Lexington High School

Environmental Science Emphasizing Ecology

TEACHER: Mr. Ben Klein
ROOM: #802
PERIODS: Varies

PHONE: 324-4691(email works best)
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COURSE: Ecology

TEXT:
• *Environmental Science.* Holt-Mifflin-Harcourt Publishing. 2013.

COURSE DESCRIPTION: This course introduces students to the core principles of **ecology**, the study of how living organisms interact with each other and their environment. We will explore key concepts such as **energy flow** through ecosystems, **matter cycles** (like carbon and nitrogen), and the diverse **symbiotic relationships** that connect all life. A major focus of the semester will be a long-term **plant collection project**, giving students hands-on experience identifying and classifying local flora.

COURSE OUTLINE:
• Introduction of basic concepts of ecology
• Population Interactions
• Energy Movement
• Population genetics and statistics
• Matter Cycling
• Biomes
• Biodiversity

REQUIRED MATERIALS:
• 1-1/2 inch 3 ring binder
• Loose leaf notebook paper (college ruled)
• Pencil/pen (Several assorted colors will be useful)
• iPad
• Planner

GRADING BREAKDOWN:
Semester Grade Breakdown
45% - Q1
45% - Q2
10% - Semester Exam

Quarter Grade Breakdown
60% - Assessments (Plant project will count as a test grade)
40% - Homework

CHEATING:
Academic dishonesty in any form will not be tolerated. Examples include, but are not limited to: plagiarism, crib sheets, looking off fellow students, speaking with fellow students during quizzes or exams to name a few. Any instances of academic dishonesty will be dealt with according to the student code of conduct.

PASSES:
It is important to be in class. Under the direction of the administration, students will not be allowed to use the restroom during class unless an emergency exists. In my opinion an emergency means you are about to throw-up. Forgetting to use the restroom during passing period is not an emergency.

ABSENCES AND MAKE-UP WORK:

- The students will be held accountable for all missed assignments, notes, etc for any absence. Use your planner to determine what assignments you may have missed.

- Regarding homework (e.g. vocabulary powerpoints, study guides, and reading & writing activities), you are still expected to turn those assignments in before the due date and time. This includes being sick on the due date of an assignment. Digital assignments still need to be turned in prior to the duedate. However, exceptions can be made to this rule if the student makes arrangements with me (Mr. Klein) and those arrangements are acceptable to both parties. This will be rare! Documents proving hospitalizations and attendance at funerals will be helpful in obtaining due date extensions.

- If you are absent from class where you miss a quiz or exam, you have 2-days to make up the quiz or exam from when you return to school. I understand that you may have multiple assessments to make up from other classes, to alleviate that stress and give you the best chance for success on the assessment it is essential that you speak with me to FORM A PLAN for making up the missed assessment.

- Students that miss school because of a pre-excused reason need to notify the teacher (Mr. Klein) as soon as possible. **If you are attending a school function, your work must be made up ahead of time unless prior arrangements have been made.** If you miss school due to an extended family trip, a packet of articles will be put together for your participation points. These articles should be read and summarized before you come back. You are also responsible for any classwork as well.

- If you miss a lab, you need to read three articles from sciencenews.org and write a five-sentence summary of the articles. Articles are available in the science room. Please ask your instructor for articles.

LATE WORK:
Assignments are due by the DUE DATE. Check Google Classroom, your planner, etc. for due dates. The due date listed in the planner shared each week with you takes precedence over all other due dates.

Assignments turned in after the due date will only be given 50% of credit earned. After 1-week late, assignments will not able to be accepted. Students will be given a 0.1 for the opportunity to learn.

Due to the time it takes often to set up activities/labs, it is not efficient to set up the lab if you miss it. Therefore, if you miss a lab you will need to write 3 article summaries (I'll show you where and how to find and write, respectively, the summaries) for each day of lab that you miss.

NOTE: This late policy does NOT apply to the project. Due dates are non-negotiable. If you miss school on the project due dates, you will receive a zero!

FIELD WORK EXPECTATIONS:
My goal is to be outside in the environment as much as weather and time permit. You should be prepared to go outside daily. You will need to have clothes that you will be okay with getting dirty/wet (this includes shirt, pants, and shoes). Also if you have allergies you should make sure that you take antihistamines and have gloves for the handling/collection of irritating plants. While I do not intend for you to intentionally handle plants with may cause irritation in some individuals(i.e. poison ivy), it is possible that you (the student) may accidentally touch one of these plants as you are novices.

Also, in rare instances, we may happen upon various forms of wildlife. At no point should you attempt to interact with these animals. Wild animals are unpredictable and can be dangerous when threatened. In the event that you see a wild animal notify me immediately and I will prescribe you the appropriate course of action.

In a related note, throwing sticks, rocks, and the like at any wildlife constitutes harassment of wildlife. Should you choose to do the above listed action I will promptly call our friendly NGPC Conservation Officers and notify them of your criminal actions. Additionally, you will prohibited from future nature excursions that we commonly do in class. Also you will be prohibited from participating in all labs.

OTHER USEFUL INFORMATION:

- You should plan on spending between 30-60 minutes A DAY outside of this class reviewing a material. Learning happens the best when you are exposed to the information consistently and constantly.
- 30-60 minutes a day sounds like a lot…I know. However you won't be spending every day on my class. I understand sometimes other classes take precedence. That time is an average. Some day you won't spend anytime outside of class studying ecology. Other times you might be spending 2 hours or more.
- You will most likely have to do some Field work outside of school time. Make sure prior to entering any private property for plant collections make sure you have permission from the land owner.
- I am available nearly anytime via email to answers questions about concepts/ problems in class. Also before/after school is great if you need one-on-one assistance.
- To give yourself the best chance of passing you MUST do the project. If you do the plant project, there are 2 phases to the plant project which total 450 points. The total amount of time to complete this project is between 4 and 5 hours. If you are able to get a 100% on the project, it is nearly impossible to fail this class. Students that do not do the plant project, almost always fail the course.
- You are able to choose another project with my approval. My approval will be based on the value it provides to ecology and if the project time is similar to a plant project. For example, if you were to choose to write a research paper it would have to be at least 10 pages double-spaced (1-inch margins) with 15-20 sources.
- I can do the entire plant project in about 3 hours. However, I know a lot of plants and wouldn't have to look them up. However, in the past years in talking with students that have completed the plant project it takes them about 5-10 "man-hours" of work to get it done.

Remote Learning Addendum:

In the event that this class must meet remotely due to suspension of face-to-face instruction in response to directed health protocols determined by local health departments, Nebraska State Department of Education, and/or governmental mandate the following rules must be met. These rules (and expectations) are in addition to rules set forth by the Lexington Board of Education and Lexington Public Schools Administration regarding remote learning.

- Be dressed appropriately for school.
- Eat and use the restroom before the meeting begins.
- Let family members and visitors know you are zooming.
- Be sitting in a chair at a table/desk. If possible, have a wall behind you.
- No uninvited guests.
- Have the needed supplies. Scientific calculator, pens/pencils, printed copies of the notes, worksheets, cheat sheets, etc.
- Arrive on time to your meeting.
- If you are having problems connecting, contact the teacher by email ASAP; or let a peer
- in the class know so they can tell the teacher.
- Turn on your camera and be visible on camera.
- Do not change your background once the meeting begins.
- Mute yourself when others are speaking.
- Use the “hi hand” to let the teacher know you have a question.
- Use the “thumbs up” to let the teacher know you understand.
- No non-class related chats.
- No recording of class without permission.
- You are in school during your Zoom Meeting, behave accordingly.

Communicate with your teacher if you are having problems or need help. They cannot help you if they do not know you need help.

PLANT PROJECT

As part of this class student are expected to complete a plant project. The plant project will consist of the students collecting, identifying, and correctly labeling wild plants. Traditionally cultivated plants will not be accepted. Examples of cultivated plants include, but are not limited to corn, soybeans, marigolds, roses, and cetums. If a student is wondering if a plant is considered cultivated you are to ask Mr. Klein and receive written permission to use a questionable plant.

Students are expected to collect, press, and prepare 30 plants. Each plant must include a reproductive structure (e.g. flower or seed head), stem, and at least 3 leaves that when pressed are flat. Directions on how to press plants will be given in class. No trees will be accepted.

I have a limited number of plant presses that the students may use. Those presses will be issued on a first come, first serve basis. It is possible to make a plant press at home with some easily attainable resources.

Final plant collection should have 30 plants with a label that includes the following information: common name, scientific name, date of collection, and county of collection. For identifying plants students may use any method they wish. I will caution you to not use plant identification applications (aka apps) on your mobile device for identifying plants. Those apps often give incorrect information.

Presentation: Students should organize their collection in alphabetical order by common name. Students are also required to create a table of contents that has each plant's common name and scientific name. Each plant is worth 10 points. 7 of those 10 points is based on quality of the plant. 3 points are given for accuracy of labeling.

Timeline:

Aug. 18 - Plant project described in detail.
Aug. 21 - Plant press checkout after school.
Sept. 29th & 30th - Pressed plants brought in. No plant identification is needed yet. Mr. Klein checks for doubles and potential cultivated plants. Students are awarded 5 points for each plant they bring in for a maximum of 150 points
Nov. 19 & 20 (21st if needed) - Students will present their plant collections in a random order that will come out on Nov 18th.

Students that have willingly choose to not present any plants have never passed the class. Conversely, students that have done well on the plant project have almost always passed the class. It is your best interest to do the plant project. For about 5 hours of active work on this plant project, a student may secure a passing grade.