

NOUVEL HIGH SCHOOL

COURSE SYLLABUS - ECOLOGY

<p>COURSE DESCRIPTION:</p>	<p>This course will examine relationships between organisms and their environments from the perspective of populations and communities and list factors that can affect each other. The integration of different abiotic cycles will be evaluated with particular attention given to how they can impact biodiversity as well as energy transfer throughout the ecosystem. In addition, review of several biology concepts will be incorporated where relevant. Emphasis is placed on explanation, description, analysis, project-based research and laboratory study. A unit on water quality, treatment, and environmental science topics will be included if time permits.</p>
<p>MAJOR COURSE GOALS:</p>	<p>At the end of the semester long course students should be able to:</p> <ol style="list-style-type: none"> 1. Identify aquatic and terrestrial biomes including the plant and animal adaptations and threats to the biome. 2. Describe social interactions and behavior of organisms. 3. Analyze and compare chemical cycles and their role in food chains, energy pyramids, and food webs. 4. Evaluate human impact on ecosystems including water quality and sustainability. 5. Examine interdependent relationships in ecosystems and ecosystem dynamics including population interaction such as competition, symbiosis, and niches. 6. Determine population demographics of species including density and dispersal patterns <p>Course goals will allow students to prepare for college level ecology and environmental science courses and careers in the future.</p>
<p>COURSE ASSESSMENT PLAN:</p>	<p>Tests, quizzes, laboratory experiments, projects, presentations, participation, class work, homework</p>
<p>SUPPLIES AND MATERIALS NEEDED:</p>	<p>1 ½ in. binder with loose leaf paper Dividers – 1 for each unit Highlighters for notes Art Supplies: poster board, colored markers, color pencil, etc to be kept at home</p>
<p>EXTRA HELP:</p>	<p>Available before and after school for questions and assistance with the course if necessary. Also available through e-mail at any time.</p>
<p>INSTRUCTIONAL PHILOSOPHY:</p>	<p>For every unit there will be lectures, laboratory experiments,</p>

	<p>assignments, quizzes, exams and occasional research for presentations made to the class. You may be asked to work independently or in small groups for experiments and labs. A combination of formative and summative assessments will be given throughout the semester long course. Students are expected to participate in taking notes and class discussions as well as complete assigned work and projects as designated by the unit.</p>
<p>MAJOR COURSE PROJECTS AND INSTRUCTIONAL ACTIVITIES:</p>	<ul style="list-style-type: none"> ● Biomes <ul style="list-style-type: none"> ○ Aquatic Biomes ○ Pond Water Experiment – weather dependent ○ Terrestrial Biomes ● Organismal Ecology <ul style="list-style-type: none"> ○ Behavioral Responses: Ethnology ○ Morphological Responses ○ Physiological Responses ● Population Ecology <ul style="list-style-type: none"> ○ Demographics of a population ○ Age, Birth rate/Death Rate, Stable vs. Unstable ○ Density/Dispersal Patterns ○ Survivorship Curves ○ Exponential vs. Logistic Curves ○ R Selected vs. K Selected ● Community Ecology <ul style="list-style-type: none"> ○ Population Interactions ○ Organism’s Defenses ○ Interspecific Competition ○ Niches ○ Symbiosis ○ Biodiversity ○ Succession ● Ecosystem Ecology <ul style="list-style-type: none"> ○ Energy Flow/pyramid ○ Food Chains vs. Food Web ○ Chemical Cycles - Water, Carbon, Nitrogen, & Phosphorus ○ Human Impacts on the Ecosystems ● Environmental Science – if time permits <ul style="list-style-type: none"> ○ Water Quality & Sustainability ○ Water Treatment ○ Hazardous Chemicals
<p>CLASSROOM EXPECTATIONS:</p>	<p>- Rules as stated in the student handbook will be adhered to.</p>

	<p>PLEASE BE AWARE OF THE FOLLOWING ACCORDING TO THE PARENT/STUDENT HANDBOOK: “More than 10 absences (excused/unexcused) during a semester from any class/classes will result in the failure to receive credit for the class/classes missed. In case of a medical condition/extended illness, a written document by a physician must be provided upon returning to school. The doctor’s note must contain all the dates of absence(s) and the return to school date to be considered.</p>
<p>HOMEWORK POLICY AND GRADING SCALE:</p>	<p>Your grade will be comprised of the following:</p> <p>1) Exams 60%</p> <p style="padding-left: 40px;">a. Tests/Quizzes</p> <p style="padding-left: 40px;">b. Projects</p> <p>2) Class Work 40%</p> <p style="padding-left: 40px;">a. Assignments</p> <p style="padding-left: 40px;">b. Laboratory Experiment</p> <p style="padding-left: 40px;">c. Homework</p> <p>98 – 100 = A+ 87 – 89 = B+ 77 – 79 = C+ 67 – 69 = D+</p> <p>93 – 97 = A 83 – 86 = B 73 – 76 = C 63 – 66 = D</p> <p>90 – 92 = A- 80 – 82 = B- 70 – 72 = C- 60 – 62 = D-</p> <p style="text-align: right;">0 - 59 = F</p>
<p>CONTACT INFORMATION:</p>	
<p>Teacher:</p>	
<p>Email Address:</p>	
<p>Phone Number:</p>	