Midway Public School
ISD 128
Course Syllabus
9th Grade Physical Science
2014 - 15

Instructor Information:

Instructor:	Mr. Mark Gehrls
Office Location:	Room 114/115
Telephone:	701 689-2432
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Hours for Extra Help:	8:00-8:30 am, 4th hour, 6th hour, 7th hour, and 3:30-4:00 pm
My web site:	http://midwayndscience.weebly.com/

Course Information:

Course Name:	Physical Science – Grade 9
Class Location:	Room 114/115
Class Time:	Section 1: 9:39 – 10:29

Course Description:

Physical Science will engage 9th grade students in a relatively rigorous yet grade appropriate survey of the scientific disciplines of chemistry and physics. During the fall semester, students will be introduced to the following.

1. The high school lab – its equipment and safe use
2. The metric system and the International System of Units (SI)
3. The classification of matter
4. The structure of the atom
5. The Periodic Table and its organization
6. Chemical bonding
7. Writing chemical formulas and naming chemical compounds
8. Writing and balancing chemical equations

Topics to be explored during the spring semester will include the following.

1. Force, motion, and Newton's Laws of Motion
2. Work and power
3. Potential energy, kinetic energy, and the conservation of energy
4. Simple machines and mechanical advantage
5. Electricity

*Please note the subject matter covered during the spring semester will involve the use of several mathematical principles and a math intense survey of the topics listed above.

Course Learning Objectives and Associated Science Standards:

The student who has successfully completed the fall semester will be able to:

1. Use appropriate safety equipment and precautions during lab investigations. (std 9-10.2.2)
2. Identify questions and concepts that guide scientific investigations. (std 9-10.2.3)
3. Classify elements according to similar properties. (std 9-10.3.1)
4. Classify changes in matter as physical or chemical. (std 9-10.3.2)
5. Identify the Law of Conservation of Matter in physical and chemical changes. (std 9-10.3.3)
6. Construct a model of an atom. (std 9-10.3.4)
7. Identify the reactants and products of a chemical reaction. (std 9-10.3.5)
8. Distinguish between a balanced and unbalanced chemical equation. (std 9-10.3.6)

At the end of the spring semester, students in physical science should in addition to fall semester objectives, be able to:

1. Use Newton's laws to describe the motion of an object. (std 9-10.3.7)
2. Describe the relationship between kinetic and potential energy in basic transformation. (std 9-10.3.8)
3. Describe the relationship between form and function. (std 9-10.1.4)
4. Develop and conduct a simple scientific investigation. (std 9-10.2.4, std 9-10.2.7, and std 9-10.2.8)
5. Identify the short-term and long-term effects of physical processes. (std 9-10.5.4)
6. Explain how scientific principles have been used to create common technologies. (std 9-10.6.2)
7. Explain how views and attitudes have influenced the development of science. (std 9-10.8.5)

In addition to the scientific concepts and principles introduced during this class, several common core reading and writing standards will be incorporated as well.

Course Resources:

Textbook: Holt Science Spectrum: A Physical Approach

Web Resources: GPB Education (http://www.gpb.org/chemistry-physics/students/all)
Khan Academy (http://www.khanacademy.org/)

Grade Scale:

The grading scale for Physical Science will follow with the grading scale

93 – 100	A
86 – 92	B
78 – 85	C
70 – 77	D
0 -- 69	F
Incomplete	IC

Calculating Grades:

Quarter grades will be calculated as follows:

(Homework average x 0.1) + (Assessment and formal writing average x 0.9)

Overall semester grades will be calculated as follows:

(Semester average x 0.8) + (Semester Final Test grade x 0.2)

Late Work:

1. Work turned in on time will be given full credit.

2. School policy will be followed for work turned in or made up late due to illness.

3. "I Forgot" -- Each quarter students will be granted one "I Forgot" for daily work assignments. If a student forgets his/her homework assignment in the locker, has temporarily misplaced an assignment, or simply failed to complete an assignment, the assignment can be turned in late with no penalty by using the "I Forgot" option for that quarter. Please note, only one "I Forgot" per student per quarter.

4. A grace period will be extended to students whose work is not completed on time. Late work will be accepted between the end of class and 3:30 on the day it is due, however it will be docked 10 % for being late.

*This policy only applies to homework (daily work).

Extra Credit:

I do not offer extra credit. If a student is paying attention in class, doing his/her own homework, preparing for test properly, and seeking additional help from me when needed, there should be no need for extra credit.

Class Rules:

* Bring all necessary materials to class.
* Be seated and ready to learn when the bell rings.
* Be respectful of others and their property.
* Speak when acknowledged and as appropriate.
* Electronic devices are not allowed in the classroom.
* Planners must be signed in ink – both on check out and check in -- when leaving the classroom for any reason.

Academic Responsibility:

All homework, projects, etc. must be satisfactorily completed and submitted when due to receive full credit. Failure to do so will result in an Incomplete (I) grade, reduced grade, and/or repeating the assignment. Ass students are obligated to devote the entire scheduled school day toward achieving content mastery