



Wilby High School
 Science Department
Mrs. Rinaldi

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COURSE SYLLABUS
 Title: Physical Science

*We will work together in creating a learning experience that you will remember for the ages (I hope ☺).
 Your absolute best effort and attitude is expected every day.*

Course Description: This course provides a broad overview of earth science, chemistry, and physics. Analytical skills including the scientific method, measurement, and data analysis are developed.

Wilby Core Values and Beliefs: “The students, faculty, staff, and administration of Wilby High School will work cooperatively with families, members of the community, and the Board of Education to create a safe, welcoming, and academic environment which embraces, challenges, and nurtures the diverse talents, interests, and learning styles of all its students. All students will leave Wilby High School with the self-respect, respect for others, knowledge, and skills necessary to become independent, intellectually curious, and self-fulfilled members of society.”

21st Century Learning Expectations:

ALL STUDENTS WHO ENTER INTO MY CLASS NEED TO EMBODY WILBY’S 21ST CENTURY LEARNING EXPECTATIONS.

ACADEMIC EXPECTATIONS:	SOCIAL EXPECTATIONS:	CIVIC EXPECTATION:
<i>The Wilby High School student will be:</i>		
- an Effective Reader	- a Respectful Person	- a Community Contributor
- an Effective Writer	- a Collaborative and Cooperative Worker	
- an Effective Problem Solver		
- a Self-Directed Learner		

Preparation for class: “Failing to prepare is like preparing to fail,” John Wooden. ***This includes a 3 ring binder OR a notebook with folders for handouts. You will also need a pen (only blue or black), and a pencil. If you are having difficulty getting any of these supplies, please let me know and arrangements can be made for you to get them.*** You must have these supplies by the end of the second week of class (quiz grade).

Class Binder/Notebook: You will receive a test grade each marking period for your class binder or notebook. It will be graded using the following categories:

- Assignments (60%)
- All work securely bound or in folders (20%)
- Organization (10%)
- Neatness (5%)
- Labels (5%)

For each student to be guaranteed a good time and education in class there are a few rules and guidelines everyone must follow:

General Class Guidelines and expectations:

1. Students will respect and tolerate all people and viewpoints in the classroom.
2. Be prepared and on time to class.
3. Electronic devices are not allowed.
4. You must **ALWAYS** be in dress code.
5. Raise your hand and wait for permission to speak, do not speak while others are speaking.
6. Respect the property of others (keep hands, feet, and objects to yourself). This includes my desk and SMARTboard.

A few things I take for granted:

- No one will ask to leave the room unless absolutely necessary.
- You will treat each other with respect.
- You will use listening skills.
- You will allow others to speak without interrupting.
- You will remain seated while in class.
- You will not damage my room, books, or equipment in any way.
- You will raise your hand to be called on before answering.
- You will complete assignments on time.

GRADING POLICY: Your grade in this class will be calculated as follows:

- **Tests (20%)** – There will be at least one test per chapter to ensure full understanding of all the topics discussed.
- **Quizzes (15%)** – There will be one quiz given on average every week to monitor understanding and comprehension of the topics discussed and vocabulary to ensure that every student succeeds.
- **Homework (10%)** – Homework is assigned nightly and will range from a studying/reading assignment, to a worksheet, review questions or unfinished class work. Homework must be fully completed to receive a homework credit.
- **Projects (test grade)** – At least one project is assigned each term. These projects are meant to extend and enrich classroom learning and will come in many different forms and activities.
- **Labs (25%)** – Labs are a fun in classroom extension to regular class work; a chance for you to have fun hands on learning experiences of the topics studied in lecture.
- **Classwork (20%)** - Work completed in class is an important part of learning. The notes, worksheets, tables, foldables, etc. you complete while in class help you to process and then understand the information you are learning.
- **Disposition Toward Learning (10%):**
 - Class Participation (5%) - graded daily based on behavior & class contributions both positively and negatively. Students will also be graded using Wilby's Respectful Person Rubric.
 - Attendance (5%) – In order to be prepared for class and lab you need to be on time and in class every day when the bell rings. Attendance will be out of 45 points per marking period. For unexcused absences, you will lose one point. For unexcused tardies you will lose 0.5 points.

Assessments: Lab activities, demonstrations, CFA (common formative assessments), homework assignments, tests, quizzes, projects, textbook problems, district benchmarks

Homework: The purpose of homework is to introduce new concepts, review and reinforce learning, or apply class content in a new way. Homework will be assigned at a minimum of two days a week. You are expected to complete all homework completely, which includes complete sentences and calculations.

****Homework will be accepted up until a test is given on that unit, but all homework that is late receives a grade of 65%.**

Exceptions: Excused absence-due date of return

Lab Safety: We will often perform various laboratory activities and demonstrations during this school year. You must follow all safety precautions for each activity. I will supply you with laboratory safety contract. You must follow all these rules for your own safety and the safety of those around you. If you fail to follow these rules, you will be given a zero for the assignment and your parents will be called (depending on the severity of the offense a written referral may be completed).

Policy for makeup work: Most assignments are due the next day of class. If you are absent you are responsible to check the **make-up bin** for missed assignments. Remember to turn them in within 2 days. When you miss a class, you are responsible for the following:

1. Show me all missed homework as soon as you return to class.
 2. Get missed work from the make-up work bin.
 3. Check with a classmate for any missed notes.
 4. Complete assignment on your own time (not in class and must be handed in 2 days). Include date of absence(s) on assignment.
 5. For an extended absence, see me for a make-up schedule.
- **If you miss a lab activity**, you will need to make it up within one week (by appointment). If lab cannot be made up, you will be given an alternate assignment.
 - **If you miss a test**, you need to make an appointment to make it up either before school, during homeroom, activity/supervised study period, study hall or after school. If not, you will complete the test during your scheduled class.
 - **If you are absent the day before a test**, you will still be expected to take the test as scheduled.

Tardiness: You are expected to be sitting in your assigned seat and working on the DO-NOW assignment when the bell rings. **If you are not, you are late to class.** Tardiness is not acceptable without a pass.

Negative Consequences: (If you BREAK a rule)

First time: Verbal Warning

Second Time: Redirection Room/Student-Teacher Conference

Third Time: Detention/Parents Called

Fourth Time: Written Referral to the Office

Fifth Time: Parent-Teacher-Administrator Conference

Severe Disruption: Student sent immediately to the office, phone call home, written referral and a parent-teacher-administrator conference

Consequence for having an electronic device:

First offense: Verbal warning

Second offense: Confiscation (pick up at the end of the day)

Third offense: Confiscation and detention (device sent down to office for a parent/guardian to pick up)

Dress Code: You must be in dress code at all times. This is a Board of Education Policy that all teachers/administrators and adults are obligated to uphold.

Latex and Nut-Free Zone: There are students and adults in this building with SEVERE allergies. It is our responsibility to ensure that these people are safe to come to school. Food and drink are NOT ALLOWED in class. Latex balloons, sunflower seeds, peanut butter products are prohibited in the building. Do not put someone's life in jeopardy!

Seating: You will have assigned seating. I reserve the right to change seating at any time.

Cheating/Plagiarism: Cheating will not be tolerated. If there is a test being administered and I catch you cheating, you will receive a zero. Plagiarism is not tolerated. If I find that you have plagiarized in any way, you will receive a zero on the assignment and a phone call will be placed to your parents.

Passes: Passes will not be given unless it is an emergency. If it is not an emergency, my answer is NO.

Physical Science Syllabus Topics Discussed

Marking Period 1		Marking Period 3	
W 1	Introduction to class <ul style="list-style-type: none"> • How will this science class be run? 	W 20-21	<u>Acids & bases</u> <ul style="list-style-type: none"> ▪ Solutions, solvents, and solubility ▪ Characteristics of acids and bases ▪ pH scale ▪ Neutralization reaction
W 2-3	<u>Scientific Method</u> <u>Metric Measurement</u> <u>Graphing</u>	W 22-24	<u>Forces & Motion</u> <ul style="list-style-type: none"> ▪ Speed vs velocity vs acceleration ▪ Gravity; friction
W 4-6	<u>Matter</u> <ul style="list-style-type: none"> ▪ States of matter ▪ Phase changes – (inc. melting & boiling point) ▪ Physical/chemical properties ▪ Heterogeneous vs homogeneous mixtures ▪ Water cycle – Law of conservation of matter 	W 25-26	<u>Energy</u> <ul style="list-style-type: none"> ▪ Types of energy – potential vs kinetic ▪ Relationship b/t energy and mass ▪ Energy transfers ▪ Law of conservation of energy
W 7-8	<u>Atoms</u> <ul style="list-style-type: none"> ▪ Protons, electrons, neutrons (P,E,N) ▪ Atomic number & mass ▪ Bohr model 	W 27-28	<u>Heat and Light</u> <ul style="list-style-type: none"> ▪ Solar Energy ▪ Principles of light ▪ Electromagnetic spectrum ▪ Heat energy
W 9-11	<u>Periodic Table</u> <ul style="list-style-type: none"> ▪ Energy levels/valence electrons/Lewis dot diagrams ▪ Patterns in the periodic table ▪ Metals/nonmetals/metalloids ▪ Properties of families 	W-29-31	District Benchmark III <u>Electricity</u> <ul style="list-style-type: none"> ▪ Static electricity & electric charges ▪ Circuits ▪ Alternating current (AC) vs Direct Current (DC) ▪ Ohm’s Law ; electrical safety
	District Benchmark I		

Marking Period 2		Marking Period 4	
W 12-15	<u>Bonding</u> <ul style="list-style-type: none"> ■ Atoms/molecules/compounds ■ Ionic/covalent/metallic bonds ■ Simple nomenclature <u>Chemical Equations</u> <ul style="list-style-type: none"> ■ Reactants vs products ■ Law of conservation of mass – simple balancing equations (no polyatomics) ■ General reaction types ■ Factors affecting reaction rates 	W 32-34	<u>Magnetism</u> <ul style="list-style-type: none"> ■ Magnetic fields (like poles vs unlike poles) ■ Magnetosphere, magnetic domain, ferromagnetic materials <u>Electromagnetism</u> <ul style="list-style-type: none"> ■ Electromagnetic induction ■ Transformers – step up/step down <u>Global impacts on the environment</u> <ul style="list-style-type: none"> ■ Fossil fuels, pros and cons ■ Power grids & electricity pathways ■ Difference between greenhouse effect ,global warming, climate change
W 16-18	<u>Organic Chemistry</u> <ul style="list-style-type: none"> ■ Chemical structure and properties of carbon ■ Carbon bonding – single, double, triple ■ Monomers vs polymers, polymerization 	W 35-37	<u>Pros and cons of alternative resources</u> <ul style="list-style-type: none"> ■ Renewable vs nonrenewable sources ■ Availability, portability, efficiency, expense, & environmental impact for each resource
W 18-19	District Benchmark II, Midterm Review & Midterms	W 38	<u>Brownfields & impacted habitats</u> <ul style="list-style-type: none"> ■ What are they ■ Point and nonpoint sources of pollution ■ Bioremediation vs phytoremediation
		W 39-40	District Benchmark IV, Final Exam Review, Final Exams

Laboratory Safety Guidelines & Contract

Purpose

Science classes often involve hands-on laboratory activities. In my class you will do at least one lab per week. Many labs will involve potentially hazardous chemicals and materials. I refer to them as potentially hazardous because they are only hazardous if used inappropriately. There is no place in my class for unsafe use of materials. Thus, you will need to either be safe or be out. To guide you to be safe, I am giving you this lab safety contract. It contains guidelines for safe behavior in my class. You must read this contract carefully, have your parents read it and you both must sign it and return it to me. ***Only after I have your signed copy of this agreement will you be able to participate in any lab activities in this class.*** As such, it is a good idea to print up an extra copy for you to keep in your binder for reference.

General guidelines

1. Conduct yourself responsibly at all times.
2. Follow all written and verbal instructions carefully. Ask questions if you do not understand.
3. No student is allowed in the classroom without a teacher. If there is no teacher in the room, DO NOT ENTER!
4. Do not touch any equipment or materials before instructed to do so.
5. NO FOOD IN THE LAB!!!
6. Never start the lab unless you have received prior approval from me.
7. Always read the lab packet before you perform the lab.
8. Keep your work area neat and clean.
9. Leave your backpack under your chair at all times (never in the aisles, or in the lab area).
10. Never leave liquid-filled containers uncovered.
11. Know the location and operation of all safety equipment.
12. Do not run, shout, or throw things in the lab.

13. Notify me if an unsafe condition exists in the classroom.
14. Dispose of all chemicals properly. I will instruct you about how to dispose of specific chemicals.
15. Keep your hands away from your face while doing labs. Also, always wash your hands after the clean-up is complete.
16. Rinse out all glassware and leave it to dry in the designated locations.
17. Stay at your lab bench during labs.
18. Know what to do if there is a fire drill.
19. Treat preserved biological specimens respectfully
20. Carry sharps appropriately; tips down and away.

Accidents

1. Immediately report ALL injuries, no matter how minor, to me.
2. Use the eyewash or shower if you are splashed with a chemical. Always assume that the chemicals are hazardous.

Clothing

1. Goggles, aprons and gloves must be worn.
2. Contact lenses should be avoided
3. Only close-toed shoes may be worn on lab days.
4. Tie long hair behind your head.
5. No loose clothing or jewelry.

Handling Chemicals

1. Consider all lab chemicals to be hazardous.
2. Double check the label before using a chemical
3. Take only the amount of chemical you will use.
4. Never return unused chemicals to their original container (see # 14 above).
5. Never let a chemical near your mouth.
6. Never remove chemicals or other materials from the lab.
7. Always hold chemical bottles with two hands when transporting them.

Handling Glassware

1. Never handle broken glass. If a piece of glassware breaks, notify me immediately and I will dispose of it.
2. Never use chipped glassware.

Heating Substances

1. Use caution when heating something with a Bunsen burner. Do not put any substance in the flame, and always light the burner at arm's length.
2. Never leave a lit burner unattended.
3. Never look into a container that is being heated.

Laboratory Contract Agreement

Student

I, _____, have read and understand the guidelines listed in the attached document. I promise to follow these guidelines. I understand that failure to follow these or other verbal guidelines may result in removal from the lab, detention, failure and/or dismissal from the course.

Signature

Date

Parent or Guardian

I _____, have read and understand the guidelines listed in the Attached document. I understand that my child is expected to follow these guidelines. I also understand the consequences of my child's failure to abide by these guidelines.

Signature

Date

Class Expectations Agreement

STUDENTS: I have read this classroom discipline plan and understand it. I will honor it.

Signature: _____ Date: _____

PARENTS/GUARDIANS: My child has discussed the classroom discipline plan with me. I understand it and will support it.

Signature: _____ Date: _____

Parents and guardians please provide me with the best ways to contact you this school year. Thank you!

Email: _____

Phone (s): _____
