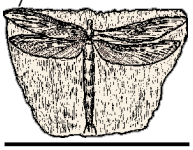
Sci 8- Herliczek
BFCCPS 2013-2014

Name:_____ Date:_____

# Science 8

## Syllabus: Trimester One

(August 27th to December 5th)



**Teacher:** Melissa K. Herliczek
**E-mail:** mherliczek@bfccps.org (preferred)
**Class website:** http://bfccps.org/faculty/melissa-herliczek/
**Phone extension :** (508) 541- 3434 Ext. 112 (voice mail only)
Please leave a message with your name, number, and suggested time(s) to return your call. Thank you!

## A. 8TH GRADE SCIENCE DESCRIPTION

The eighth grade science course will focus upon aspects of **Life Science, Earth Science**, and **Technology and Engineering**. The variety of topics and skills studied in 8th grade science is intended to both prepare students for success with the Massachusetts state assessments and higher level science courses.

Students will be expected to master skills and concepts of the scientific investigation or inquiry process with the guidance of the teacher. Students will also be asked to read scientific articles, newspaper articles, textbooks, and peer work. Writing and literacy skills will play an important role in the development of scientific competencies and attitudes such as **prediction, skepticism, analysis, observation, interpretation, and inference**.

**The first trimester** will focus upon the following **Life Science** and **Earth Science** topics:

- Structure and Function of Cells (continued)
- Photosynthesis and Respiration
- Classification of Organisms
- Evolution and Biodiversity
- Mapping Fundamentals

## B. LEARNING GOALS (Trimester One)

**Having attended this class, students will be able to:**

- Compare and contrast plant and animals cells
- Research and identify sound learning methods and strategies, and use these methods to create a web-based science lesson
- Identify and describe the processes of cellular respiration and photosynthesis in a variety of ways
- Compare and contrast photosynthesis and cellular respiration
- Classify organisms into the six kingdoms of organisms
- Describe and provide examples of the causes of biological evolution and biological diversity
- Explain how biological evolution leads to biological diversity within changing ecosystems

- Provide and explain the evidence for the theory of biological evolution
- Explain the causes for biological extinction
- Read, interpret, and create a variety of maps and models of the Earth's surface

## C. CLASS EVALUATION

| Grading | Percent of Overall Grade |
|---|---|
| Class Participation/Homework | *25%* |
| Quizzes | *25%* |
| Tests (and Small Projects or Investigations) | *25%* |
| Exams (and Science Fair Project) | *25%* |

Evaluation will be based on:

1. Class participation, including completion of classroom activities
2. Completion and accuracy of homework
3. Mastery of the course content as measured on weekly or bi-weekly quizzes (given on Friday or Monday)
4. Mastery of the course content on tests and exams (every 4-6 weeks)
5. A Science Fair Project completed during Trimester II and Trimester III

- All assignments submitted on time will be entered into the grade book up to a total score of 100%.
- A test or exam that has received an undesirable score can be revised by completing a revision worksheet and attaching it to the original test or exam. The revision needs to be completed within one week of the original assessment. Students will receive complete instructions of the revision process in class.
- Tests and exams can be revised for a score up to 100% and will be averaged with the original score.

Grading Scale
Fractions of grade points will be rounded to the nearest whole number.
Grades are calculated as follows:
A = 90-100
B = 80-89
C = 70-79
D= 60-69

## D. CLASS TOPICS

This course directly addresses the following subject matter requirements of the Massachusetts Science and Technology Curriculum Framework:

## Life Science Standards:

| | | |
|---|---|---|
| Classification of Organisms | | 1. Classify organisms into the currently recognized kingdoms according to characteristics that they share. Be familiar with organisms from each kingdom. |
| Structure and Function of Cells | | 3. Compare and contrast plant and animal cells, including major organelles (cell membrane, cell wall, nucleus, cytoplasm, chloroplasts, mitochondria, vacuoles). |
| EVOLUTION AND BIODIVERSITY | Genetic Variation and Adaptation | Standard 10: Give examples of ways in which genetic variation and environmental factors are causes of evolution and the diversity of organisms. |
| | Evidence for Evolution- fossils, rock record, and anatomy | Standard 11: Recognize that evidence drawn from geology, fossils, and comparative anatomy provides the basis of the theory of evolution. |
| | Extinction Explanation | Standard 12: Relate the extinction of species to a mismatch of adaptation and the environment. |
| ENERGY AND LIVING THINGS | Producers and Photosynthesis! | Standard 16: Recognize that producers (plants that contain chlorophyll) use the energy from sunlight to make sugars from carbon dioxide and water through a process called photosynthesis. This food can be used immediately, stored for later use, or used by other organisms. |
| CHANGES IN ECOSYSTEM OVER TIME | Evolution and Biodiversity | Standard 18: Recognize that biological evolution accounts for the diversity of species developed through gradual processes over many generations. |

## Earth Science Standards:

| | | |
|---|---|---|
| MAPPING THE EARTH | Maps and Models | 1. Recognize, interpret, and be able to create models of the earth's common physical features in various mapping representations, including contour maps. |

## E. TEXT AND MATERIALS

Students will be using the following text in the classroom:

Prentice Hall: Science Explorer
"Cells and Heredity" and "Inside Earth"
(A variety of science articles, newspaper articles, and other text materials will be used in science class as well. )

## F. TOPICAL OUTLINE

Unit 1: Structure and Function of Cells (Learning and Memory Project)
Unit 2: Photosynthesis and Cellular Respiration
Unit 3: Classification of Organisms
Unit 4: Evolution and Biodiversity
Unit 5: Maps and Models

## G. SCIENCE FAIR

Students will be expected to participate in science fair by completing a science fair project. This includes a laboratory experiment, lab report, laboratory journal, display board and background research. Specific information regarding science fair will be distributed to both parents and students a few months prior to science fair. Each student's science fair project will be graded as an exam grade.

## H. CLASS INFORMATION

### Attendance/Participation:

All students will receive a "weekly overview" or "weekly" each class on Monday that will review the week's lessons, activities, goals, and homework. The weekly will also be posted to the class website on Monday by 4 pm (or Tuesday by 4 pm, depending upon their class schedule).

**Please note:** Any changes to the weekly overview or homework will be reviewed in class with the students.

Class attendance is very important. Active participation in class discussion and small groups is expected. For every day of class missed students will be expected to retrieve their late work/materials and find out the deadline for their late submission(s). **In general, incomplete work from an absence will be due in five days.** All work for absent students will be organized and available for student pick up in the science classroom. In the case of extended absences, I will provide materials for pick up in the main office.

### Homework:

Homework is due on the assigned due date at the beginning of class. Students have **three days** to turn in homework assignments for partial credit. Each day late will cause the assignment's grade to decrease 10 points. After the **three day** period, no credit (0%) will be entered into the grade book.

### Other Assignments:

All assignments are due on the due date. An assignment which is turned in after the due date will result in a grade reduction of 10 points for each 24-hour period unless specific permission has been given by the instructor to submit the assignment on another date. An incomplete assignment will receive a 0% in the grade book.

**Writing Quality:**

All submitted work must be a finished product that is the result of participating in the writing process and steps as instructed by the teacher. It is expected to be high quality work. Students will be provided rubrics and specific correction areas for graded writing assignments.

**Work Integrity:**

Assigned work submitted to fulfill course requirements will be entirely that of the individual students and/or that of the group with whom he/she has worked cooperatively. All sources of facts, quotes, and images must be properly cited in papers and slideshow presentations. Students will be properly guided and instructed on how to create citations for images and background research. See student handbook for further information.

**Classroom Behavior:**

I am committed to creating and maintaining an interactive and positive learning environment. Positive classroom behaviors will be expected at all times. Students are expected to add to the learning environment with a respectful and supportive mindset. Students that exhibit behavior that is not enhancing the learning environment will be redirected as instructed by the teacher. Please contact me with any questions or concerns regarding behavioral expectations.

(Cut and sign below.)

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I understand and agree to the course syllabus for 8th grade science. In the case that I have any questions about the course syllabus, I will be sure to contact Ms. Herliczek. Thank you!

Student Name:_____

Student Signature_____ Date_____

Parent/Guardian Signature_____ Date_____