**8th Grade Physical Science 2014-2015**

**Academy for Technology and the Classics**

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**Course Description:** The middle school physical science curriculum is designed to give students the necessary skills for a smooth transition from elementary physical science standards to high school physical science standards. The purpose of 8th grade physical science is to give all students an overview of common strands in physical science including, but not limited to, the nature of matter, laws of energy, matter, motion and forces and energy transformation. We will also cover concepts of general astronomy and earth science. This class will be different from some other classes that you have taken. There is a lot of learning from hands on/minds on activities, and not just from reading and listening. When you are doing something during class or a lab, make sure you understand *what* you are doing and *why* you are doing it. **You Are Responsible for Your Own Learning . . .** Engage your brain by taking an active role in the construction of your knowledge through the experiences that are created in this class.

**Textbook:** Textbooks will be digital this year. However, a hardcopy classroom set will be available for students to use during class time and ER

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| **Outline of Topics:** | | | |
|  | Scientific Methods |  | Forces and Energy |
|  | Matter |  | Work and Machines |
|  | Measurement and Calculations |  | Energy and Sound |
|  | Elements, Atoms, Ions |  | Energy in Action |
|  | Periodic Table |  | Transfer of Energy |
|  | Motion |  | Characteristics of Light |
|  | Laws of Motion |  | Characteristics of Sound |
|  | Speed |  | Electricity |
|  | Direction |  | Magnetism |

**Materials:**You will need to bring to class…

 1 1” – 2” Binder or section in a larger notebook labeled science

 Loose Leaf College Ruled Lined Paper

 Composition book

 Sharpened pencils

 Black or Blue Ink Pens(Multiple)/Pencils

**Tutorial Schedule:**Physical Science tutorial help will normally be available on ER days and before school during the week. *Students are urged to seek help* when the need arises.

**Makeup work:** It is the student’s responsibility, not the teacher’s, to make arrangements for make-up work. Please see the ATC policy on makeup work/late/missed assignments.

**Late work:** Late work will be accepted with 10 points deducted per day late for up to three days.

**Student Responsibilities and Expectations:**

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|  Come to class prepared!   Maintain an organized Science notebook.   Be in class on time – ready to work This means in your seat and ready when the bell rings..   Ask questions regarding what you don’t understand.   Turn work in on time; make up work on time.   Do homework. This is your chance to practice and apply what you have read.   Keep your desk area clean, neat and orderly. |

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|  Treat classmates, teachers and visitors with dignity and respect.   Remain seated during class and lab activities.   Follow all safety rules.   Comply with all ATC and classroom policies   Give full effort each and every minute of each and every day on each and every activity.   Put forth ***EFFORT***, ***ACHIEVE***, and ***SUCCEED***! |

**Laboratory Responsibilities:** Lab time is essential to both learning and applying skills. ***Labs are not play time!*** Lab safety violations will result in alternative assignments, possible dismissal from the lab, and loss of credit for the lab and/or deduction of your grade for the lab. Damaged or broken lab equipment caused from mishandling, misuse, carelessness or failure to follow directions will be charged to the student.

**Methods of Instruction:** Presentation of material will most often be through a combination of didactic teaching (lecture), cooperative learning (group work), and through the use of multiple real life hands on/minds on application. This is followed by plenty of opportunity to practice and apply new material. Practice work (both individual and group), crossword puzzles, bonus challenges, demonstrations, concept checks, models and discussions are also used in the process to achieve a single purpose…that of helping you to learn and to excel in physical science. Although learning physical science is ultimately the student’s responsibility, as the instructor I will provide instruction, materials, explanations, practice instruments, tutoring and individual help if needed. Remember, practice makes perfect in physical science as well as in life.

**Grading:** Grades will be based on the number of points earned as compared with total points possible. I do not grade every assignment. Many assignments are spot checked or recorded for completion. The purpose of assignments is for practice, as well as demonstration of mastery and skill. Grades are weighted as follows:

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| **Description** | **Approximate Number**  **or Frequency** | **Approximate**  **Points** | **Approximate**  **Percentage** |
| Major Assessments (tests, projects) | 2 – 3 per 6 weeks | Each Worth 100 pts. | 50% of Overall Grade |
| Daily Work to include Sponges, Notebook Checks, Labs, and all individual and group daily assignments. | Daily | Each Worth 100 pts. | 25% of Overall Grade |
| Quizzes & minor projects | 2 – 3 per 6 weeks | Each Worth 100 pts. | 15% of Overall Grade |
| Homework | As necessary to reinforce concepts | Each Worth 100 pts. | 10% of Overall Grade |
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**Extra Credit:** Students always ask about extra credit**. There is extra credit available generally but you must ask.**

**Behavior:** Behave in a manner that allows all students the opportunity to learn, and respect the rights of classmates and teachers. I will not allow a disruptive student to detract from my ability to teach nor disrupt other student’s opportunity to learn.

**Social Contract:** Students will create and abide by a social contract in this classroom. Violations of the social contract will result in removal from class and possibly lunch detention. Violations to our classroom social contract when a sub is present results in an automatic 3 days of detention.

**What can you expect of me?**

 You can expect that I take your education and science in particular, very seriously.

 You can expect me to enforce school policies (punctuality, dress code, hall passes, student dispositions, etc.).

 You can expect me to give you every opportunity to learn and understand physical science.

 You can expect me to treat you with the utmost of patience, courtesy and respect.

 **I expect the same from each of you.**

**Signatures:** We have read and understand all of the above, and will abide by these guidelines. Parents please include a day time phone number and a valid email address. I look forward to helping your child achieve the goals that you have set for them this year!

Student\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Parent\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Day Time Phone #\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ E-Mail\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_