Utica High School
Physical Science
2016-2017

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Course Description:
Physical Science is designed to serve as a foundation course for other high school science courses. It is a laboratory course that integrates principles of chemistry and physics. It emphasizes inquiry-based learning, process skills, and higher order thinking skills. Instruction is based on the Ohio Science Curriculum Standards. Chemistry units include: composition of matter, atomic structure and periodic table, and chemical bonds and reactions together with basic nuclear chemistry. Physics units include: forces and motions; conservation of energy, electricity and magnetism; and wave phenomena, characteristics, behavior, including electromagnetic and sound waves. Because experimentation is the basis of science, laboratory investigations are an integral part of this course. Investigative, hands-on laboratory activities that address the high school inquiry standards are central to effective instruction in this course.

Materials
You are expected to come to class prepared with the following items:

- Textbook
- 3 Ring Binder, preferably 1 inch
- Graph paper
- iPad
- Pens, Pencils
- Coloring utensils (colored pencils, crayons, markers)
- *CALCULATOR*

Grading Scale:

- 90 – 100 = A
- 80 – 89 = B
- 70 – 79 = C
- 60 – 69 = D
- 0 – 59 = F

Grade Weights:

- Tests – 70%
- Quizzes – 10%
- Labs – 10%
- Classwork/Homework– 10%

AT THE END OF EACH 9-WEEKS, YOU WILL TAKE A BENCHMARK EXAM. THESE EXAMS WILL COUNT FOR 20% OF YOUR OVERALL CLASS GRADE!

Denial of Credit Policy for Full-Year Course:
Any student who accumulates more than sixteen (16) incidents per class of non-professional absences in a year-long course, excused or unexcused will receive a zero (0) for that class period, for that day and every day in excess of the sixteen (16) days.

Class Participation
What you put into this class will be what you get out. Active participation is essential in Physical Science. This class is not meant to be observation. You will be given many opportunities to participate in class discussions, activities, and labs. Your grade will reflect poor participation. Remember, poor participation includes not paying attention to discussions, lectures, or instructions; sleeping; talking; and being generally disruptive.

Class Assignments

This course will be presented and sequenced within an inquiry-based learning approach. In many sections, we will complete laboratory investigations before discussing the concepts in class. Because of this approach, it is essential that you keep track of the homework assignments and readings. You are expected to be a responsible learner. This means you should study/review the material daily, ask questions for clarification in class, answer questions in class, seek an understanding of the concept-rather than just memorizing something you don't understand, and prepare for a test in a timely manner.

Tests

Tests will be given at the end of a unit of study. There will usually be a mix of multiple choice, short answer, interpreting data, and discussion questions. You will be required to use the information we have discussed in class in a test situation. Tests will NOT be simple restatement of definitions or concepts. A small portion of the questions may come from the reading assignments, which may not be discussed in class, so it is important that you read the assigned pages of the text or supplementary material. I test for comprehension and understanding. It may take some time to get used to this method, as opposed to just memorization. *Poor test grades reflect poor preparation.* Your effort in the class will be reflected in your test grade. Test retakes will be schedule for before or after school by the teacher.

Quizzes

Quizzes will be given throughout the semester. Many will be announced a few days in advance, however some will be unannounced. If you don't know the material well enough on a daily basis to be successful on your quiz, you need to be studying at home or coming into see me for help.

Bell Work

Every day at the beginning of class, there will be 2 or 3 questions on the board. These are your bell work questions. You will be given around 5 minutes to complete the questions before we go over them. You are expected to correct your answers when we go over them too. We will take quizzes on a regular basis to ensure you are doing and correcting your bell work.

Homework

You will be assigned homework regularly. This work is designed to help you practice the skills we have learned in class and build on your understanding of those skills. I check homework sporadically. You should be prepared to show it to me every day. I also sporadically collect homework. You should be prepared to turn it in to me on a daily basis. **Late homework will not be accepted for full credit except in the case of absence**. If it is not done when I collect it, it is considered late. When returning from an absence, you are responsible for turning in your missed assignments. Most assignments can be found on Virtual Classroom and will be submitted through Virtual Classroom.

Make-Up and Missed Work

It is your responsibility to make up any missed work not exceeding one day more than the period of absence. Check the class website. Come see me when you miss a day. I will point you towards anything you missed. If there were any additional notes that were not part of a handout, you are responsible for getting them from a partner. You will also need to get with someone in the class who can give you an overview of the class you missed. You are responsible for keeping up with these things during non-instruction time. **IF YOU MISS A DAY, IT IS YOUR RESPONSIBILTY TO GET CAUGHT UP!**

Sequence (* = Honors)	**Textbook**
1st 9-Weeks	
Unit 1	Sec: 1.2, 1.3
Lab Safety Scientific Method Organizing Data Metric Units Scientific Notation*	
Unit 2	Sec: 11.1, 11.2, 11.3
1-D vectors Displacement Motion (Speed, velocity and Acceleration) Interpreting Graphs - Position vs. Time - Velocity vs. Time	
Unit 3	Sec: 12.1, 12.2, 12.3, 12.4
Forces (gravity, friction, normal, & tension) Newton's Laws Free-Body Diagram Field model Dynamics Momentum*	
2nd 9-Weeks	
Unit 4	Sec: 15.1, 15.2, 14.1
Energy types Potential and Kinetic Energy Energy Transformations Work Power*	
Unit 5	Sec: 20.1, 20.2, 20.3, 16.1
Electricity Ohm's Law Electromagnetism Series and Parallel Circuits	
Unit 6	Sec: 2.1, 2.2, 3.1, 3.3
Matter Characteristics Chemical and Physical Changes Density Elements and Compounds Gas Laws*	

Sequence (* = Honors)	**Textbook**
3rd 9-Weeks	
Unit 7	Sec: 4.2, 4.3
Atomic Structure Ions & Isotopes Periodic Table Groups and Periods Electron Configuration and Orbitals*	
Unit 8	Sec: 6.1, 6.2, 6.3
Bonding (Ionic and Covalent Bonds) Chemical Formulas Polyatomic Ions	
4th 9-Weeks	
Unit 9	Sec: 7.1, 7.2, 7.3, 10.1, 10.4
Chemical Change Chemical Reactions Endothermic and Exothermic Reactions Fusion and Fission Nuclear Decay* Catalysts*	
Unit 10	Sec: 17.1, 17.2, 18.1, 18.2, 18.3,
Waves – Characteristics and Behavior Electromagnetic Spectrum Light Sound Wave Interactions and Lenses	
Unit 11	Sec: 26.3, 26.1, 25.5, 25.2
Big Bang Theory Nebula Theory H-R Diagram	

Units 2-7 contain Content which may be addressed on Performance-Based Assessment around the end of the 3rd 9-weeks.

BEHAVIORAL PROCEDURES

All Utica High School and North Fork Local School District policies will be adhered to.

- **Everyone is expected to be in their seats preparing to start class before the tardy bell rings.** There will be bellwork each day waiting for you to complete the first five minutes of every class.

- **Tardies will follow the Utica High School Tardy Policy.** Excessive trades (3 and more) will result in lunch detentions, after school detentions, and Saturday school.

- **Respect Yourself, Your Classmates, and This Classroom.** Everyone's opinions and contributions to class are welcomed.

- **Everyone will be active listeners.** When someone else is talking you must be attentive and courteous.

- **Everyone is expected to have all materials necessary for class with them everyday.** You will need your class notebook, iPad, textbook, paper, and a writing utensil everyday in class.

- **All students will wait for specific instructions before entering the lab.** You are not to use any materials or lab equipment without explicit instruction from Mr. Hofacker No student should use the sinks, safety shower, or emergency eye wash unless there is an absolute emergency.

1st offense – warning/ conference with the teacher
2nd offense – detention and parent contact
3rd offense – detention and parent contact
4th offense – referral to the administration

Expectations for Mr. Hofacker Physical Science

You can expect that I will…

1. be proficient in the subject matter.
2. be available to answer your questions or discuss anything pertaining to this course.
3. be on time and prepared for class daily.
4. provide coherent notes and instruction.
5. manage and control the class to provide the best learning environment for everyone.
6. provide timely feedback pertaining to grades in the course.
7. clearly communicate test dates and due dates to everyone.
8. clearly communicate and apply course, classroom, Utica High, and NFLS policies.

I can expect that you…

1. accept personal responsibility for your learning. You bear the responsibility for your learning. Your instructor serves as a guide, mentor, and resource.
2. are here to learn and are intellectually engaged by and curious about ideas.
3. understand that a great deal of learning will take place outside of the classroom in the form of studying.
4. recognize that mastery (earning an A) is seen as the ability to apply what you've learned to new situations or to solve new kinds of problems.
5. understand grades are earned by consistent effort, hard work, perseverance, and learning. If learning does not occur, all of your hard work, perseverance, and consistent effort will not ensure a passing grade.
6. will ask questions as they arise.
7. are responsible for keeping up with the class schedule and course material. Absence is not an excuse, nor does it mitigate your responsibilities.
8. are responsible for assessing your progress and seeking help.
9. come to class prepared to engage in and discuss content for each day's lecture.