

**MUST BE POSTED ON EACH TEACHERS WEBSITE**

**CEC Middle College of Denver  
Science Department  
Biology 1 – Credits: 5 Science  
Fall Semester, 2009  
Instructor: Craig Magtutu  
Class meets 7:25, 9:52, 11:22, 12:11, and 1:00, at CEC Main Campus in Room 222  
Office: Room 222 Office Phone: 720-423-6612  
Faculty email: [Craig\\_Magtutu@dpsk12.org](mailto:Craig_Magtutu@dpsk12.org)  
Office Hours: Mondays & Wednesdays 3:00 – 4:00**

**Main Office: 720-423-6600  
Attendance Line: 720-423-6649**

**Required Course Materials:**

- Text: BSCS Biology – A Human Approach (provided)
- Lab Notebook – Any 70+ page spiral or hard bound notebook page perforations.
- Class Binder with four dividers. May share with other classes, but must have separate dividers for science.
- Pens, pencils

**Course Description:**

This course emphasizes five unifying principles of modern biology: evolution, cell theory, gene theory, energy, and homeostasis. Students will develop the following skills:

- Explain major biological concepts
- Describe the role, place, and interactions of humans in the biosphere
- Demonstrate the process of scientific inquiry
- Apply critical thinking and problem-solving strategies
- Explain that science is a way of knowing
- Use educational technologies as tools for learning

**Course Competencies and Critical Skills:**

Upon completion of this course, students should understand that:

- Living systems change through time by the process of natural selection whereby individuals best adapted to their environment survive and reproduce successfully.
- Living systems maintain a relatively stable internal environment through their regulatory mechanisms and behavior.
- Living systems are complex and highly organized, and they require matter and energy to maintain this organization.
- Living systems are related to other generations by genetic material made of DNA that is passed on through reproduction.

- Living systems grow, develop, and differentiate during their lifetimes based on a genetic plan that is influenced by the environment.
- Living systems interact with their environment and are interdependent with other systems.
- Inquiry involves engaging in scientifically oriented questions, giving priority to evidence in responding to questions, formulating explanations based on evidence, connecting explanations to scientific knowledge, and communicating and justifying explanations.

Topical Outline View:

- I. Being a Scientist
- II. Evolution: Patterns and Products of Change
  - A. The Human Animal
  - B. Evolution: Change Across Time
  - C. Products of Evolution: Unity and Diversity
- III. Homeostasis: Maintaining Dynamic Equilibrium in Living Systems
  - A. The Internal Environment of Organisms
  - B. Maintaining Balance in Organisms
  - C. Human Homeostasis: Health and Disease
- IV. Energy, Matter, and Organization
  - A. Performance and Fitness
  - B. The Cellular Basis of Activity
  - C. The Cycling of Matter and the Flow of Energy in Communities
- V. Reproduction and Inheritance in Living Systems
  - A. Reproduction in Humans and Other Organisms
  - B. Continuity of Information Through Inheritance
  - C. Gene Action
- VI. Growth, Development, and Differentiation
  - A. Processes and Patterns of Development
- VII. Interactions and Interdependence in Living Systems
  - B. Human Interaction within Ecosystems

**Evaluation Methods and Class Management:** to receive credit for this course you must finish all work with a D or better, turn your work in on time, and in the proper format, adhere to school attendance policies, and participate regularly in class.

**After 4 tardies, unexcused or excused, the student is required to serve a 30 minute detention with that classroom teacher. After 3 unexcused absences in one month, students will be referred by their teacher to the CEC Attendance Committee.**

## Kinds of Classwork:

Work will consist of a combination of hands-on activities and laboratories, cooperative exercises, and individual written assignments.

You will use a science notebook in this class to record your work and take notes. This notebook will be graded periodically to evaluate your progress in biology and as a critical thinker.

Cooperative “group” work will be done regularly and group scores will be sometimes used as grade book entries.

Quizzes and exams will be given using traditional paper sheets as well as with our classroom response “clicker” system (CPS).

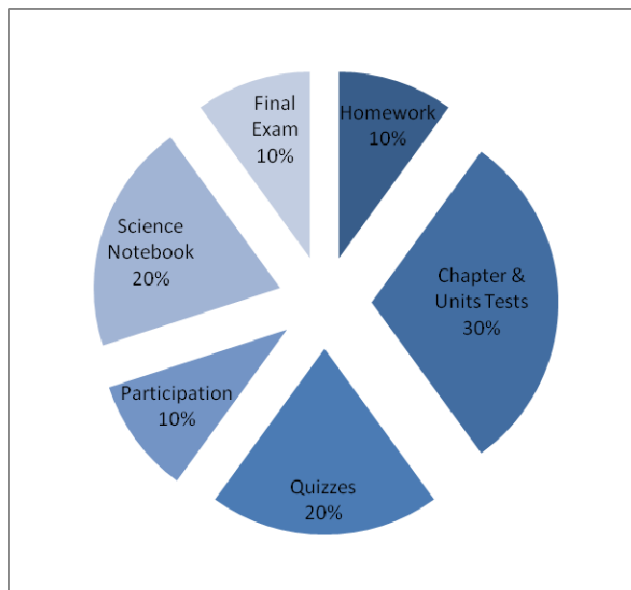
As per new DPS policy, homework collected will count for 10% of your grade. Regular homework quizzes and notebook grades may often cover work done outside of class.

Several class projects will be offered throughout this course. Your cooperation and successful work on these projects is essential to your learning and to your grade.

**Late Work:** Students are allowed a minimum of two days for every day absent to make up missed work or make other arrangements. Remember my purpose is to provide opportunities to help your child to be successful.

**Grading:** Your grade will be determined using a “total points” system. This means that you can calculate your percentage at any time by dividing the number of points you have earned by the total points possible at that time. See the diagram for *approximate* contributions from various assessment types.

<b>Grading Scale:</b>	<b>100-93% A</b>
	<b>92-90% A-</b>
	<b>87-89% B+</b>
	<b>83-86% B</b>
	<b>82-80% B-</b>
	<b>79-77% C+</b>
	<b>76-73% C</b>
	<b>72-70% C-</b>
	<b>69-60% D</b>
	<b>59-0% F</b>



**Plagiarism:** Plagiarism is literary theft of another author’s ideas and/or exact words, without giving proper credit to the source in both the text of your essay and on the Works Cited sheet. This rule is true of direct quotes, paraphrases, and summaries. Plagiarism is a serious ethical offense and may be grounds for the student’s failure in this class. Cheating of any kind is forbidden.

**Cell Phones and electronic devices should be TURNED OFF while you are in class.**

**Class Assignments:**

<b>Week</b>	<b>Big Idea / Standard</b>	<b>Activities Assignments</b>
1	Introductions, class expectations, procedures, and routines.	<ul style="list-style-type: none"> <li>• Create CECMoodle.com account</li> <li>• Return parent letter</li> <li>• Letter to your future self</li> </ul>
2	Chapter 0 – Thinking Like a Scientist	<ul style="list-style-type: none"> <li>• Cooperating like a scientist</li> <li>• Communicating like a scientist</li> <li>• Thinking as a scientist thinks</li> <li>• <u>Rules and procedures quiz</u></li> <li>• <u>Science notebook check #1</u></li> </ul>
3	Chapter 1 – The Human Animal	<ul style="list-style-type: none"> <li>• How different are we?</li> <li>• Primates exploring primates+</li> <li>• Tony’s brain+</li> <li>• Portraying humankind</li> <li>• <u>Assessments TBD</u></li> </ul>
4	Chapter 2 – Evolution: Change Across Time	<ul style="list-style-type: none"> <li>• Lucy</li> <li>• Evidence for change across time+</li> <li>• <u>Science notebook check #2</u></li> </ul>
5	Chapter 2 – Evolution: Change Across Time	<ul style="list-style-type: none"> <li>• Explaining evolution</li> <li>• Modeling natural selection+</li> <li>• <u>Assessments TBD</u></li> </ul>
6	Chapter 2 – Evolution: Change Across Time	<ul style="list-style-type: none"> <li>• Evolution in action+</li> <li>• <u>Chapter 2 Test</u></li> </ul>
7	Chapter 3 – Products of Evolution: Unity and Diversity	<ul style="list-style-type: none"> <li>• Strange encounters</li> <li>• Describing life</li> <li>• A look at diversity+</li> <li>• <u>Science notebook check #3</u></li> </ul>
8	Chapter 3 – Products of Evolution: Unity and Diversity	<ul style="list-style-type: none"> <li>• Adaptation, diversity, and evolution</li> <li>• Using unity to organize+</li> <li>• <u>Assessments TBD</u></li> </ul>
9	Chapter 3 – Products of Evolution: Unity and Diversity	<ul style="list-style-type: none"> <li>• Explaining the zebra’s stripes+</li> <li>• First encounter with the critter+</li> <li>• <u>Unit 1 Test</u></li> </ul>

Beginning of 2 <sup>nd</sup> Quarter		
10	Chapter 4 – The Internal Environment of Organisms	<ul style="list-style-type: none"> <li>• Can you stand the heat?</li> <li>• Cells in action+</li> <li>• A cell model</li> <li>• <u>Science notebook check #4</u></li> </ul>
11	Chapter 4 – The Internal Environment of Organisms	<ul style="list-style-type: none"> <li>• Regulating the internal environment+</li> <li>• <u>Assessments TBD</u></li> </ul>
12	Chapter 4 – The Internal Environment of Organisms	<ul style="list-style-type: none"> <li>• Can you stand the heat – again?+</li> <li>• <u>Chapter 4 Test</u></li> </ul>
13	Chapter 5 – Maintaining Balance in Organisms	<ul style="list-style-type: none"> <li>• The body responds</li> <li>• Stepping up the pace+</li> <li>• <u>Science notebook check #5</u></li> </ul>
14	Chapter 5 – Maintaining Balance in Organisms	<ul style="list-style-type: none"> <li>• On a scale of 0 to 14+</li> <li>• Homeostasis in your critter+</li> <li>• <u>Chapter 5 Test</u></li> </ul>
15	Chapter 6 – Human Homeostasis: Health and Disease	<ul style="list-style-type: none"> <li>• Self-defense!</li> <li>• <u>Unit 2 Test</u></li> </ul>
16	Make-up / Catch-up / Projects	<ul style="list-style-type: none"> <li>• Complete notebooks</li> <li>• Project presentations</li> <li>• <u>Science notebook check #6</u></li> </ul>
17	Review Week	<ul style="list-style-type: none"> <li>• <u>Review activities</u></li> </ul>
18	Finals	<ul style="list-style-type: none"> <li>• <u>Final Exam (10% of semester grade)</u></li> </ul>

Christmas Break