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| Time Frame | Topic/Unit | Skills/Concepts | Major Assessments | Core Standards | Resources |
|  3 weeks | Topic 1: What is Biology & Scientific method? | * Lab #1 Safety in the Laboratory
* Lab #2 Investigation of the Scientific Method with written lab report
* Lab #3 the Compound light microscope
* Lab #4 Pond water Investigation
 | Topic 1 Exam |  | * Topic 1 PowerPoint
* Topic 1 Notes or OneNote
* Topic 1 EBQ
* Topic 1 Bikini Bottom experiments wks
* Topic 1 jungle shark documentary with paired worksheet
* Topic 1 graph practice
* Topic 1 topic questions and CR questions
* Topic 1 castle learnings
 |
| 2.5 weeks | Topic 2: Chemistry of Life | * Lab #5 Temperature and pH on Enzymes
 | Topic 2 Exam |  | * Topic 2 Chemistry of Life PowerPoint
* Topic 2 Student notes or OneNote
* Topic 2 biochem CR and topic guidelines homework
* Topic 2 EBQ
* Topic 2 Enzymes and Pacman wks
* Topic 2 Enzymes make the world go round reading
* Topic 2 Castle Learning
 |
| 3 weeks | Topic 3: Cell Structure and Plasma Membrane | * Lab #6 Cells Alive Internet Activity
* NYS Diffusion through a membrane lab
 | Topic 3 Exam |  | * Topic 3 Cells PowerPoint
* Topic 3 NYS pre lab PowerPoint
* Topic 3 cells notes or OneNote
* Topic 3 Cells city analogy wks
* Topic 3 Knowing your cell organelles wks
* Topic 3 Cancer Cells EBQ
* Topic 3 Cells CR and topic guidelines homework
* Topic 3 Castle Learnings
 |
| 3 weeks | Topic 4: Mitosis & Asexual Reproduction | * Lab #7 Mitosis Lab
* Lab #8 Investigating Asexual Reproduction
 | Topic 4 Exam |  | * Topic 4 Mitosis & Asexual Reproduction PowerPoint
* Topic 4 Student notes or One Note
* Topic 4 CR or guidelines homework
* Topic 4 Pet Shop Mystery wks
* Topic 4 Stem Cells EBQ
* Topic 4 Asexual Reproduction Group posters
* Topic 4 Mitosis graphic coloring study guide
* Topic 4 Castle Learnings
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| 3.5-4 weeks | Topic 5: Meiosis & Sexual Reproduction | * Lab #9 Meiosis lab
* Lab #10 Human Female Menstral Cycle
* Lab #11 Fetal Development
 | Topic 5 ExamTopic 5 Animal and Plant Reproduction Take Home Exam |  | * Topic 5 PowerPoint
* Topic 5 Student notes or OneNote
* Topic 5 guidelines and CR HW
* Topic 5 Miracle of Live Video with Questions
* Topic 5 Influences on Fetal Development
* Topic 5 cord clamping EBQ
* Topic 5 Man’s failed paternity test EBQ
* Topic 5 Castle Learnings
 |
| 3 weeks | Topic 6: What is DNA? | * NYS lab making connections
* Lab #12 DNA Extraction lab
* Lab #13 Genetics with a 😊
 | Topic 6 Exam |  | * Topic 6 DNA PowerPoint
* Topic 6 Student notes or OneNote
* Topic 6 Snorks activity
* Topic 6 codon bongo
* Topic 6 CR and guidelines homework
* Topic 6 DNA EBQ
* Topic 6 GATTACA Movie with worksheet
* Topic 6 Guided Readings
* Topic 6 Castle Learning
 |
| 4 weeks | Topic 7: Genetics | * Lab #14 Using DNA to Solve a Crime
* Lab #15 Karyotype Lab
* Lab #16 Virtual Gene-Splicing Lab
 | Topic 7 ExamGenetic Engineering Project |  | * Topic 7 PowerPoints
* Topic 7 Student notes or OneNote
* Topic 7 Dragon Genetics Activity
* Topic 7 Punnet squares practice wks
* Topic 7 Guided Readings
* Topic 7 EBQ
* Topic 7 Blood Typing Game
* Topic 7 Genetic Engineering Research Paper
* Topic 7 Guidelines and CR homework
* Topic 7 Castle Learning
 |
| 3 weeks | Topic 8: Taxonomy & Evolution | * Lab #17 Peppered Moth simulation lab
* Lab #18 Investigation of Evolution by natural selection
* NYS Lab Beaks of Finches
* Lab #19 Shark Dichotomous key lab
 | Topic 8 ExamTopic 8 Quiz |  | * Topic 8 PowerPoints
* Topic 8 Student Notes or OneNote
* Kahoot
* Tpoic 8 CR and guidelines homework
* Topic 8 Guided Readings
* Topic 8 Lucy EBQ
* Topic 8 Taxonomy and Dichotomous key practice wks
* Topic 8 Evolutionary relationships wks
* Topic 8 Galapagos Island movie with questions
* Topic 8 castle learning
* Topic 8 evolution quiz
 |
| 2 weeks | Topic 9: Plant Physiology Photosynthesis Vs Cellular Respiration | * Lab #20 Investigating stomata in plants
* Lab #21 Photosynthesis and Cellular respiration
* Lab #22 Energy in a Cell virtual lab
* Lab #23 Chicago Cyanide Murders: a case study in Cellular Respiration
 | Topic 9 Exam |  | * Topic 9 PowerPoints
* Topic 9 Student notes or OneNote
* Kahoot
* Topic 9 Sea Slugs EBQ
* Topic 9 Photosynthesis vs CR Jeopardy
* Topic 9 Help Wanted Plant Positions wks
* Topic 9 Leaf Anatomy files
* 3rd Rover
* Topic 9 guidelines and CR homework
* Topic 9 Guided Readings
* Topic 9 Castle Learning
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| 2 weeks | Topic 10A: Human Body SystemsRespiratory, Circulatory, & Digestive Systems | * Lab #24 Blood Typing lab
* Lab #25 Lung Capacity Lab
 | Topic 10A Exam |  | * Topic 10 PowerPoints
* Topic 10 Student Notes or OneNote
* Kahoot
* Topic 10 worksheets and A&P diagrams
* 3rd Rover
* Topic 10 bypass EBQ
* Topic 10 CR and homework
* Topic 10 castle learning
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| 1.5 weeks | Topic 10B: Muscular, Nervous, & Skeletal body systems | * Lab #26 Receptors for touch
* Lab #27 Effects of training the brain
 | Topic 10B Exam |  | * Topic 10B PowerPoints
* Topic 10B Student notes or OneNote
* Kahoot
* 3rd Rover
* Topic 10B CR and homework
* Topic 10B A&P diagrams and wks
* Topic 10B Neuron Paintings Project
* Topic 10B Castle Learning
 |
| 2 weeks | Topic 10C: Endocrine, Immune, & Regulation body systems | * Lab #29 Frog Dissection lab
* Lab #30 Modeling Disease Transmission
 | Topic 10C Exam |  | * Topic 10C PowerPoints
* Topic 10C Student notes or OneNote
* Kahoot
* 3d rover
* Topic 10C CR and HW wks
* Topic 10C A&P diagrams and wks
* Topic 10C castle learnings
 |
| 3-4 weeks | Topic 11: Ecology | * Lab #31 Food Webs
* Lab #32 Food Chains
* Lab #33 Amino Acid Sequence
* NYS Relationships and Biodiversity lab
 | Topic 11 Exam |  | * Topic 11 PowerPoints
* Topic 11 student notes or OneNote
* Kahoot
* Topic 11 CR and guidelines HW WKS
* Topic 11 Zebra mussels EBQ
* Topic 11 Ecological succession wks
* Topic 11 Ecological succession watercolor activity
* Topic 11 Deer predation graph
* Topic 11 The lion king food web
* Topic 11 The 11th hour documentary with worksheet
* Topic 11 Predator/ pray Life video with worksheet
* Topic 11 Castle learnings
 |
| 2 weeks | Topic 12: REVIEW | * Lab #34 Extra Graph Practice
 | NYS Living Environment Regents in June |  | * Livingenvironmentsregentsprep.org
* LE Interactive Regents
* LE Boot camp survival guide
* State lab review packets
* Copies of old exams
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