

Apologia ~ Exploring Creation with Biology ~ Schedule for 2019-2020

Module 8 (Jan. 6-10)					
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					
<p>Exp. 8.1 (Class Lab 01/06/20) – family, mirror</p> <p>Exp. 8.2 (Class Lab 01/06/20) – lab notebook</p> <p><u>Vocabulary</u></p> <p>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)</p>					

Module 8 (Jan. 13-17)					
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					
<p>Exp. 8.3 (Class Lab 01/13/20) – Lab notebook</p> <p>Exp. 8.4 (Class Lab 01/13/20) – 60 radish seeds, 2 shallow pans, soil, clear plastic wrap, box, water, lab notebook, magnifying glass, eyedropper (Bring to class-2 shallow pans & a box to cover one).</p> <p><u>Vocabulary</u></p> <p>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) Change in chromosome number (255)</p>					

Apologia ~ Exploring Creation with Biology ~ Schedule for 2019-2020

Module 9 (Jan. 20-24)					
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					
<u>Vocabulary</u>					
The immutability of species (267) Strata (270)		Fossils (270)		Microevolution (268) Macroevolution (168) Paleontology (273)	

Module 9 (Jan. 27-31)					
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; Macroevoluion 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					
<u>Vocabulary</u>					
Structural homology (282)					

Module 10 (Feb. 3-7)					
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					
<u>Vocabulary</u>					
Ecology (299) Biome (299) Ecological pyramid (304)		Population (299) Primary consumer (301) Biomass (304)		Community (299) Secondary consumer (301) Watershed (312)	
Ecosystem (299) Tertiary consumer (301)					

Apologia ~ Exploring Creation with Biology ~ Schedule for 2019-2020

Module 10 (Feb. 10-14)

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 (Class Lab 02/10/20) – thermometer, large Ziploc, sunny windowsill, 2-liter bottle, vinegar, baking soda, teaspoon

Vocabulary

Greenhouse effect (317)

Module 11 (Feb. 17-21)

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 (Class Lab 02/10/20) – microscope, prepared slide: sponge, lab notebook colored pencils, natural sponges (optional)

Exp. 11.2 (Class Lab 02/10/20) – microscope, prepared slide: hydra, lab notebook colored pencils

Vocabulary

Radial symmetry (330)
Collar cells (333)
Medusa (335)
Testes (339)

Invertebrates (329)
Bilateral symmetry (330)
Amoebocytes (333)
Epithelium (336)
Ovaries (339)

Vertebrates (329)
Epidermis (333)
Gemmule (334)
Mesoglea (336)

Spherical symmetry (330)
Mesenchyme (333)
Polyp (335)
Nematocysts (337)

Apologia ~ Exploring Creation with Biology ~ Schedule for 2019-2020

Module 11 (Feb. 24-28)					
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 Nematoda, 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 (Class Lab 02/24/20) – dissecting tools & tray, earthworm specimen, magnifying glass, lab notebook					
Exp. 11.4 (Class Lab 02/24/20) – microscope, prepared slide: planarian, lab notebook colored pencils					
<u>Vocabulary</u>					
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)			

Module 12 (Mar. 2-6)					
Date:	Mon., Mar. 2	Tues., March 3	Wed., March 4	Thurs., March 5	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 (Class Lab 03/02/20) – dissecting tools and tray, crayfish specimen, magnifying glass, lab notebook					
<u>Vocabulary</u>					
Exoskeleton (361)		Molt (362)		Thorax (362) Abdomen (362)	
Cephalothorax (362)		Compound eye (363)		Simple eye (363) Open circulatory system (364)	
Statocyst (370)		Gonad (371)			

Apologia ~ Exploring Creation with Biology ~ Schedule for 2019-2020

Module 12 (Mar. 9-13)					
Date:	Mon., March 9	Tues., March 10	Wed., March 11	Thurs., March 12	Fri., March 13
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 (Class Lab 03/09/20) – laboratory notebook					
<u>Vocabulary</u>					
Complete metamorphosis (384)			Incomplete metamorphosis (384)		

Module 13 (Mar. 16-20)					
Date:	Mon., March 16	Tues., March 17	Wed., March 18	Thurs., March 19	Fri., March 20
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					
<u>Vocabulary</u>					
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)					

Apologia ~ Exploring Creation with Biology ~ Schedule for 2019-2020

Module 13 (Mar. 23-27)					
Date:	Mon., March 23	Tues., March 24	Wed., March 25	Thurs., March 26	Fri., March 27
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					
<p>Exp. 13.1 (Class Lab 03/23/20) – dissecting tools and tray, perch specimen, magnifying glass, lab notebook</p> <p>Exp. 13.2 (Class Lab 03/30/20) – dissecting tools and tray, frog specimen, magnifying glass, lab notebook</p> <p><u>Vocabulary</u></p> <p style="text-align: center;">Biles (411) Atrium (413) Ventricle (413) Ectothermic (413)</p>					

Module 14 (Mar. 30-Apr. 3)					
Date:	Mon., March 30	Tues., March 31	Wed., April 1	Thurs., April 2	Fri., April 3
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					
<p>Exp. 14.1 (do at home) – leaf press (or substitute), laboratory notebook, tree identification book</p> <p>Exp. 14.2 (Class Lab 04/06/20) – red cabbage, stove, spoon, pot, white vinegar, clear ammonia, water, 2 eyedroppers, 3 small glasses, sheet of white paper, measuring cups, tablespoon</p> <p><u>Vocabulary</u></p> <p style="text-align: center;">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)</p>					

Apologia ~ Exploring Creation with Biology ~ Schedule for 2019-2020

Module 14 (Apr. 6-10)					
Date:	Mon., April 6	Tues., April 7	Wed., April 8	Thurs., April 9	Fri., April 10
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					
<p>Exp. 14.3 (Class Lab 04/06/20) – Prepared slides: <i>zea mays</i>, <i>ranunculus</i>, leaf cross section with vein, microscope, labe notebook, colored pencils</p> <p>Vocabulary</p> <p>Girdling (448) Alternation of generations (452) Dominant generation (454) Pollen (457) Cotyledon (458)</p>					

Module 15 (Apr. 13-17)					
Date:	Mon., April 13	Tues., April 14	Wed., April 15	Thurs., April 16	Fri., April 17
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					
<p>Exp. 15.1 (Class Lab 04/20/20) – Sharp scissors, sharp blade, slides and coverslips, water, eyedropper, magnifying glass, microscope, lab notebook, colored pencils, variety of flowers</p> <p>Vocabulary</p> <p>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)</p>					

Apologia ~ Exploring Creation with Biology ~ Schedule for 2019-2020

Module 15 (Apr. 20-24)					
Date:	Mon., April 20	Tues., April 21	Wed., April 22	Thurs., April 23	Fri., April 24
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					
<p style="color: blue;">Exp. 15.2 (Class Lab 04/20/20) – sharp blade, lab notebook, variety of different fruits</p> <p><u>Vocabulary</u></p> <p>Pollination (482) Double fertilization (484) Seed (486) Fruit (486)</p>					

Module 16 (Apr. 27-May 1)					
Date:	Mon., April 27	Tues., April 28	Wed., April 29	Thurs., April 30	Fri., May 1
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					
<p style="color: red;">* This is going to require some discussion.</p> <p style="color: blue;">Exp. 16.1 (Class Lab 04/27/20) – micro slide: chick embryo, magnifying glass, microscope, desk lamp, lab notebook, colored pencils</p> <p><u>Vocabulary</u></p> <p>Amniotic egg (496) Neurotoxin (502) Hemotoxin (502) Endotherm (507)</p>					

Apologia ~ Exploring Creation with Biology ~ Schedule for 2019-2020

Module 16 (May 4-8)					
Date:	Mon., May 4	Tues., May 5	Wed., May 6	Thurs., May 7	Fri., May 8
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 (Class Lab 05/04/20) – 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!