Mrs. Brown's Biology Syllabus

Course Name: General Biology

Teacher's Name: Mrs. Shanel Lightfoot-Brown

Communication: I will correspond to parents through e-mail. You may email me at slbrown@tcss.net. You may visit my classroom blog at brownsbiology.wordpress.com for weekly updates. Please visit the school's website at http://hillcresthigh.tcss.net/site/default.aspx?PageID=37. Please sign up for remind101 by texting this message **@edc74c** to this number **81010** homework reminders.

Course Description: Biology is a required, inquiry-based course focused on providing all high school students with foundational life science content about the patterns, processes, and interactions among living organisms. The emphasis is on increased sophistication and rigor of a limited number of core ideas rather than on memorizing a breadth of factual content. The content standards are organized according to the disciplinary core ideas for the life science domain. The first core idea, From Molecules to Organisms: Structures and Processes, concentrates on the structure of the cells and how their functions are necessary for supporting life, growth, behavior, and reproduction. The second core idea, Ecosystems: Interactions, Energy, and Dynamics, investigates the positive and negative interactions between living organisms and other biotic and abiotic factors. The third core idea, Heredity: Inheritance and Variation of Traits, centers on the formation of proteins that affect the trait expression, also known as the central dogma of molecular biology.

Course Objectives:

1.) Select appropriate laboratory glassware, balances, time measuring equipment, and optical instruments to conduct an experiment.
2.) Describe cell processes necessary for achieving homeostasis, including active and passive transport, osmosis, diffusion, exocytosis, and endocytosis.
3.) Identify reactants and products associated with photosynthesis and cellular respiration and the purposes of these two processes.
4.) Describe similarities and differences of cell organelles, using diagrams and tables.
5.) Identify cells, tissues, organs, organ systems, organisms, populations, communities, and ecosystems as levels of organization in the biosphere.
6.) Describe the roles of mitotic and meiotic divisions during reproduction, growth, and repair of cells.
8.) Identify the structure and function of DNA, RNA, and protein.
9.) Differentiate between the previous five-kingdom and current six-kingdom classification systems.
10.) Distinguish between monocots and dicots, angiosperms and gymnosperms, and vascular and nonvascular plants.

11.) Classify animals according to type of skeletal structure, method of fertilization and reproduction, body symmetry, body coverings, and locomotion.
12.) Describe protective adaptations of animals, including mimicry, camouflage, beak type, migration, and hibernation.
13.) Trace the flow of energy as it decreases through the trophic levels from producers to the quaternary level in food chains, food webs, and energy pyramids.
14.) Trace biogeochemical cycles through the environment, including water, carbon, oxygen, and nitrogen.
15.) Identify biomes based on environmental factors and native organisms.
16.) Identify density-dependent and density-independent limiting factors that affect populations in an ecosystem.

Materials: 3 ring notebook with dividers (you will place and organize your handouts and bell ringers/ Data Sheets); pencils, pen; paper and 1 black and white composition notebook for labs

Composition Notebooks: Students are required to keep up with your notebook throughout the semester. Notebooks will include notes, foldables, labs, and quick looks.

Attendance: Attendance is critical to your success! Students who miss school due to illness may make arrangements to make up missed work within two days of their return from an excused absence. Students who miss class due to extracurricular activities are responsible for getting their work.

Grading Policy: All grades will be calculated on a point system. Students will be receive points for homework, classwork, laboratory reports, student journals, projects, quizzes, research papers, news article summaries and test. A comprehensive examination will be given every nine weeks. Keep all of your notes for it will be used as a study guide to prepare for test.

Bell Ringers- will be work 25 points each week

Labs- 50 points (days that you are absent, you will be given a worksheet to make the lab grade up)

Quizzes- 40 points

Exams- 100 points

Research reports and projects- 100-150 points, no more than two people to a group

Statements of Essential Functions

1. Students will be able to
2. Follow written and oral directions
3. Follow and apply basic safety requirements in class and in lab
4. Collect and analyze data
5. Manipulate apparatus
6. Perform laboratory work
7. Prepare and read graphs, written reports, collections and projects
8. Communicate effectively in writing and orally
9. Solve problems
10. Read from textbooks, supplemental materials, and teacher made materials
11. Think Critically

This course outline is subject to change and students will be notified of such changes.

I have read the entire syllabus for Mrs. Brown's Earth/Space Class

Parent_____

Student_____

Please list any questions or concerns that you may have for Mrs. Brown below:

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