**Biology Lesson Plans Quarter 1 2013-2014**

**Date Lesson and Activities State Core Journal writing**

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| **8/26****8/27** | **1. Disclosures** **2. Discuss observations vs. interpretations****3. Group activity: observations and interpretations about a living thing and their group members** | **The Nature of Science-ILO’s** |  |
| **8/28****8/29** | **1. Pay lab fee as a class****2. Notes: What is Science? Safety****3. Handout: Lab safety****4. Safety contract** | **The Nature of Science-ILO’s** | **Journal 1: snowglobe****What is science?** |
| **8/30****9/3** | **1. Collect Safety contract, disclosures****2. Assign books****3. Biology quarterly pre test****4. Handout: safety rules (from book appendix)** | **The Nature of Science-ILO’s** |  |
| **9/4****9/5** | **1. Pre-test on tools****2. Notes: tools used in science****3. Handout: tools** | **The Nature of Science-ILO’s** | **Journal 2: sorting diagram****tools** |
| **9/6****9/9** | **1. Notes: metrics****2. Lab: metric measuring****3. Handout: metric practice** | **The Nature of Science-ILO’s** | **Journal 3: persuasive paragraph****Why the U.S. should be metric** |
| **9/10****9/11** | **1. Notes: Characteristics of life****2. Handout: review of graphing****3. Handout: graphing practice** | **The Nature of Science-ILO’s** |  |
| **9/12****9/13** | **1. Review****2. Test**  |  |  |
| **9/16****9/17** | **1. Notes: levels of ecology****2. Introduce Desert Ecology project****3. Movie: Deserts**  | **Std 1-Obj 1** | **Journal 4: Alphabet graffiti****Deserts** |
| **9/18****9/19** | **1. Lab: Energy needs (skittles)****2. Notes: food chains, food webs****3. Handout: symbiosis** | **Std 1-Obj 1** | **Journal 5: Bull’s eye****Levels of ecology** |
| **9/20****9/23** | **1. Group activity: energy pyramids****2. Notes: cycles****3. Handout: cycles** | **Std 1-Obj 1****Std 1-Obj 2** |  |
| **9/24****9/25** | **1. Notes: Biomes****2. Handout: biome map** | **Std 1-Obj 3** |  |
| **9/26****9/27** | **1. GSL powerpoint and booklet****2. Notes: the impact of people****3. Book questions** | **Std 1-Obj 2****Std 1-Obj 3** | **Journal 6: Commercial Ad****Create an ad for the Great Salt Lake** |

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| **9/30****10/1** | **1. Handout: Biological magnification****2. Outline: resources-soil, water, air (pages 158-165)**  | **Std 1-Obj 2****Std 1-Obj 3** |  |
| **10/2****10/3** | **1. Review****2. Test-ecology** |  |  |
| **10/4****10/7** | **1. Notes: intro to chemistry****2. Review periodic chart in book****3. Handout: Atom chart** | **Std 2-Obj 1** |  |
| **10/8****10/10** | **1. Notes: bonds and reactions****2. Lab: chemical and physical changes****3. Handout: formulas** | **Std 2-Obj 1** | **Journal 7: explanatory paragraph****Explain how to draw an atom**  |
| **10/11****10/14** | **1. Notes: pH****2. Lab: determining pH** | **Std 2-Obj 1** | **Journal 8: writing a list****Use p. 39 to create a list as directed** |
| **10/15****10/16** | **1. Notes: carbohydrates and lipids****2. Handout: review of atoms and bonding** | **Std 2-Obj 1** |  |
| **10/21****10/22** | **1. Notes: proteins, enzymes, nucleic acids****2. Model: enzyme activity** | **Std 2-Obj 1** | **Journal 9: explanation****Explain the lock and key theory** |
| **10/23****10/24** | **1. Review****2. Test: chemistry** |  |  |
| **10/25****10/28** | **1. Notes: discovery of cells****2. Class Lab: prokaryotic vs. eukaryotic cells****3. Handout: cell timeline (book)****4. Biology quarterly post-test** | **Std 2-Obj 3** |  |
| **10/29****10/30** | **1. Notes: cell organelles** **2. Lab: using the microscope****3. Handout: cell catalog** | **Std 2-Obj 3** |  |
| **10/31** | **See next quarter** |  |  |

**Biology Lesson Plans Quarter 2 2013-2014**

**Date Lesson and Activities State Core Journal writing**

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| **10/31****11/4** | **1. Biology quarterly pre test****2. Notes: cell organelles** **3. Lab: plant and animal cells****4. Work on cell catalog** | **Std 2-Obj 3** | **Journal 1: Venn diagram****Compare prokaryotic and eukaryotic cells** |
| **11/5****11/6** | **1. Drawing of cell functions****2. Handout: cell organelles****3. Finish cell catalog** | **Std 2-Obj 3** | **Journal 2: analogy****Compare a cell to a city, school, business, etc.** |
| **11/7****11/8** | **1. Quiz: label plant or animal cell****2. Demo: Diffusion in air and liquid****3. Notes: movement through a membrane** | **Std 2-Obj 3** |  |
| **11/11****11/12** | **1. Notes** **2. Handout: movement through a membrane** | **Std 2-Obj 3** | **Journal 3: diagram****Show the flow of water from a cell in a beaker** |
| **11/13****11/14** | **1. Review****2. Test on cell structure and function** |  |  |
| **11/15****11/18** | **1. Notes: photosynthesis****2. Lab: pigments****3. Handout: timeline (book)** |  | **Journal 4: word pairs****Create a sentence from the pair of words** |
| **11/19****11/20** | **1. Notes: respiration****2. Handout: vocabulary****3. Handout: review of cellular energy** | **Std 2-Obj 2** | **Journal 5: diagram and explain****Diagram Joseph Priestley’s experiment and explain it** |
| **11/21****11/22** | **1. Notes: cell division****2. Lab: cell size (agar blocks)****3. Handout: cell division** | **Std 2-Obj 3** |  |
| **11/25****11/26** | **1. Notes: cell division****2. Lab: onion root tips****3. finish mitosis booklet** | **Std 2-Obj 3** |  |
| **12/2****12/3** | **1. Activity: graphing cell cycle****2. Handout: review of cell division** | **Std 2-Obj 3** | **Journal 6: apoptosis** |
| **12/4****12/5** | **1. Review of cell processes****2. Test** |  |  |
| **12/6****12/9** | **1. Notes: discovery of DNA****2. Group activity: DNA puzzle****3. Handout: timeline (book)** | **Std 4-Obj 3** | **Journal 7: DNA article****Answer questions on article** |

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| **12/10****12/11** | **1. Notes: DNA structure and replication****2. Handout: DNA replication****3. Book questions** | **Std 4-Obj 3** |  |
| **12/12****12/13** | **1. Notes: protein synthesis****3. model: building a paper protein** | **Std 4-Obj 3** |  |
| **12/16****12/17** | **1. Handout: mutations****2. Handout: DNA fingerprints** | **Std 4-Obj 3** |  |
| **12/18****12/19** | **1. Open book test: DNA** |  |  |
| **12/20****1/6** | **1. Notes: Genetic terms and crosses****2. Handout: practice crosses #1****3. Handout: probability** | **Std. 4-Obj 2** |  |
| **1/7****1/8** | **1. Class activity: human traits****2. Notes** **3. Handout: practice crosses #2** | **Std. 4-Obj 2** | **Journal 8: coat of arms****Create a genetic coat of arms** |
| **1/9****1/10** | **1. Lab: Making babies****2. Handout: Pedigree charts** | **Std. 4-Obj 2** | **Journal 9: careers page 322****Choose 1 career to write about** |
| **1/13****1/14** | **1. Notes****2. Lab: meiosis** **3. Biology quarterly post test** | **Std. 4-Obj 1** |  |
| **1/15****1/16** | **1. Notes****2. Lab: blood type****3. Handout: possible blood crosses** | **Std. 4-Obj 2** | **Journal 10: chart****Pedigree of a family trait** |
| **1/17****1/21** | **1. Quiz****2. Handout: Karyotypes****3. Handout: practice crosses #3** | **Std. 4-Obj 2** |  |
| **1/22****1/23** | **1. Handout: Huntington’s disease pedigree****2. Handout: Crossword review****3. Book questions** | **Std. 4-Obj 2** |  |

**Biology Lesson Plans Quarter 3 2013-2014**

**Date Lesson and Activities State Core Journal writing**

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| **1/27****1/28** | **1. Lab: cloning****2. Biology quarterly pre test** | **Std. 4-Obj 2** |  |
| **1/29****1/30** | **1. Review****2. Test on genetics** |  |  |
| **1/31****2/3** | **1. Movie: Biodiversity****2. Notes: Evolution****3. Handout: timeline** | **Std 5-Obj 2** | **Journal 1:** **Complete evolution survey** |
| **2/4****2/5** | **1. Notes****2. Lab: fossil dig****3. Lab: fossil observation****4. Handout: fossil footprints** | **Std 5-Obj 2** |  |
| **2/6****2/7** | **1. Lab: variations****2. Handout: homologous structures** | **Std 5-Obj 2****Std 5-Obj 1** |  |
| **2/10****2/11** | **1. Notes****2. Lab: ferrets****3. Handout: natural selection** | **Std 5-Obj 1** | **Journal 2: hypotheses vs theories****Lamarck** |
| **2/12****2/13** | **1. Notes****2. Handout: comparing proteins****3. Handout: populations** | **Std 5-Obj 2****Std 5-Obj 1** |  |
| **2/14****2/18** | **1. Handout: geologic time****2. Movie: camouflage****3. Handout: crossword review** | **Std 5-Obj 2****Std 5-Obj 1** | **Journal 3: chart****Geologic time** |
| **2/19****2/20** | **1. Review of evolution****2. Test** |  |  |
| **2/21****2/24** | **1. Notes: classification****2. Class activity: classify monsters****3. Handout: scientific names** | **Std 5-Obj 3** |  |
| **2/25****2/27** | **1. Notes****2. Handout: classify shapes, primates****3. Handout: key to salamanders** | **Std 5-Obj 3** |  |
| **2/28****3/3** | **1. Lab: owl pellets, classify animal in pellet****2. Handout: four keys** | **Std 5-Obj 3** | **Journal 4: cladogram** |

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| **3/4****3/5** | **1. Lab: fashion a fish****2. Handout: crossword review** | **Std 5-Obj 3** | **Journal 5: classify****Classify members of lab group** |
| **3/6****3/7** | **1. Review****2. Test on classification** |  |  |
| **3/10****3/11** | **1. Notes: Plants****2. Lab: monocot and dicots****3. Handout: plant booklet** | **Std 3-Obj 1****Std 3-Obj 2** | **Journal 6: outline****Page 635 what a plant needs** |
| **3/12****3/13** | **1. Notes****2. Handout: leaf structure and function** | **Std 3-Obj 1****Std 3-Obj 2** |  |
| **3/14****3/17** | **1. Notes** **2. Handout: roots and stems** | **Std 3-Obj 1****Std 3-Obj 2** | **Journal 7: vocabulary****Choose 5 words and write a 4 sentence paragraph** |
| **3/18****3/19** | **1. Notes****2. Lab: flower parts****3. Handout: flower diagram** | **Std 3-Obj 1****Std 3-Obj 2** | **Journal 8: classifying****Parts of plants we eat** |
| **3/20****3/21** | **1. Handout: pollination/seed dispersal****2. Handout: Plant Hormones****3. Biology quarterly post test** | **Std 3-Obj 1****Std 3-Obj 2** |  |
| **3/24****3/25** | **1. Handout: crossword review****2. Quiz: plants** |  |  |
| **3/26****3/27** | **1. Notes: Body systems****2. Handout: system matching-cut and paste** | **Std 3-Obj 1****Std 3-Obj 2** |  |
| **3/28****4/1** | **1. Notes****2. Lab: Heart rate****3. Handout: label diagram of heart** | **Std 3-Obj 1****Std 3-Obj 2** | **Journal 9: page 950 compare****Compare circulatory systems** |

**Biology Lesson Plans Quarter 4 2013-2014**

**Date Lesson and Activities State Core Journal writing**

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| **4/2****4/3** | **1. Notes****2. Lab: system comparison to invertebrate animal** | **Std 3-Obj 1****Std 3-Obj 2** | **Journal: Ads****Create ad for convincing teens to exercise or drink milk** |
| **4/4****4/7** | **1. Notes****2. Finish group posters****3. Presentations** | **Std 3-Obj 1****Std 3-Obj 2** |  |
| **4/8****4/9** | **1. Handout: puzzle** **2. Handout: RAFT writing assignment** | **Std 3-Obj 1****Std 3-Obj 2** | **Journal:** **Paragraph on life without one sense** |
| **4/10****4/11** | **1. Test: open note** |  |  |
| **4/14****4/15** | **1. Notes: fish****2. Lab: dissection of fish** | **Std 3-Obj 1****Std 3-Obj 2** |  |
| **4/16****4/22** | **1. Notes: amphibians****2. Lab: dissection of frog****3. Movie: amphibians** | **Std 3-Obj 1****Std 3-Obj 2** |  |
| **4/23****4/24** | **1. Quiz: frog structure****2. Notes: reptiles****3. Handout: FAR****4. Handout: lizard temperature regulation** | **Std 3-Obj 1****Std 3-Obj 2** | **Journal: cause and effect****DOL 52 Ecoalert what is the cause of frog mutations?** |
| **4/25****4/28** | **1. Movie: reptiles****2. Notes: birds****3. Handout: bird beaks and feet** | **Std 3-Obj 1****Std 3-Obj 2** | **Journal: sorting****Crocodile article** |
| **4/29****4/30** | **1. Movie: birds****2. Notes: mammals****3. Handout: mammal comparison** | **Std 3-Obj 1****Std 3-Obj 2** |  |
| **5/1****5/2** | **1. Lab: mammal intelligence****2. Lab: primate thumbs** | **Std 3-Obj 1****Std 3-Obj 2** | **Journal: page 848****Paragraph on social behavior** |
| **5/5****5/6** | **1. Review****2. Test: animals****3. Handout: animal mascots** |  |  |
| **5/7****5/8** | **1. Notes: protists and fungi****2. Lab: mushrooms** |  | **Journal: descriptive paragraph****Describe motion in protists** |

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| **5/9****5/12** | **1. Lab: Protists****2. Handout: Protozoan response****3. Handout: Protists and fungi** |  |  |
| **5/13****5/14** | **1. Notes: viruses****2. Lab: set up bacteria plates****3. Handout: viral reproduction** |  | **Journal: analyzing data****p. 591 graph chart, answer #3** |
| **5/15****5/16** | **1. Notes: bacteria****2. Lab: read bacteria plates****3. Handout: bacteria shapes** |  | **Journal: Venn diagram****Protists, fungi, bacteria** |
| **5/19****5/20** | **1. Lab: disease outbreak (cruise ship)****2. Handout: disease matching** |  | **Journal: p. 584-585****List important roles of prokaryotes** |
| **5/21****5/22** |  |  |  |
| **5/23****5/27** |  |  |  |
| **5/28****5/29** | **1. Collect books** |  |  |
| **5/30****6/1** | **Two days for SAGE tests (whenever we are assigned to take them)** |  |  |
| **6/3****6/4** |  |  |  |
| **6/5****6/6** | **1. Graduation/Yearbook day****1. Teacher check out day** |  |  |