

MONTE VISTA CHRISTIAN SCHOOL

SCI 057 Life Science

Britney Reese, Instructor

Course Syllabus

Course Description:

An exploration of several important topics of life science including cells, genetics, theories of origin, and the structure and function of living systems. Students will learn facts, principles, concepts, and skills through class lectures, project based learning, research, discussions, and hands-on experiences. During the course of the class the students will come to understand what life is, what science is, and to understand the role we have been given as stewards of the earth.

Curricular Mapping:

This course will continue to develop student skills in the area of observation, understanding the use of the scientific method, and using critical thinking to organize and understand the universe of living things. Methods of classification, and the internal and external structures and functions of living things will be introduced as well as topics related to the stewardship of the environment and our own bodies. This class will lay the foundation for their next biology experience with the learning of terminology, systems, and lab procedures, including dissection.

ESLR (Expected Schoolwide Learning Results):

Technological ESLR

In line with the school's Mission Statement, in particular, providing "innovative educational programs that prepare our students for success in life," graduates of Monte Vista are technologically fluent in current, mainstream computing technologies. A graduate of Monte Vista Christian School:

- a. Is technologically fluent in current, mainstream computing technologies.
- b. Demonstrates comfort using and adapting to new technologies and operating computing hardware and software.
- c. Demonstrates responsible **digital citizenship**, in particular with respect to safety, ownership rights, collaboration, publication, privacy, security and digital footprints.
- d. Demonstrates competence in transmitting digital data without the use of paper.
- e. Demonstrates competence in producing digital products, such as but not limited to notes, essays, projects, and presentations.
- f. Demonstrates online research competence to find answers and solve problems in real time scenarios.

Course Objectives:

Upon the successful completion of this course the student will be able to:

1. Conduct an investigation
2. Develop and use a model
3. Use argument supported by evidence
4. Construct a scientific explanation
5. Gather and synthesize information
6. Analyze and interpret data
7. Predict patterns
8. Evaluate solutions
9. Apply scientific ideas
10. Use mathematical representations to support explanations

Course Outline and Requirements:

1. Unit 1 Structure, Function, and Information Processing
 - a. Introduction to Life Science
 - b. Cell Biology
 - c. Molecular Biology and Genetics
2. Unit 2 Natural Selection and Adaptations
 - a. Theories of Origin
3. Unit 3 Matter and Energy in Organisms and Ecosystems
 - a. Prokaryotes
 - b. Protists
 - c. Fungi
 - d. Plants
4. Unit 4 Interdependent Relationships in Ecosystems
 - a. Animal Behavior
 - b. Ecology
5. Unit 5 Growth, Development, and Reproduction of Organisms
 - a. Invertebrates
 - b. Vertebrates
 - c. Human Biology

There will be tests, projects, and a variety of labs.

Texts:

Your necessary digital texts for this class are part of a “Required Course Materials Fee” thru the EdTech bookstore. This bundle has your students schedule preloaded and the bulk of their required course materials already prepackaged for you. You were sent an email on 7/25/16 with detailed instructions for purchasing and activation. Please note: some courses may require additional purchases outside of the course materials fee.

Grading:

All student grades will be weighted as follows:

1. 55% Tests/Projects
2. 45% Classwork/Homework

Class Policies:

The following class policies are non-negotiable. Please see the instructor if you have any concerns with your ability to follow these policies.

1. Attendance: Students are expected to be in class daily. If you are absent, it is your responsibility to get the class work and homework that you missed. You will have one day for every day you are out to make up your work.
2. Tardiness: Students are expected to be in their seats with all materials needed when the bell rings otherwise they will be marked “Tardy”.

School Policies:

Students are subject to all academic policies of the school as printed in the Student Handbook. Furthermore, it is each student’s responsibility to read and follow all academic policies of the school.

iPad Apps:

Students will need the following free apps. More apps may be requested to be added to the student’s iPad throughout the school year.

- eClicker Audience *by, Big Nerd Ranch, Inc.*
- Virtual Cell Animations *by, VCell Productions*
- HudsonAlpha iCell *by HudsonAlpha Institute for Biotechnology*
- Virtual Heart *by, Museum of Science and Industry, Chicago*

Tips for Students:

- Come to class with a positive attitude and a readiness to listen, work with others, and ask questions.
- Check the Online Course regularly for extra resources and all assignments.

Instructor Contact:

1. Office Hours: After school until 3:45 pm.
2. Room: M8
3. Email: amyschwerdtfeger@mvcs.org

MONTE VISTA CHRISTIAN SCHOOL

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Amy Schwerdtfeger, Instructor

Terms of Agreement

This syllabus is a contract between the instructor and the student with a parent/guardian witness. As an instructor of this course, I am committed to abiding by this syllabus. As a student of this course, you also are expected to abide by this syllabus. By signing this Terms of Agreement, you are affirming that you have read and agree to abide by the guidelines, policies and agreements stated in this syllabus.

As a parent/guardian, I have read and agree to support this student in an effort to follow the guidelines, policies and agreements stated in this syllabus.

Parent Signature

Date

As a student of this course, I have read and agree to abide by the guidelines, policies and agreements stated in this syllabus.

Student Signature

Date