/study_guides_bi.htm) | | | ***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)***[***Practice Test for Chapter***](http://biologyjunction.com/quizzes.htm) | | |
| ***Second Nine Weeks*** | | | | | |
| **7 Days** | **Cell Division** | ***Chapter 8***[**Cell Cycle & Division**](http://biologyjunction.com/cell_division_notes.htm)  imagesCAC99918.jpg | ***Molecules & Cells***  **Standard 2**: Students shall demonstrate an understanding of the structure and function of cells. | **MC.2.B.8 Describe** the main events in the *cell cycle* (mitosis, interphase, & cytokinesis)*,* including the differences in plant and animal cell division.  **MC.2.B.9   List in order and describe** the stages of *mitosis* (prophase, metaphase, anaphase, & telophase).  **MC.2.B.10** **Analyze** the meiotic maintenance of a constant *chromosome* number from one generation to the next.  **CDL.7.B.8**  **Compare and contrast** life cycles (sexual & asexual) of familiar organisms.**HE.4.B.4   Examine** different modes of inheritance such as  *crossing over.* |  |
| [***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)Chapter Study Guide***](http://biologyjunction.com/study_guides_bi.htm) | | | ***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)***[***Practice Test for Chapter***](http://biologyjunction.com/quizzes.htm) | | |
| **8 Days** | **Heredity** | ***Chapters 9 & 12***  [**Genetics**](http://biologyjunction.com/mendelian_genetics.htm)  imagesCAGLT0L3.jpg | ***Heredity & Evolution***  **Standard 4:** Students shall demonstrate an understanding of *heredity****.*** | **HE.4.B.1 Summarize** the outcomes of Gregor Mendel’s experimental procedures.  **HE.4.B.2 Differentiate** among the *laws and principles of inheritance* (dominance, segregation, independent assortment).  **HE.4.B.3** **Use the *laws* of probability and *Punnett squares*** to predict *genotypic* and *phenotypic* *ratios.*  **HE.4.B.4** **Examine** different modes of inheritance (sex linkage, codominance, crossing over, incomplete dominance, & multiple alleles.  **HE.4.B.5 Analyze** the historically significant work of prominent geneticists.  **HE.4.B.6**   **Evaluate *karyotypes*** for abnormalities such as monosomy & trisomy. |  |
| [***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)Unit Study Guide***](http://biologyjunction.com/study_guides_bi.htm) | | | ***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)***[***Practice Test for Unit***](http://biologyjunction.com/quizzes.htm) | | |
| **10 Days** | **Nucleic  Acids & Proteins** | **Chapters 10, 11, 13** [**Nucleic Acids & Protein Synthesis**](http://biologyjunction.com/nucleic_acids_.htm)  imagesCAP2F5DP.jpg | ***Heredity & Evolution***  **Standard 5:** Students shall investigate the molecular basis of genetics**.** | **HE.5.B.1   Model** the components of a *DNA nucleotide* and an *RNA* *nucleotide.*  **HE.5.B.2 Describe** the Watson-Crick *double helix model* of *DNA,* using the *base-pairing rule* (a*denine-thymine*, *cytosine-guanine*).  **HE.5.B.3**  **Compare and contrast** the structure and function of *DNA* and *RNA.*  **HE.5.B.4** **Describe and model** the processes of replication, *transcription*, and *translation*.  **HE.5.B.5**  **Compare and contrast** the different types of *mutation* events, including *point mutation*, *frameshift mutation*, *deletion*, and *inversion.*  **HE.5.B.6** **Identify** effects of changes brought about by *mutations* (beneficial, harmful, & neutral).  **MC.1.B.1**  **Describe** the structure and function of nucleic acids found in living systems.  **NS.12.B.6** **Relate** the *chromosome theory of heredity* to recent findings in genetic research(e.g., *Human Genome Project-HGP, chromosome therapy).* |  |
| ***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)***[***Nucleic Acid Review***](http://biologyjunction.com/nucleic%20acid%20review.doc) | | | ***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)***[***Practice Test for Unit***](http://biologyjunction.com/quizzes.htm) | | |
| ***Ecology*** | | | | | |
| **10 Days** | ***Ecology and Behavior*** | **Unit 5** [**Ecology**](http://biologyjunction.com/ecology_notes_bi.htm)  imagesCAGKDGNA.jpg | ***Ecology & Behavioral Relationships***  **Standard 8:** Students shall demonstrate an understanding of ecological and behavioral relationships among organisms.  **Standard 9:** Students shall demonstrate an understanding of the ecological impact of global issues. | **EBR.8.B.1**  **Cite** examples of abiotic and *biotic factors* of *ecosystems****.***  **EBR.8.B.2   Compare and contrast** the characteristics of *biomes****.***  **EBR.8.B.3   Diagram** the carbon, nitrogen, phosphate, and water cycles in an *ecosystem.*  **EBR.8.B.4 Analyze** an *ecosystem’s* energy flow through food chains, food webs, and *energy pyramids.*  **EBR.8.B.5   Identify and predict** the factors that control *population*, including *predation*, *competition*, crowding, water, nutrients, and shelter.  **EBR.8.B.6 Summarize** the symbiotic ways in which individuals within a *community* interact with each other:   * ***commensalism*** * ***parasitism*** * ***mutualism***   **EBR.8.B.7 Compare and contrast** *primary succession* with *secondary succession.*  **EBR.8.B.8** **Identify** the properties of each of the five levels of *ecology:*   * **organism** * ***population*** * ***community*** * ***ecosystem*** * ***biosphere***   **EBR.9.B.1**  **Analyze** the effects of human *population* growth and *technology* on the environment/*biosphere.*  **EBR.9.B.2**  **Evaluate** long range plans concerning resource use and by-product disposal in terms of their environmental, economic, and political impact.  **EBR.9.B.3**  **Assess** current world issues applying scientific themes (e.g., global changes in climate, *epidemics*, *pandemics*, ozone depletion, UV radiation, natural resources, use of *technology*, and public policy). |  |
| [***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)Unit Study Guide***](http://biologyjunction.com/study_guides_bi.htm) | | | ***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)***[***Practice Test for Chapter***](http://biologyjunction.com/quizzes.htm) | | |
| **End of First Semester!!!!!** | | | | | |
| **Second Semester** | | | | | |
| ***3rd Nine Weeks*** | | | | | |
| **Timeline** | **Topic** | **Unit/Chapter** | **Learner Skills** | **Standards** | **Resources** |
| **10 Days** | **Evolution** | ***Chapters 14,15,16***  [**Evolution**](http://biologyjunction.com/darwin%20&%20natural%20selection%20notes%20bi.htm)  imagesCAUBDUUZ.jpg | ***Heredity & Evolution***  **Standard 6:** Students shall examine the development of the *theory* of *biological evolution.* | **HE.6.B.1   Compare & contrast Lamarck's explanation** of evolution with **Darwin's** theory of evolution by natural selection.  **HE.6.B.2** **Recognize** that evolution involves a change in **allele frequencies** in a population across successive generations.  **HE.6.B.3 Analyze** the effects of **mutations** and the resulting variations within a population in terms of natural selection.  **HE.6.B.4** **Illustrate mass extinction** events using a time line.  **HE.6.B.5** **Evaluate** evolution in terms of evidence as found in the following:   * **fossil record** * ***DNA* analysis** * ***artificial selection*** * **morphology** * **embryology** * **viral *evolution*** * **geographic distribution of related *species*** * ***antibiotic* and *pesticide* *resistance* in various organisms**   **HE.6.B.6 Compare** the processes of relative and radioactive dating to determine the age of fossils.  **NS.12.B.2**  **Understand** that scientific theories may be modified or expanded based on empirical data, verification, & peer review.  **NS.12.B.3** **Summarize** biological evolution. |  |
| [***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)Unit Study Guide***](http://biologyjunction.com/study_guides_bi.htm) | | | ***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)***[***Practice Test for Unit***](http://biologyjunction.com/quizzes.htm) | | |
| ***TAXONOMY*** | | | | | |
| **7 Days** | **Classification & Diversity of Life** | ***Chapter 18*** [**Taxonomy**](http://biologyjunction.com/taxonomy_notes_bi.htm)  imagesCAWMCE5F.jpg | ***Classification & Diversity of Life***  **Standard 7:** Students shall demonstrate an understanding that organisms are diverse. | **HE.6.B.7  Interpret** a *Cladogram.*  **CDL.7.B.1 Differentiate** among the different *domains* (Bacteria, Archaea, & Eukarya).  **CDL.7.B.2  Differentiate** the characteristics of the six kingdoms:   * **Eubacteria** * **Archaea** * **Protista** * ***Fungi*** * **Plantae** * **Animalia**   **CDL.7.B.3 Identify** the seven major taxonomic categories:   * **kingdom** * **phylum** * **class** * **order** * **family** * ***genus*** * ***species***   **CDL.7.B.4 Classify and name** organisms based on their similarities and differences applying *taxonomic nomenclature* using *dichotomous keys.* |  |
| [***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)Chapter Study Guide***](http://biologyjunction.com/study_guides_bi.htm) | | | ***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)***[***Practice Test for Chapter***](http://biologyjunction.com/quizzes.htm) | | |
| ***Microorganisms*** | | | | | |
| **10 Days** | ***MICROBES*** | ***Chapters 23 & 24***  [**Bacteria**](http://biologyjunction.com/bacteria_notes_b1.htm) **and**[**Viruses**](http://biologyjunction.com/virus_notes_b1.htm)  untitled.bmp | ***Classification & Diversity of Life***  **Standard 7:** Students shall demonstrate an understanding that organisms are diverse. | **CDL.7.B.1  Differentiate** between the  *domains* Bacteria & Archaea.  **CDL.7.B.2**  **Differentiate** the characteristics of these kingdoms --- Eubacteria & Archaea.  **CDL.7.B.6**  **Compare and contrast** the structures and characteristics of *viruses* (*lytic* and *lysogenic cycles*) with non-living and living things.  **CDL.7.B.7   Evaluate** the medical and economic importance of *viruses.*  **CDL.7.B.8** **Compare and contrast** life cycles (sexual & asexual) of bacteria.  **CDL.7.B.9**  **Classify** *bacteria* according to their characteristics and adaptations.  **CDL.7.B.10**  **Evaluate** the medical and economic importance of *bacteria.*  **HE.6.B.5 Evaluate** *evolution* in terms of evidence as found in the following:   * ***viral evolution*** * ***antibiotic and pesticide resistance in various organisms*** |  |
| [***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)Unit Study Guide***](http://biologyjunction.com/study_guides_bi.htm) | | | ***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)***[***Practice Test for Unit***](http://biologyjunction.com/quizzes.htm) | | |
| **10 Days** | ***Protists  &  Fungi*** | ***Chapters 25 & 26***  ***Protists:*** [**Protozoan**](http://biologyjunction.com/protozoan_notes_b1.htm)[**Algal-like**](http://biologyjunction.com/algal__fungal_protist_notes_b1.htm) **&** [**Fungi**](http://biologyjunction.com/fungi_notes_b1.htm)  imagesCANDJL7E.jpg | ***Classification & Diversity of Life***  **Standard 7:** Students shall demonstrate an understanding that organisms are diverse. | **CDL.7.B.2 Differentiate** the characteristics of the kingdoms **Protista &  Fungi.**  **CDL.7.B.11   Describe** the characteristics used to classify protists**:**   * **plant-like** * **animal-like** * **fungal-like**   **CDL.7.B.12   Evaluate** the medical and economic importance of protists .  **CDL.7.B.13**  **Compare and contrast** *fungi* with other eukaryotic organisms**.**  **CDL.7.B.14   Evaluate** the medical and economic importance of *fungi*. |  |
| [***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)Chapter Study Guide***](http://biologyjunction.com/study_guides_bi.htm) | | | ***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)***[***Practice Test for Chapter***](http://biologyjunction.com/quizzes.htm) | | |
| ***End of 3rd Nine Weeks*** | | | | | |
| ***PLANTS*** | | | | | |
| **16 Days** | ***Vascular & Nonvascular Plants*** | ***Unit 7*  Plants**[**Mosses & Ferns**](http://biologyjunction.com/moss__fern_notes_b1.htm)  [**Seed Plant taxonomy**](http://biologyjunction.com/plant_taxonomy_bi.htm)  [**Seed Plant Structure**](http://biologyjunction.com/plant_structure_bi1.htm)  [**Seed Plant Reproduction**](http://biologyjunction.com/plant_reproduction.htm)  imagesCAZ582QT.jpg | ***Classification & Diversity of Life***  **Standard 7:** Students shall demonstrate an understanding that organisms are diverse. | **CDL.7.B.2 Differentiate** the characteristics of the kingdom **Plantae.**  **CDL.7.B.15 Differentiate** between *vascular* and *nonvascular plants.*  **CDL.7.B.16 Differentiate** among cycads, gymnosperms, and angiosperms**.**  **CDL.7.B.17  Describe** the structure and function of the major parts of a plant:   * **roots** * **stems** * **leaves** * **flowers**   **CDL.7.B.18   Relate** the structure of plant tissues (epidermal, ground, vascular) to their functions.  **CDL.7.B.19  Evaluate** the medical and economic importance of plants.  **CDL.7.B.8** Compare and contrast life cycles of familiar organisms   * sexual reproduction * asexual reproduction * metamorphosis * *alternation of generations*   **CDL.7.B.5**   **Investigate** Arkansas' *biodiversity* using appropriate tools and *technology.* |  |
| [***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)Unit Study Guide***](http://biologyjunction.com/study_guides_bi.htm) | | | ***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)***[***Practice Test for Unit***](http://biologyjunction.com/quizzes.htm) | | |
| ***4th Nine Weeks*** | | | | | |
| ***ANIMALS*** | | | | | |
| **5 Days** | ***Animal  Diversity*** | ***Chapter 32*** [**Introduction to Animals**](http://biologyjunction.com/introduction_to_animal_notes_b1.htm)  [**Animal Characteristics Notes**](http://biologyjunction.com/Animals%20characteristic%20Notes%20(general).doc)  imagesCAWD2J0O.jpg | ***Classification & Diversity of Life***  **Standard 7:** Students shall demonstrate an understanding that organisms are diverse. | **CDL.7.B.20 Identify** the symmetry of organisms:   * **radial** * **bilateral** * **asymmetrical**   **CDL.7.B.2 Differentiate** the characteristics of the kingdom **Animalia** .  **CDL.7.B.8** **Compare and contrast** life cycles (sexual & asexual) of familiar organisms. |  |
| [***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)Chapter Study Guide***](http://biologyjunction.com/study_guides_bi.htm) | | | ***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)***[***Practice Test for Chapter***](http://biologyjunction.com/quizzes.htm) | | |
| ***Invertebrates*** | | | | | |
| **3 Days** | ***Simple Invertebrates*** | ***Chapters 33 & 34*** [**Sponges, & Cnidarians**](http://biologyjunction.com/sponges__cnidarian_notes_b1.htm)  **[Unsegmented Worms](http://biologyjunction.com/unsegmented_worm_notes_b1.htm)**  imagesCACJ4P1D.jpg | ***Classification & Diversity of Life***  **Standard 7:** Students shall demonstrate an understanding that organisms are diverse. | **CDL.7.B.20   Identify** the symmetry of organisms:   * **radial** * **bilateral** * **asymmetrical**   **CDL.7.B.21**    **Compare and contrast** the major invertebrate classes according to their nervous, respiratory, excretory, circulatory, and digestive systems . |  |
| [***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)Unit Study Guide***](http://biologyjunction.com/study_guides_bi.htm) | | | ***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)***[***Practice Test for Chapter***](http://biologyjunction.com/quizzes.htm) | | |
| **3 Days** | ***Complex Invertebrates*** | ***Chapter 35*** [**Mollusks**](http://biologyjunction.com/mollusk_notes_b1.htm) **&**      [**Annelids**](http://biologyjunction.com/annelid%20notes%20b1.htm)  1234.bmp | ***Classification & Diversity of Life***  **Standard 7:** Students shall demonstrate an understanding that organisms are diverse. | **CDL.7.B.20 Identify** the symmetry of organisms:   * **radial** * **bilateral** * **asymmetrical**   **CDL.7.B.21 Compare and contrast** the major invertebrate classes according to their nervous, respiratory, excretory, circulatory, digestive, reproductive and integumentary systems. |  |
| [***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)Chapter Study Guide***](http://biologyjunction.com/study_guides_bi.htm) | | | ***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)***[***Practice Test for Chapter***](http://biologyjunction.com/quizzes.htm) | | |
| **2 Days** | ***Complex Invertebrates*** | ***Chapters 36 & 37*** [**Arthropods**](http://biologyjunction.com/arthropod_notes_b1.htm) **&** [**Insects**](http://biologyjunction.com/insect_notes_b1.htm)  imagesCAETOZ1B.jpg | ***Classification & Diversity of Life***  **Standard 7:** Students shall demonstrate an understanding that organisms are diverse. | **CDL.7.B.20    Identify** the symmetry of bilateral organisms.  **CDL.7.B.21**   **Compare and contrast** the major invertebrate classes according to their nervous, respiratory, excretory, circulatory, digestive, reproductive and integumentary systems. |  |
| [***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)Unit Study Guide***](http://biologyjunction.com/study_guides_bi.htm) | | | ***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)***[***Practice Test for Unit***](http://biologyjunction.com/quizzes.htm) | | |
| **2 Days** | ***Complex Invertebrates*** | ***Chapter 38***  [**Echinoderms**](http://biologyjunction.com/echinoderm_notes.htm) **&** [**Chordates**](http://biologyjunction.com/chordates.htm)  imagesCA0QA4GQ.jpg | ***Classification & Diversity of Life***  **Standard 7:** Students shall demonstrate an understanding that organisms are diverse. | **CDL.7.B.20 Identify** the symmetry of organisms:   * **radial** * **bilateral**   **CDL.7.B.21 Compare and contrast** the major invertebrate classes according to their nervous, respiratory, excretory, circulatory, digestive, reproductive and integumentary systems. |  |
| [***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)Chapter Study Guide***](http://biologyjunction.com/study_guides_bi.htm) | | | ***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)***[***Practice Test for Chapter***](http://biologyjunction.com/quizzes.htm) | | |
| ***VERTEBRATES*** | | | | | |
| **2 Days** | **Vertebrates** | ***Chapters 39 & 40*** [**Fish**](http://biologyjunction.com/fish_notes_bi.htm) **&** [**Amphibians**](http://biologyjunction.com/amphibian_notes_bi.htm)  **imagesCAJ4GSV3.jpg** | ***Classification & Diversity of Life***  **Standard 7:** Students shall demonstrate an understanding that organisms are diverse. | **CDL.7.B.2 Differentiate** the characteristics of the kingdom **Animalia.**  **CDL.7.B.8 Compare and contrast** life cycles (sexual & metamorphosis) of vertebrates.  **CDL.7.B.22**    **Compare and contrast** the major vertebrate classes according to their nervous, respiratory, excretory, circulatory, digestive, reproductive and integumentary systems. |  |
| [***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)Unit Study Guide***](http://biologyjunction.com/study_guides_bi.htm) | | | ***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)***[***Practice Test for Unit***](http://biologyjunction.com/quizzes.htm) | | |
| **2 Days** | ***Vertebrates*** | ***Chapters 40 & 41*** [**Reptiles**](http://biologyjunction.com/reptile_notes_bi.htm) **&** [**Birds**](http://biologyjunction.com/bird_notes_bi.htm)  imagesCAEE6X3P.jpg | ***Classification & Diversity of Life***  **Standard 7:** Students shall demonstrate an understanding that organisms are diverse. | **CDL.7.B.2 Differentiate** the characteristics of the kingdom Animalia.  **CDL.7.B.8 Compare and contrast** life cycles of familiar organisms   * **sexual reproduction** * **asexual reproduction** * **metamorphosis**   **CDL.7.B.22 Compare and contrast** the major vertebrate classes according to their nervous, respiratory, excretory, circulatory, digestive, reproductive and integumentary systems. |  |
| [***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)Unit Study Guide***](http://biologyjunction.com/study_guides_bi.htm) | | | ***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)***[***Practice Test for Unit***](http://biologyjunction.com/quizzes.htm) | | |
| **2 Days** | ***Vertebrates*** | ***Chapter 42*** [**Mammals**](http://biologyjunction.com/mammals%20notes%20bi.htm)  imagesCAZQGA93.jpg | ***Classification & Diversity of Life***  **Standard 7:** Students shall demonstrate an understanding that organisms are diverse. | **CDL.7.B.2 Differentiate** the characteristics of the kingdom Animalia.  **CDL.7.B.8**  **Compare and contrast** life cycles of familiar organisms.  **CDL.7.B.22**    **Compare and contrast** the major vertebrate classes according to their nervous, respiratory, excretory, circulatory, digestive, reproductive and integumentary systems. |  |
| [***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)Chapter Study Guide***](http://biologyjunction.com/study_guides_bi.htm) | | | ***[http://biologyjunction.com/images/dancingdot4.gif](http://biologyjunction.com/study_guides_bi.htm)***[***Practice Test for Chapter***](http://biologyjunction.com/quizzes.htm) | | |
| |  |  |  | | --- | --- | --- | | ***Standards for all Labs:*** | NS.13.B.1 Collect and analyze scientific data using appropriate mathematical calculations, figures, and tables | NS.13.B.2 Use appropriate equipment and *technology* as tools for solving problems (e.g., microscopes, centrifuges, flexible arm cameras, computer software and hardware) | | | | | | |
| **End of Year !!!!** | | | | | |