**LIFE SCIENCE SYLLABUS**

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| Teacher  | Mrs. Sanahine Balian Chahinian |
| E-mail | Sbalian@Ferrahian.org |
| Phone | (818)784-6978 |
| Conference Hours | By appointment  |
| Course Name & Grade Level | 7th Grade Life Science |
| Textbooks  | McGraw-Hill Education Life iScience 2017ISBN: 978-0-07-677284-1 |
| Resources | [www.sanahinebalian.weebly.com](http://www.sanahinebalian.weebly.com); online |
| Required Materials | Pencils, erasers, colored correcting pen, and spiral or composition notebook, hand sanitizes, a box of tissue.  |
| Course Description:* Each lesson has content standard(s) and the school-wide adopted ESLR’s listed at the beginning of the lesson.
* All the 7th grade California Science Standards will be covered this year. This class integrates many aspects of science including an emphasis that is placed on the understanding and use of the scientific method. Students will learn by thinking, talking, and writing about what they do and discover in science. This year students will be focusing on life science. This includes cell biology, genetics, evolution, structure and function of living systems, and, of course, investigation and experimentation throughout these concepts.
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| **ESLRs Addressed** |
|  1a 1b 1c |  2a 2b 2c |  3a 3b 3c |  4a 4b 4c |  5a 5b 5c |
| **Re-enter in the following boxes the designated ESLRs numbers, which are addressed by this course** |
| 1 a, b, and c |  | 3 a, b, and c | 4 a, b, and c | 5 a, b, and c |

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| **Content Standards** |
| **The following is the California Department of Education Content Standards of this Course.** |
| Focus on Life ScienceCell Biology 1. All living organisms are composed of cells, from just one to many trillions, whose details usually are visible only through a microscope. As a basis for understanding this concept:
	1. Students know cells function similarly in all living organisms.
	2. Students know the characteristics that distinguish plant cells from animal cells, including chloroplasts and cell walls.
	3. Students know the nucleus is the repository for genetic information in plant and animal cells.
	4. Students know that mitochondria liberate energy for the work that cells do and that chloroplasts capture sunlight energy for photosynthesis.
	5. Students know cells divide to increase their numbers through a process of mitosis, which results in two daughter cells with identical sets of chromosomes.
	6. Students know that as multicellular organisms develop, their cells differentiate.

Genetics1. A typical cell of any organism contains genetic instructions that specify its traits. Those traits may be modified by environmental influences. As a basis for understanding this concept:
	1. Students know the differences between the life cycles and reproduction methods of sexual and asexual organisms.
	2. Students know sexual reproduction produces offspring that inherit half their genes from each parent.
	3. Students know an inherited trait can be determined by one or more genes.
	4. Students know plant and animal cells contain many thousands of different genes and typically have two copies of every gene. The two copies (or alleles) of the gene may or may not be identical, and one may be dominant in determining the phenotype while the other is recessive.
	5. Students know DNA (deoxyribonucleic acid) is the genetic material of living organisms and is located in the chromosomes of each cell.

Evolution 1. Biological evolution accounts for the diversity of species developed through gradual processes over many generations. As a basis for understanding this concept:
	1. Students know both genetic variation and environmental factors are causes of evolution and diversity of organisms.
	2. Students know the reasoning used by Charles Darwin in reaching his conclusion that natural selection is the mechanism of evolution.
	3. Students know how independent lines of evidence from geology, fossils, and comparative anatomy provide the bases for the theory of evolution.
	4. Students know how to construct a simple branching diagram to classify living groups of organisms by shared derived characteristics and how to expand the diagram to include fossil organisms.
	5. Students know that extinction of a species occurs when the environment changes and the adaptive characteristics of a species are insufficient for its survival.

Structure and Function in Living Systems1. The anatomy and physiology of plants and animals illustrate the complementary nature of structure and function. As a basis for understanding this concept:
	1. Students know plants and animals have levels of organization for structure and function, including cells, tissues, organs, organ systems, and the whole organism.
	2. Students know organ systems function because of the contributions of individual organs, tissues, and cells. The failure of any part can affect the entire system.
	3. Students know how bones and muscles work together to provide a structural framework for movement.
	4. Students know how the reproductive organs of the human female and male generate eggs and sperm and how sexual activity may lead to fertilization and pregnancy.
	5. Students know the function of the umbilicus and placenta during pregnancy.
	6. Students know the structures and processes by which flowering plants generate pollen, ovules, seeds, and fruit.
	7. Students know how to relate the structures of the eye and ear to their functions.

Investigation and Experimentation 1. Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:
	1. Select and use appropriate tools and technology (including calculators, computers, balances, spring scales, microscopes, and binoculars) to perform tests, collect data, and display data.
	2. Use a variety of print and electronic resources (including the World Wide Web) to collect information and evidence as part of a research project.
	3. Communicate the logical connection among hypotheses, science concepts, tests conducted, data collected, and conclusions drawn from the scientific evidence.
	4. Construct scale models, maps, and appropriately labeled diagrams to communicate scientific knowledge (e.g., motion of Earth's plates and cell structure).
	5. Communicate the steps and results from an investigation in written reports and oral presentations.
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**Class Schedule - Quarter 1**

**The schedule includes the textbook chapters to be covered throughout the year, additional subject matter, all lectures, tests, quizzes, projects and other relevant information.**

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| **First Semi-Quarter** |
| Week 1 | Introduction & ExperimentationUnit 1: Life Structure and FunctionChapter 1: Classifying and Exploring, Lesson 1 |
| Week 2 | Chapter 1: Classifying and Exploring Lesson 2: Measurement and Scientific Tools Lesson 3: Case StudyChapter 1 Quiz |
| Week 3 | Sept. 4: Labor Day – School ClosedChapter 2: Cell Structure and Function Lesson 1: Cells and Life |
| Week 4 | Chapter 2: Cell Structure and FunctionLesson 2: The Cell |
| Week 5 | Chapter 2: From a Cell to an OrganismLesson 3: Moving Cellular Material |

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| **Second Semi-Quarter**  |
| Week 1 | Lesson 4: Cells and EnergyChapter 2 Review & Test |
| Week 2 | Chapter 3: From a Cell to an OrganismLesson 1: The Cell Cycle and Cell Division |
| Week 3 | Chapter 3: From a Cell to an OrganismLesson 2: Levels or Organization |
| Week 4 | Chapter 3: From a Cell or an OrganismChapter 3 Test |
| Week 5 | Chapter 4: Reproduction of OrganismLesson 1: Sexual Reproduction and Meiosis |

**Class Schedule - Quarter 2**

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| **First Semi-Quarter** |
| Week 1 | Chapter 4: Reproduction of OrganismLesson 2: Asexual ReproductionChapter 4 Test |
| Week 2 | Chapter 5: Genetics Lesson 1: Mendel and His PeasLesson 1 Quiz |
| Week 3 | Chapter 5: GeneticsLesson 2: Understanding InheritanceLesson 3 DNA and GeneticsChapter 5 Test |
| Week 4 | Chapter 6: The Environment Change Over TimeLesson 1: Fossil Evidence of EvolutionLesson 2: Theory of Evolution By Natural SelectionLesson 1 and 2 Quiz |
| Week 5 | Chapter 6: The Environment Change Over TimeLesson 3: Biological Evidence of Evolution  |

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| **Second Semi-Quarter** |
| Week 1 | Unit 2: From Bacteria to PlantsChapter 7: Bacteria and VirusesLesson 1: What are BacteriaLesson 2: Bacteria in NatureQuiz |
| Week 2 | Chapter 7: Bacteria and VirusesLesson 3: Wat are Viruses?Chapter 7 Test |
| Week 3 | Chapters Review (Chapters 1 through 7)\*\*\*\*\*MIDTERMS\*\*\*\*\* |
| Week 4 | Christmas Vacation |

**Class Schedule - Quarter 3**

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| **First Semi-Quarter** |
| Week 1 | Chapter 8: Protists and FungiLesson 1: What are prostistsLesson 2: What are fungi?Quiz |
| Week 2 | Chapter 8: Prostists and Fungi TestChapter 9: Plant DiversityLesson 1: What is a Plant? |
| Week 3 | Chapter 9: Plant DiversityLesson 2: Seedless PlantsLesson 3: Seed PlantsChapter 9 Test |
| Week 4 | Chapter 10: Plant Processes and ReproductionLesson 1: Energy Processing in PlantsLesson 2: Plant Reponses |
| Week 5 | Chapter 10: Plant Processes and ReproductionLesson 3: Plant ResponsesChapter 10 TestUnit 4: Human Body SystemsChapter 14: Structure and Movement Lesson 1: The Skeletal System |

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| **Second Semi-Quarter** |
| Week 1 | Chapter 14: Structure and MovementLesson 2: The Muscular SystemLesson 3: The SkinTest |
| Week 2 | Chapter 15: Digestion and ExcretionLesson 1: NutritionLesson 2: The Digestive SystemQuiz |
| Week 3 | Chapter 15: Digestive and ExcretionLesson 3: The Excretory SystemChapter 16: Respiration and CirculationLesson 1: The Respiratory System |
| Week 4 | Chapter 16: Respiration and CirculationLesson 2: The Circulatory SystemLesson 3: BloodQuiz |
| Week 5 | Chapter 16: Respiration and CirculationLesson 4: The Lymphatic SystemChapter 16 Test |

**Class Schedule - Quarter 4**

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| **First Semi-Quarter** |
| Week 1 | Chapter 17: Immunity and DiseasesLesson 1: DiseasesLesson 2: The Immunity System |
| Week 2 | Chapter 17: Immunity and DiseasesLesson 3: Staying HealthyChapter 18: Control and CoordinationLesson 1: The Nervous System |
| Week 3 | \*\*\*\*\*EASTER BREAK\*\*\*\*\* |
| Week 4 | Chapter 18: Control and CoordinationLesson 2: The SensesLesson 3: The Endocrine System |
| Week 5 | Chapter 18 TestUnit 3: AnimalsChapter 11: Animal DiversityLesson 1: What Defines an Animal?  |
| Week 6 | Chapter 11: Animal DiversityLesson 2: Invertebrate PhylaLesson 3: Phylum ChordataQuiz |

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| **Second Semi-Quarter** |
| Week 1 | Chapter 12: Animal Structure and FunctionLesson 1: Support, Control and MovementLesson 2: Circulation and Gas ExchangeQuiz |
| Week 2 | Chapter 12: Animal Structure and FunctionLesson 3: Digestion and ExcretionTest |
| Week 3 | Chapter 19: Reproduction and Development  |
| Week 4 | Final Review Chapters 8-11 |
| Week 5 | Final Review Chapters 12-18 |
| Week 6 | Finals |

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| **Classroom Rules** |
| **This section includes the rules set by the teacher and the consequences of violating these rules.** |
| **Classroom Rules:**1. **Have all appropriate materials and supplies at your desk and be seated when the bell rings.**
2. **No eating, drinking or chewing gum in class.**
3. **Respect classmates!**
4. **Raise your hands and wait for permission to speak.**
5. **Stay in your assigned seat unless you have permission to do otherwise.**
6. **Treat equipment and classroom with care.**

**Consequences:**1. **Verbal warning**
2. **Meeting with student**
3. **Contacting parent(s)**
4. **Action plan**
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| **School Grading Policy**  |
| **This section includes grading policies set by the school administration for grades 6-12** |
| The grades assigned to students are based on their **academic progress** and their **classroom behavior**. Students receive **Academic** and **Cooperation** grades for every quarter of the four-quarter academic year. Students also receive a mid-term progress report for each of these 9-10 weeklong quarters. Besides the quarter grades, students are assigned semester grades for each class or course. The quarter grade is assigned based on the following percent distribution:

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| **Quarter Grade** |
| Tests and quizzes  | 50-70 %  | Homework  | 10-15 % |
| Projects, labs, etc.  | 10-15 % | Class participation  | 10-15 % |

The semester grade is assigned based on the following percent distribution:

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| **1st Semester Grade** | **2nd Semester Grade** |
| 1st Quarter grade | 40% | 3rd Quarter grade | 40% |
| 2nd Quarter grade | 40% | 4th Quarter grade | 40% |
| Mid-year exam grade | 20% | Final exam grade | 20% |
| Total  | 100% | Total  | 100% |

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|  | **Academic Grade Scale - Grades 6-12** |
| LetterGrade | Scale100 | Scale4 | ScaleWt. |  | LetterGrade | Scale100 | Scale4 | ScaleWt. |  | LetterGrade | Scale100 | Scale4 | ScaleWt. |  | LetterGrade | Scale100 | Scale4 | ScaleWt. |
| A+ | 100 | 4.4 | 5.4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A+ | 99 | 4.3 | 5.3 |  | B+ | 89 | 3.3 | 4.3 |  | C+ | 79 | 2.3 | 3.3 |  | D+ | 69 | 1.3 | 1.3 |
| A+ | 98 | 4.2 | 5.2 |  | B+ | 88 | 3.2 | 4.2 |  | C+ | 78 | 2.2 | 3.2 |  | D+ | 68 | 1.2 | 1.2 |
| A+ | 97 | 4.1 | 5.1 |  | B+ | 87 | 3.1 | 4.1 |  | C+ | 77 | 2.1 | 3.1 |  | D+ | 67 | 1.1 | 1.1 |
| A | 96 | 4.0 | 5.0 |  | B | 86 | 3.0 | 4.0 |  | C | 76 | 2.0 | 3.0 |  | D | 66 | 1.0 | 1.0 |
| A | 95 | 3.9 | 4.9 |  | B | 85 | 2.9 | 3.9 |  | C | 75 | 1.9 | 2.9 |  | D | 65 | 0.9 | 0.9 |
| A | 94 | 3.8 | 4.8 |  | B | 84 | 2.8 | 3.8 |  | C | 74 | 1.8 | 2.8 |  | D | 64 | 0.8 | 0.8 |
| A | 93 | 3.7 | 4.7 |  | B | 83 | 2.7 | 3.7 |  | C | 73 | 1.7 | 2.7 |  | D | 63 | 0.7 | 0.7 |
| A- | 92 | 3.6 | 4.6 |  | B- | 82 | 2.6 | 3.6 |  | C- | 72 | 1.6 | 2.6 |  | D- | 62 | 0.6 | 0.6 |
| A- | 91 | 3.5 | 4.5 |  | B- | 81 | 2.5 | 3.5 |  | C- | 71 | 1.5 | 2.5 |  | D- | 61 | 0.5 | 0.5 |
| A- | 90 | 3.4 | 4.4 |  | B- | 80 | 2.4 | 3.4 |  | C- | 70 | 1.4 | 2.4 |  | D- | 60 | 0.4 | 0.4 |
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| **Assessment** |
| **This section includes rules set by the school administration** |
| Test/Quiz PolicyStudents take **at least** TWO tests and two quizzes per class or course per semi-quarter. Two to four quizzes may be counted as one test. It is up to the individual teacher to adopt a policy to drop the lowest test grade of a student in calculating the quarter grade. No more than two tests are scheduled on the same day. The test scheduled last will be automatically dropped.Test/Quiz Make-UpStudents with **excused** absences shall have the opportunity to complete missed class work and make up all tests receiving full credit. The student is responsible to arrange for the make-up. Students who miss a test/quiz because of an **unexcused** absence will receive a failing grade on that test/quiz, except when the teacher decides to offer the chance for make-up. If a student misses a test/quiz while on suspension, he/she will not have the opportunity to make up the test/quiz and will receive an "F". Cheating Acts of cheating or plagiarism will result in suspension and the student will receive an "F" (20/100) on the test or the assigned work. |
| **This section includes grade percent distribution and additional rules set by the teacher** |
| Science Department Grading Policy:

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| Tests |  30% |
| Quizzes |  20% |
| Laboratory Assignments and Projects |  20% |
| Homework |  10% |
| Classwork |  20% |

Tests/Quizzes: There will be a test OR a quiz upon the completion of each chapter. Students will know about the quiz in advance. There will not be any graded pop quizzes. Exams will typically consist of multiple choice, matching, true and false questions, and short answer responses \*Test make-up policy: Students with an excused absence can take the missed test within 1 to 2 days of returning to school. It is the student’s responsibility to meet with the teacher to set the date when the make-up test will be given. Laboratory Assignments: Labs and collaborative group activities will occur to reinforce any concepts or topics covered in a chapter. Lab write-ups will be due at the end of the lab or the following day. Laboratory investigations should always be done in accordance to teacher directions and the laboratory code of conduct (i.e., the science safety contract).Projects:  Expectations and guidelines will be provided and explained in class. Homework: Homework is assigned Monday through Thursday. Students are required to read the appropriate chapters and sections, as well as answer any follow-up questions or activities. Late homework will NOT be accepted (except for in case of excused absences). Two missed homework assignments will result in parent notification. Participation: Students should come to class prepared and ready to learn. Books, folders, notebooks, writing materials, and other necessary items should be brought to class unless noted otherwise.  \*Extra credit assignments may be given occasionally during the school year. However, students should not depend on these assignments to ensure a desirable grade in the class.  |