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|  | *Fairfield Ludlowe High School - Fairfield Warde High School* **BIOLOGY 21**  |
| Ms. K. Smigala | Room 347 |
| Full Year | Per 7 with labs Mon per 8 |
| ksmigala@fairfieldschools.org  |
| COURSE DESCRIPTION |
| This course will provide students with a comprehensive knowledge of biology and will prepare students for entry into the Advanced Placement program. The course uses a molecular biology approach. Topics will be illustrated through the following themes that will recur throughout the course: evolution; structure and function; energy relationships; reproduction and inheritance; unity and diversity; and stability and patterns of change. Students in this course are capable of handling primary source material for reference and are highly motivated, self-directed learners. This course requires excellent study skills including note taking, time management and organization. |
| COURSE OBJECTIVES |
| Students will understand that:* due to its unique chemical structure, carbon forms many organic and inorganic compounds.
* fundamental life processes depend on the physical structure and the chemical activities of the cell.
* similarities in the chemical and structural properties of DNA in all living organisms allow the transfer of genes from one organism to another.
* in sexually reproducing organisms, each offspring contains a mix of characteristics inherited from both parents.
* evolution and biodiversity are the result of genetic changes that occur over time in constantly changing environments.
* microorganisms have an essential role in life processes and cycles on Earth.
* living organisms have the capability of producing populations of unlimited size, but the environment can support only a limited number of individuals from each species.
* the use of resources by human populations may affect the quality of the environment.
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| UNITS OF STUDY |
| * Introduction
* Biochemistry
* Cell Structure and Function
* Cell Energetics
* Nucleic Acids and Molecular Genetics
* Cell Cycle and Meiosis
* Classical and Applied Genetics
* Classification
* Evolution and Population Genetics
* Microbiology
* Animal Evolution
* Plant Evolution
* Ecology
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| COURSE POLICIES AND REQUIREMENTS |
|  GRADING |
|  | Summative Assessments: | 90%Tests, Quizzes, Labs, Projects |
|  | Formative Assessments: | 10%Homework, Classwork, some labs |
|  | Behavioral Characteristics: | 0%  |
|  |  Late work including homework and lab reports will no longer be accepted once other students’ papers have been returned to them.  |
|  MATERIALS |
|  | Textbook: Modern Biology Online textbook: http://my.hrw.com Username: charlesdarwi Password: k3e6 |
|  EXPECTATIONS OF STUDENTS |
|  | When you are absent, YOU are responsible for all missed work and labs. You are responsible for obtaining missed notes, class work, and homework. You are also responsible for making up missed lab work. (Please note that experiments must be made up in a timely manner since live specimens and other preparations cannot be maintained indefinitely.) If you are absent for 1 day and a test or a quiz was given on that day, assume you will take your exam the next day during class.  |
|  EXTRA HELP |
|  |  Ms. Smigala is available before, during and after school. Schedule an appointment.  |
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