Exploring Creation with Biology ~ Schedule for 2013-2014

Apologia ~ Exploring Creation with Biology ~ Module 1 (Week 1)

Date:		Tues., Sept. 3	Wed., Sept. 4	Thurs., Sept. 5	Fri., Sept. 6
Reading	Pgs. 1-6; Introduction, What is Life? DNA and Life, Energy Conversion and Life …and ►	Pgs. 6-8; Sensing and Responding to Change, All Life Forms Reproduce	Pgs. 8-11; Life's Secret Ingredient, The Scientific Method	Pgs. 12-18; Limitations of the Scientific Method, Spontaneous Generation: The Faithful Still Cling to It! Biological Classification	Pgs. 18-20; Characteristics Used to Separate Organisms into Kingdoms
Written Work	On Your Own (OYO) 1.1 and 1.2	OYO 1.3	OYO 1.4, 1.5	OYO 1.6, 1.7	OYO 1.8-1.10

Notes

**** Before you begin this science course please read the student notes in the book on pages iv-vii. ****
**** Parent – teacher needs to read the notes in the solutions / test manual ****

Vocabulary

Metabolism (2)	Anabolism (2)	Catabolism (2)	Photosynthesis (3)
Herbivores (3)	Carnivores (3)	Omnivores (3)	Producers (4)
Consumers (4)	Decomposers (5)	Autotrophs (6)	Heterotrophs (6)
Receptors (7)	Asexual reproduction (7)	Sexual reproduction (7)	Inheritance (7)
Mutation (8)	Hypothesis (9)	Theory (9)	Scientific law (10)
Microorganisms (13)	Abiogenesis (15)		

Module 1 (Week 2)

Date:	Mon., Sept. 9	Tues., Sept. 10	Wed., Sept. 11	Thurs., Sept. 12	Fri., Sept. 13
Reading	Pgs. 20-26; The Definition of Species, Biological Key	Pgs. 27-30; Naming Organisms Based on Classification, Alternate Forms of Taxonomy	Pgs. 30-32; The Microscope		
Written Work				**Study for test**	**TEST** – Module 1, Biology: The Study of Life **___ / 100**
Lab Experiments	**Exp. 1.1 –** Using a Biological Key		**Exp. 1.2 –** Introduction to the Microscope		

Notes

Exp. 1.1 – all supplied in book

Exp. 1.2 – microscope, lens paper, slide, coverslips, cotton swabs, eyedropper, water, small pieces of bright thread, methylene blue stain

Vocabulary

Prokaryotic cell (18)	Eukaryotic cell (18)	Species (21)	Taxonomy (27)
Binomial nomenclature (27)			

Exploring Creation with Biology ~ Schedule for 2013-2014

Module 2 (Week 3)					
Date:	**Mon., Sept. 16**	**Tues., Sept. 17**	**Wed., Sept. 18**	**Thurs., Sept. 19**	**Fri., Sept. 20**
Reading	Pgs. 37-41; Introduction, Bacteria,	Pgs. 41-44; The Eating Habits of Bacteria	Pgs. 44-47; Asexual Reproduction in Bacteria	Pgs. 47-49; Genetic Recombination in Bacteria	Pgs. 49-51; Transformation and Transduction, Endospore Formation, Bacterial Colonies
Written Work	OYO 2.1-2.3	OYO 2.4, 2.5	OYO 2.6, 2.7	OYO 2.8	OYO 2.9
Notes					
Vocabulary Pathogen (37) Saprophyte (41) Parasite (42) Aerobic organism (42) Anaerobic organism (43) Steady state (46) Exponential growth (47) Logistic growth (47) Conjugation (48) Plasmid (48)					

Module 2 (Week 4)					
Date:	Mon., Sept. 23	Tues., Sept. 24	Wed., Sept. 25	Thurs., Sept. 26	Fri., Sept. 27
Reading	Pgs. 53-56; Classification in Kingdom Monera, Classes in Kingdom Monera	Pgs. 56-60; A Few Words on Other Classification Systems, Specific Bacteria, Conditions for Bacterial Growth, Preventing Bacterial Infections	Pgs. 60-62; Take a Look at the Microscopic World		
Written Work	OYO 2.10-2.14			**Study for Test**	**TEST –** Module 2, Kingdom Monera **___ / 100**
Lab Experiments	**Exp. 2.1 –** Pond Life, Part A		**Exp. 2.2 –** Pond Life, Part B		
Notes					
Exp. 2.1 – 4 jars with lids, dried grass, uncooked white rice egg yolk, soil, ladle, pond, **Exp. 2.2 –** microscope, slides, coverslips, 4 cultures from 2.1, 4 eyedroppers, cotton ball **Vocabulary** Transformation (49) Transduction (50) Endospore (50) Strains (58)				

Exploring Creation with Biology ~ Schedule for 2013-2014

Module 3 (Week 5)

Date:	Mon., Sept. 31	Tues., Oct. 1	Wed., Oct. 2	Thurs., Oct. 3	Fri., Oct. 4
Reading	Pgs. 67-70; Introduction, Classification in Kingdom Protista	Pgs. 71-73; Phylum Sarcodina	Pgs. 74-78; Phylum Mastigophora, Other Mastigophorites	Pgs. 78-83; Phylum Ciliophora, Other Members of Phylum Ciliophora, Phylu, Sporozoa	Pgs. 84-86; Subkingdom Algae, Phylum Chlorophyta
Written Work	OYO 3.1	OYO 3.2, 3.3	OYO 3.4-3.6	OYO 3.7-3.10	OYO 3.11, 3.12
Lab Experiments	**Exp. 3.1 –** Pond Life, Part C			**Exp. 3.2 –** Subkingdom Protozoa	

Notes

Exp. 3.1 – microscope, slides, coverslips, 4 cultures from 2.1, 4 eyedroppers, cotton ball

Exp. 3.2 – microscope, Prepared slides: amoeba, paramecium, euglena, volvox

Vocabulary

Pseudopod (71)	Nucleus (71)	Vacuole (72)	Ectoplasm (72)
Endoplasm (72)	Flagellate (74)	Pellicle (75)	Chloroplast (75)
Chlorophyll (75)	Eyespot (75)	Symbiosis (76)	Mutualism (76)
Commensalism (77)	Parasitism (77)	Cilia (78)	Spore (80)

Module 3 (Week 6)

Date:	Mon., Oct. 7	Tues., Oct. 8	Wed., Oct. 9	Thurs., Oct. 10	Fri., Oct. 11
Reading	Pgs. 87-89; Phylum Chrysophyta, Phylum Pyrrophyta	Pgs. 89-91; Phylum Phaeophyta	Pgs. 91-92; Phylum Rhodophyta, Summing Up Kingdom Protista		
Written Work	OYO 3.13-3.15	OYO 3.16		**Study for Test**	**TEST –** Module 3, Kingdom Protista **___ / 100**
Lab Experiments			**Exp. 3.3 –** Subkingdom Algae		

Notes

Exp. 3.3 – microscope, Prepared slides: Spirogyra, Diatoms

Vocabulary

Plankton (84)	Zooplankton (84)	Phytoplankton (84)	Thallus (85)
Cellulose (85)	Holdfast (88)	Sessile colony (88)	

Exploring Creation with Biology ~ Schedule for 2013-2014

Module 4 (Week 7)

Date:	Mon., Oct. 14	Tues., Oct. 15	Wed., Oct. 16	Thurs., Oct. 17	Fri., Oct. 18
Reading	Pgs. 97-101; Introduction, General Characteristics of Fungi *	Pgs. 101-103; Reproduction in Kingdom Fungi, Classification in Kingdom Fungi	Pgs. 103-108; Phylum Basidiomycota, Other Members of Phylum Basidiomycota	Pgs. 109-112; Yeats, Other Members of Phylum Ascomycota	Pgs. 112-114; Phylum Zygomycota
Written Work	OYO 4.1-4.3	OYO 4.4-4.6	OYO 4.7, 4.8	OYO 4.9, 4.10	OYO 4.11, 4.12
Lab Experiments			**Exp. 4.1 –** Phylum Basidiomycota	**Exp. 4.2 –** Yeast and the Fermentation Process	**Exp. 4.3 –** Molds

Notes

* Need to start growing mold on a piece of bread, jelly, and / or fruit now for later experiments.

Exp. 4.1 – microscope, magnifying glass, slides, coverslips, water, needle, mushrooms, puffballs, shelf-fungi, gloves

Exp. 4.2 – yeast, warm water, tablespoon, measuring cup, glass, sugar, microscope, eyedropper, slides and coverslips, methylene blue

Vocabulary

Extracellular digestion (98) Mycelium (98) Hypha (98) Rhyzoid hypha (99)
Aerial hypha (100) Sporophore (100) Stolon (100) Haustorium (100)
Chitin (101) Membrane (104) Fermentation (110)

Module 4 (Week 9)

Date:	Mon., Oct. 28	Tues., Oct. 29	Wed., Oct. 30	Thurs., Oct. 31	Fri., Nov. 1
Reading	Pgs. 115-117; Phylum Chytridiomycota, Phylum Deuteromycota: The Imperfect Fungi	Pgs. 117-119; Phylum Myxomycota	Pgs. 119-120; Symbiosis in Kingdom Fungi, Summing Up Kingdom Fungi		
Written Work	OYO 4.13, 4.14	OYO 4.15	OYO 4.16, 4.17	**Study for Test**	**TEST –** Module 4, Kingdom Fungi **___ / 100**
Lab Experiments	**Exp. 4.4**				

Notes

Exp. 4.3 – microscope, magnifying glass, slides, coverslips, water, eyedropper, bread, jelly, and or fruit mold, knife, needle

Vocabulary

Zygospore (112) Zygote (112) Antibiotic (116)

Exploring Creation with Biology ~ Schedule for 2013-2014

Module 5 (Week 10)					
Date:	Mon., Nov. 4	Tues., Nov. 5	Wed., Nov. 6	Thurs., Nov. 7	Fri., Nov. 8
Reading	Pgs. 125-128; Introduction, Atoms: The Basic Building Blocks of Matter	Pgs. 128-133; Elements, Molecules, Changes in Matter	Pgs. 133-138; Physical Change	Pgs. 139-142; Chemical Change, Photosynthesis	Pgs. 142-146; Organic Chemistry, Carbohydrates
Written Work	OYO 5.1-5.3	OYO 5.4-5.9	OYO 5.10	OYO 5.11-5.13	OYO 5.14, 5.15
Lab Experiments			**Exp. 5.1 –** Diffusion, **Exp. 5.2 –** Osmosis		

Notes

Exp. 5.1 – sugar, tablespoon, water, small glass, paper napkin, cellophane tape, plastic wrap

Exp. 5.2 – 3 coffee mugs, 1 egg, liquid measuring cup, tape measure, white vinegar, clear Karo syrup, distilled water

Vocabulary

Atoms (125) Matter (125) Model (126) Element (128)
Molecules (130) Physical Change (132) Chemical Change (132 Phase (133)
Diffusion (135) Concentration (135) Semipermeable membrane (136) Osmosis (136)
Catalyst (141)

Module 5 (Week 11)					
Date:	Mon., Nov. 11	Tues., Nov. 12	Wed., Nov. 13	Thurs., Nov. 14	Fri., Nov. 15
Reading	Pgs. 146-149; Organic Acids and Bases, Lipids	Pgs. 149-154; Proteins and Enzymes	Pgs. 154-156; DNA		
Written Work	OYO 5.16-5.18	OYO 5.19	OYO 5.20	**Study for Test**	**TEST –** Module 5, The Chemistry of Life **___ / 100**
Lab Experiments		**Exp. 5.3 –** The Fragility of an Enzyme			

Notes

Exp. 5.3 – part of a fresh pineapple, blender, three small bowls, small box of Jell-O, pot, stove, refrigerator, 2 tablespoons

Vocabulary

Organic molecule (142) Biosynthesis (142) Isomers (144) Monosaccharides (145)
Disaccharides (145) Polysaccharides (145) Dehydration reaction (145) Hydrolysis (146)
Hydrophobic (148) Saturated fat (149) Unsaturated fat (149) Peptide bond (150)
Hydrogen bond (155)

Exploring Creation with Biology ~ Schedule for 2013-2014

Module 6 (Week 12)

Date:	Mon., Nov. 18	Tues., Nov. 19	Wed., Nov. 20	Thurs., Nov. 21	Fri., Nov. 22
Reading	Pgs. 161-163; Introduction, Cellular Functions, Cytology	Pgs. 164-167; Cell Structure, The Cell Wall, The Plasma Membrane, The Cytoplasm	Pgs. 167-171; The Mitochondria, The Lyosome, Ribosomes, The Endoplasmic Reticulum, The Plastids, Vacuoles and Vesicles	Pgs. 171-174; Golgi Bodies, Centrioles, The Nucleus, The Cytoskeleton	Pgs. 174-176; As If This Isn't Already Complicated Enough!
Written Work	OYO 6.1, 6.2				OYO 6.4-6.6
Lab Experiments					**Exp. 6.1 –** Cell Structure 1

Notes

Vocabulary

Absorption (161)	Digestion (161)	Respiration (161)	Excretion (162)
Egestion (162)	Secretion (162)	Homeostasis (162)	Reproduction (162)
Cytology (163)	Cell Wall (165)	Middle lamella (165)	Plasma membrane (166)
Cytoplasm (166)	Ions (166)	Cytoplasmic streaming (166)	Mitochondria (167)
Lyosome (167)	Ribosomes (168)	Rough ER (168)	Smooth ER (168)
Endoplasmic reticulum (168)	Leucoplats (168)	Chromoplasts (169)	Cental vacuole (169)
Waste vacuoles (169)	Phagocytosis (169)	Phagocytic vacuole (169)	Pinocytic vesicle (170)
Secretion vesicle (170)	Golgi Bodies (171)	Microtubules (172)	Nuclear membrane (172)
Chromatin (173)	Cytoskeleton (173)	Microfilaments (173)	Intermediate filaments(173)

Module 6 (Week 13)

Date:	Mon., Nov. 25	Tues., Nov. 26	Wed., Nov. 27	Thanksgiving	Black Friday
Reading		Pgs. 176-181; How Substances Travel In and Out of Cells	Pgs. 181-182		
Written Work	Show What You Know: draw and label a cell.	OYO 6.7-6.9			
Lab Experiments			**Exp. 6.2 –** Cell Structure 2		

Notes

Exp. 6.1– microscope, lens paper, slides, coverslips, eyedroppers, water, banana, iodine, cotton swab, salt water, anacharis leaves

Vocabulary

Phospholipid (176)	Passive transport (179)	Active transport (179)	Isotonic solution (179)
Hypertonic solution (179)	Plasmolysis (179)	Cytolysis (180)	Hypotonic solution (180)

Exploring Creation with Biology ~ Schedule for 2013-2014

Module 6 (Week 14)					
Date:	Mon., Dec. 2	Tues., Dec. 3	Wed., Dec. 4	Thurs., Dec. 5	Fri., Dec. 6
Reading	Pgs. 182-186; How Cells Get Their Energy	Pgs. 186-189; ATP and ADP			
Written Work	OYO 6.10, 6.11	OYO 6.12-6.14	**Study for Test**	**Study for Test**	**TEST –** Module 6, The Cell **___ / 100**
Notes					
Vocabulary Activation energy (182)					

Module 7 (Week 15)					
Date:	Mon., Dec. 9	Tues., Dec. 10	Wed., Dec. 11	Thurs., Dec. 12	Fri., Dec. 13
Reading	Pgs. 195-198; Introduction, Genes, Chromosomes, and DNA	Pgs. 198-201; Protein Synthesis – Part 1: Transcription	Pgs. 201-204; Protein Synthesis – Part 2: Translation	Pgs. 205-211; Mitosis: Eukaryotic Asexual Reproduction	Pg. 210
Written Work	OYO 7.1	OYO 7.2, 7.3	OYO 7.4, 7.5	OYO 7.6-7.8	
Lab Experiments	**Exp. 7.1 –** DNA Extraction				**Exp. 7.2 –** Mitosis
Notes					

Exp. 7.1– blender, plastic bowl, toothpick, liquid hand soap, salt, water, strainer, small glass, meat tenderizer, rubbing alcohol, ½ cup of split peas, measuring cups and spoons, flashlight

Vocabulary

Genetics (195)	Genetic factors (196)	Environmental factors (197)	Spiritual factors (197)
Gene (197)	Messenger RNA (210)	Anticodon (201)	Codon (201)
Chromosome (205)	Mitosis (206)	Interphase (206)	Mother cell (206)
Centromere (207)			

Exploring Creation with Biology ~ Schedule for 2013-2014

Module 7 (Week 16)					
Date:	**Mon., Dec. 16**	**Tues., Dec. 17**	**Wed., Dec. 18**	**Thurs., Dec. 19**	**Fri., Dec. 20**
Reading	Pgs. 211-213; Diploid and Haploid Cells	Pgs. 213-218; Meiosis: The Cellular Basis of Sexual Reproduction	Pgs. 218-222; Virus		
Written Work	OYO 7.9, 7.10	OYO 7.11-7.14	OYO 7.15, 7.16	**Study for Test**	**TEST** – Module 7, Cellular Reproduction and DNA **___ / 100**
Lab Experiments					

Notes

Exp. 7.2– microscope, prepared slide: *allium*, *ascaris* mitosis

Vocabulary

Karotype (212) Diploid cell (212) Haploid cell (212) Diploid number(2n) (212)
Haploid number (n) (213) Meiosis (213) Gametes (213) Virus (218)
Antibodies (220) Vaccine (220)

Module 8 (Week 17)					
Date:	Mon., Jan. 6	Tues., Jan. 7	Wed., Jan. 8	Thurs., Jan. 9	Fri., Jan. 10
Reading	Pgs. 227-233; Introduction, Gregor Mendel, Mendel's Experiments	Pgs. 233-236; Updating the Terminology	Pgs. 236-242; Punnett Squares, Pedigrees	Pgs. 242-247; More Complex Crosses	Pgs. 247-249; Sex and Sex-Linked Genetic Traits
Written Work	OYO 8.1-8.3	OYO 8.4	OYO 8.5, 8.6	OYO 8.7	
Lab Experiments			**Exp. 8.1 –** Making Your Own Earlobe Pedigree	**Exp. 8.2 –** A Dihybrid Cross	**Exp. 8.3 –** Sex-linked Genetic Traits

Notes

Exp. 8.1– family, mirror

Exp. 8.2– lab notebook

Vocabulary

True Breeding (228) Allele (233) Genotype (234) Phenotype (234)
Homozygous genotype (234) Heterozygous genotype (234) Dominant allele (234) Recessive allele (234)
Pedigree (238) Monohybrid cross (242) Dihybrid cross (242)

Exploring Creation with Biology ~ Schedule for 2013-2014

Module 8 (Week 18)					
Date:	Mon., Jan. 13	Tues., Jan. 14	Wed., Jan. 15	Thurs., Jan. 16	Fri., Jan. 17
Reading	Pgs. 250-252; A More Complete Understanding of Genetics	Pgs. 253-255; Genetic Disorders and Diseases	Pgs. 255-256; Summing Up		
Written Work	OYO 8.8-8.10			**Study for Test**	**TEST –** Module 8, Mendelian Genetics **___ / 100**
Lab Experiments			**Exp. 8.4 –** Environmental Factors and Their Effect on Radish Leaf Color		

Notes

Exp. 8.3– Lab notebook

Exp. 8.4 – 60 radish seeds, 2 shallow pans, soil, clear plastic wrap, box, water, lab notebook, magnifying glass, eyedropper

Vocabulary

Autosomes (247) Sex chromosomes (247) Antigen (251) Autosomal inheritance (253)
Genetic disease carrier (253) Sex-linked inheritance (254) Mutation (254)
Change in chromosome structure (254) Chance in chromosome number (255)

Module 9 (Week 19)					
Date:	Mon., Jan. 20	Tues., Jan. 21	Wed., Jan. 22	Thurs., Jan. 23	Fri., Jan. 24
Reading	Pgs. 261-266; Introduction, Charles Darwin, Darwin's Theory	Pgs. 267-270; Microevolution and Macroevolution	Pgs. 270-273; Inconclusive Evidence: The Geological Column	Pgs. 273-280; The Details of the Fossil Record: Evidence Against Macroevolution	Pgs. 280-285; The Cambrian Explosion, Structural Homology
Written Work	OYO 9.1-9.3	OYO 9.4, 9.5	OYO 9.6, 9.7	OYO 9.8-9.10	OYO 9.11

Notes

Vocabulary

The immutability of species (267) Microevolution (268) Macroevolution (168)
Strata (270) Fossils (270) Paleontology (273)

Exploring Creation with Biology ~ Schedule for 2013-2014

Module 9 (Week 20)					
Date:	Mon., Jan. 27	Tues., Jan. 28	Wed., Jan. 29	Thurs., Jan. 30	Fri., Jan. 31
Reading	Pgs. 285-289; Molecular Biology	Pgs. 289-292; Macroevoltuion Today	Pgs. 293-294; Why Do So Many Scientists Believe in Macroevolution?		
Written Work	OYO 9.12, 9.13	OYO 9.14-9.16		**Study for Test**	**TEST** – Module 9, Evolution: Part Scientific Theory, Part Unconfirmed Hypothesis **___ / 100**
Notes					
Vocabulary Structural homology (282)					

Module 10 (Week 21)					
Date:	**Mon., Feb. 3**	**Tues., Feb. 4**	**Wed., Feb. 5**	**Thurs., Feb. 6**	**Fri., Feb. 7**
Reading	Pgs. 299-305; Introduction, Energy and Ecosystems	Pgs. 305-309; Mutualism	Pgs. 309-310; The Physical Environment	Pgs. 311-313; The Water Cycle	Pgs; 314-315; The Oxygen Cycle
Written Work	OYO 10.1-10.3	OYO 10.4	OYO 10.5, 10.6	OYO 10.7, 10.8	OYO 10.9, 10.10
Notes					
Vocabulary Ecology (299) Population (299) Community (299) Ecosystem (299) Biome (299) Primary consumer (301) Secondary consumer (301) Tertiary consumer (301) Ecological pyramid (304) Biomass (304) Watershed (312)					

Module 10 (Week 22)					
Date:	**Mon., Feb. 10**	**Tues., Feb. 11**	**Wed., Feb. 12**	**Thurs., Feb. 13**	**Fri., Feb. 14**
Reading	Pgs. 316-318; The Carbon Cycle	Pgs. 319-322; The Carbon Cycle, continued	Pgs. 322-324; The Nitrogen Cycle, Summing Up		
Written Work		OYO 10.11, 10.12	OYO 10.13	**Study for Test**	**TEST** – Module 10, Ecology **___ / 100**
Lab Experiments	**Exp. 10.1 –** Carbon Dioxide & the Greenhouse Effect				
Notes					
Exp. 10.1 – thermometer, large Ziploc, sunny windowsill, 2-liter bottle, vinegar, baking soda, teasopoon **Vocabulary** Greenhouse effect (317)					

Exploring Creation with Biology ~ Schedule for 2013-2014

Module 11 (Week 23)					
Date:	**Mon., Feb. 17**	**Tues., Feb. 18**	**Wed., Feb. 19**	**Thurs., Feb. 20**	**Fri., Feb. 21**
Reading	Pgs. 328-331; Introduction, Symmetry	Pgs. 332-335; Phylum Porifera: The Sponges	Pgs. 335-340; Phylum Cnidaria, Specific Member of Phylum Cnidaria	Pgs. 340-342; Specific Member of Phylum Cnidaria, continued	Pgs. 342-347; Phylum Annelida, Earthworm
Written Work	OYO 11.1	OYO 11.2-11.4		OYO 11.5-11.8	OYO 11.9-11.12
Lab Experiments		**Exp. 11.1 –** Observation of the Spicules of a Sponge	**Exp. 11.2 –** Observation of a Hydra		

Notes

Exp. 11.1 – microscope, prepared slide: sponge, lab notebook colored pencils, natural sponges (optional)

Exp. 11.2 – microscope, prepared slide: hydra, lab notebook colored pencils

Vocabulary

Radial symmetry (330)	Invertebrates (329)	Vertebrates (329)	Sperical symmetry (330)
Collar cells (333)	Bilateral symmetry (330)	Epidermis (333)	Mesenchyme (333)
Medusa (335)	Amoebocytes (333)	Gemmule (334)	Polyp (335)
Testes (339)	Epithelium (336)	Mesoglea (336)	Nematocysts (337)
	Ovaries (339)		

Module 11 (Week 24)					
Date:	**Mon., Feb. 24**	**Tues., Feb. 25**	**Wed., Feb. 26**	**Thurs., Feb. 27**	**Fri., Feb. 28**
Reading	Pgs. 347-350; Earthworm Dissection	Pgs. 350-352; Phylum Platyhelminthes	Pgs. 352-356; Phylum Nemtoda, Phylum Mollusca, Summing Up the Invertebrates		
Written Work		OYO 11.13, 11.14	OYO 11.15, 11.16	**Study for Test**	**TEST –** Module 11, The Invertebrates of Kingdom Animalia **___ / 100**
Lab Experiments	**Exp. 11.3 –** Earthworm Dissection	**Exp. 11.4 –** Observation of a Planarian			

Notes

Exp. 11.3 – dissecting tools and tray, earthworm specimen, magnifying glass, lab notebook

Exp. 11.4 – microscope, prepared slide: planarian, lab notebook colored pencils

Vocabulary

Anterior end (343)	Posterior end (343)	Circulatory system (344)	Nervous system (345)
Ganglia (345)	Hermaphroditic (345)	Regeneration (351)	Mantle (354)
Shell (354)	Visceral hump (354)	Foot (355)	Radula (355)
Univalve (355)	Bivalve (355)		

Exploring Creation with Biology ~ Schedule for 2013-2014

Module 12 (Week 25)					
Date:	**Mon., Mar. 3**	**Tues., March 4**	**Wed., March 5**	**Thurs., March 6**	**Fri., March 6**
Reading	Pgs. 361-364; Introduction, General Characteristics of Arthropods	Pgs. 365-370; Class Crustacea: The Crayfish, Respiratory System, Circulatory System	Pgs. 370-372; The Crayfish: Digestive System, Nervous System, Reproductive System, Other Crustaceans	Pgs. 373-375; Crayfish Dissection	Pgs. 376-379; Class Arachnida, The Spider, The Major Points of Interest in Spider Anatomy
Written Work	OYO 12.1-12.5		OYO 12.6-12.9		OYO 12.10, 12.11
Lab Experiments				**Exp. 12.1 –** Crayfish Dissection	

Notes

Exp. 12.1 – dissecting tools and tray, crayfish specimen, magnifying glass, lab notebook

Vocabulary

Exoskeleton (361) Molt (362) Thorax (362) Abdomen (362)
Cephalothorax (362) Compound eye (363) Simple eye (363) Open circulatory system (364)
Statocyst (370) Gonad (371)

Module 12 (Week 26)					
Date:	**Mon., March 10**	**Tues., March 11**	**Wed., March 12**	**Thurs., March 13**	**Fri., March 14**
Reading	Pgs. 380-385; Classes Chilopoda and Diplopoda, Class Insecta: Basic Anatomy, Respiration and Circulation, Feeding Habits, Reproduction and Development	Pgs. 385-388; A Few Orders in Class Insecta	Pg. 389; Insect Classification		
Written Work	OYO 12.12-12.15			**Study for Test**	**TEST –** Module 12, Phylum Arthropoda **___ / 100**
Lab Experiments			**Exp. 12.2 –** Insect Classification		

Notes

Exp. 12.2 – laboratory notebook

Vocabulary

Complete metamorphosis (384) Incomplete metamorphosis (384)

Exploring Creation with Biology ~ Schedule for 2013-2014

Module 13 (Week 27)

Date:	Mon., March 17	Tues., March 18	Wed., March 19	Thurs., March 20	Fri., March 21
Reading	Pgs. 393-396; Introduction, Subphylum Urochordata, Subphylum Cephalochordata	Pgs. 396-403; Subphylum Vertebrata, The Endoskeleton, The Circulatory System, The Nervous System, Reproduction	Pgs. 403-404; Class Agnatha	Pgs. 404-408; Class Chondrichthyes	Pgs. 409-416; Class Osteichthyes, The Diversity of Class Osteichthyes
Written Work	OYO 13.1-13.3	OYO 13.4-13.11	OYO 13.12-13.14	OYO 13.15-13.18	OYO 13.19-13.21

Notes

Vocabulary

Vertebrae (393) Notochord (393) Endoskeleton (396) Bone marrow (397)
Axial skeleton (398) Appendicular skeleton (398) Closed circulatory system (399) Arteries (399)
Capillaries (399) Veins (399) Olfactory lobes (400) Cerebrum (400)
Optic lobes (400) Cerebellum (400) Medulla oblongata (400) Internal fertilization (401)
External fertilization (401) Oviparous development (402) Ovoviviparous development (402) Anadromous (403)
Viviparous development (402)

Module 13 (Week 28)

Date:	Mon., March 31	Tues., April 1	Wed., April 2	Thurs., April 3	Fri., April 4
Reading	Pgs. 416-419; Perch Dissection	Pgs. 419-423; Class Amphibia, Specific Creatures in Class Amphibia, Summing Up	Pg. 422; Frog Dissection		
Written Work		OYO 13.22-13.24		**Study for Test**	**TEST** – Module 13, Phylum Chordata ___ / **100**
Lab Experiments	**Exp. 13.1**– Perch Dissection		**Exp. 13.2** – Frog Dissection		

Notes

Exp. 13.1 – dissecting tools and tray, perch specimen, magnifying glass, lab notebook

Exp. 13.2 – dissecting tools and tray, frog specimen, magnifying glass, lab notebook

Vocabulary

Biles (411) Atrium (413) Ventricle (413) Ectothermic (413)

Exploring Creation with Biology ~ Schedule for 2013-2014

Module 14 (Week 29)					
Date:	**Mon., April 7**	**Tues., April 8**	**Wed., April 9**	**Thurs., April 10**	**Fri., April 11**
Reading	Pgs. 429-431; Introduction, Basic Plant Anatomy	Pgs. 431-436; The Macroscopic Structure of a Leaf	Pgs. 436-442; The Microscopic Structure of a Leaf, Leaf Color	Pgs. 442-446; Roots	Pgs. 446-451; Stems
Written Work	OYO 14.1-14.3	OYO 14.4	OYO 14.5-14.10	OYO 14.11-14.13	OYO 14.14-14.16
Lab Experiments		**Exp. 14.1–** Leaf Collection and Identification	**Exp. 14.2–** How Anthocyanins and pH Help Determine Leaf Color		**Exp. 14.3–** Cross Sections of Roots, Stems, and a Leaf

Notes

Exp. 14.1 – leaf press (or substitute), laboratory notebook, tree identification book

Exp. 14.2 – red cabbage, stove, spoon, pot, white vinegar, clear ammonia, water, 2 eyedroppers, 3 small glasses, sheet of white paper, measuring cups, tablespoon

Vocabulary

Botony (429) Perennial plants (429) Annual plants (429) Biennial plants (429)
Vegetative organs (429) Reproductive plant organs (430) Undifferentiated cells (430) Xylem (430)
Phloem (430) Leaf mosaic (432) Leaf margin (434) Deciduous plant (441)

Module 14 (Week 30)					
Date:	**Mon., April 14**	**Tues., April 15**	**Wed., April 16**	**Thurs., April 17**	**Fri., April 18**
Reading	Pgs. 452-454; Classification of Plants, The Bryophytes	Pgs. 455-456; Seedless Vascular Plants	Pgs. 457-458; Seed-Making Plants		
Written Work	OYO 14.17, 14.18	OYO 14.19, 14.20	OYO 14.21, 14.22	**Study for Test**	**TEST –** Module 14, Kingdom Plantae: Anatomy and Classification **___ / 100**
Lab Experiments					

Notes

Exp. 14.3 – Prepared slides: *zea mays*, *ranunculus*, leaf cross section with vein, microscope, labe notebook, colored pencils

Vocabulary

Girdling (448) Alternation of generations (452) Dominant generation (454) Pollen (457)
Cotyledon (458)

Exploring Creation with Biology ~ Schedule for 2013-2014

Module 15 (Week 31)					
Date:	**Mon., April 21**	**Tues., April 22**	**Wed., April 23**	**Thurs., April 24**	**Fri., April 25**
Reading	Pgs. 463-466; Introduction, How a Plant Depends on Water, Water Absorption in Plants	Pgs. 466-472; Water Transport in Plants, Plant Growth	Pgs. 472-475; Insectivorous Plants, Reproduction in Plants, Vegetative Reproduction	Pgs. 475-479; Sexual Reproduction in Phylum Anthophyta	Pgs. 480-483; The Reproductive Process in Anthophytes, parts 1 & 2
Written Work	OYO 15.1, 15.2	OYO 15.3-15.6	OYO 15.7-15.9	OYO 15.10, 15.11	OYO 15.12-15.15
Lab Experiments				**Exp. 15.1–** Flower Anatomy	

Notes

Exp. 15.1 – Sharp scissors, sharp blade, slides and coverslips, water, eyedropper, magnifying glass, microscope, lab notebook, colored pencils, variety of flowers

Vocabulary

Physiology (463)	Nastic movement (464)	Pore spaces (466)	Loam (466)
Cohesion (467)	Translocation (468)	Hormones (469)	Phototropism (470)
Gravitropism (470)	Thigmotropism (470)	Perfect flowers (477)	Imperfect flowers (477)

Module 15 (Week 32)					
Date:	**Mon., April 28**	**Tues., April 29**	**Wed., April 30**	**Thurs., May 1**	**Fri., May 2**
Reading	Pgs. 484-485; The Reproductive Process in Anthophytes, part 3	Pgs. 485-488; Seeds and Fruits	Pgs. 489-490; Germination and Early Growth		
Written Work	OYO 15.16, 15.17	OYO 15.18	OYO 15.19	**Study for Test**	**TEST –** Module 15, Kingdom Plantae: Physiology and Reproduction **___ / 100**
Lab Experiments		**Exp. 15.2–** Fruit Classification			

Notes

Exp. 15.2 – sharp blade, lab notebook, variety of different fruits

Vocabulary

Pollination (482)	Double fertilization (484)	Seed (486)	Fruit (486)

Exploring Creation with Biology ~ Schedule for 2013-2014

Module 16 (Week 33)					
Date:	**Mon., May 5**	**Tues., May 6**	**Wed., May 7**	**Thurs., May 8**	**Fri., May 9**
Reading	Pgs. 495-498; Introduction, Class Reptilia	Pgs. 498-499; Classification of Reptiles, Order Rhynchocephalia	Pgs. 499-504; Order Squamata, Lizards, Snakes, Order Testudines, Order Crocodilia	Pgs. 505-509; * Dinosaurs, Class Aves	Pgs. 509-513; A Bird's Ability to Fly
Written Work	OYO 16.1-16.4	OYO 16.5	OYO 16.6-16.11	OYO 16.12-16.14	OYO 16.15-16.17
Lab Experiments				**Exp. 16.1–** Bird Embryology	

Notes

* This is going to require some discussion.

Exp. 16.1 – micro slide: chick embryo, magnifying glass, microscope, desk lamp, lab notebook, colored pencils

Vocabulary

Amniotic egg (496) Neurotoxin (502) Hemotoxin (502) Endotherm (507)

Module 16 (Week 34)					
Date:	**Mon., May 12**	**Tues., May 13**	**Wed., May 14**	**Thurs., May 15**	**Fri., May 16**
Reading	Pgs. 514-518; Classification in Class Aves	Pgs. 518-520; Class Mammals	Pgs. 520-526; Classification in Class Mammalia, Summing It All Up		
Written Work	OYO 16.18, 16.19	OYO 16.20-16.22	OYO 16.23-16.25	**Study for Test**	**TEST –** Module 16, Reptiles, Birds, and Mammals **___ / 100**
Lab Experiments	**Exp. 16.2–** Bird Identification				

Notes

Exp. 16.2 – bird field guide, binoculars, bird seed, lab notebook

Vocabulary

Down feathers (511) Contour feathers (511) Placenta (519) Gestation (519)
Mammary glands (519)

Congratulations! You're finished!