

# Physical Science

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<b>Grades:</b>	<b>6<sup>th</sup> – 8<sup>th</sup></b>
<b>Days of Week:</b>	<b>Wednesday</b>
<b>Time of Class:</b>	<b>11:00 a.m. – 12:30 p.m. ET</b>
<b>Length of Class:</b>	<b>20 Weeks</b>
<b>Semester:</b>	<b>Fall &amp; Winter</b>
<b>Tuition:</b>	<b>\$400.00</b>

## Class Dates:

### Fall

Week 1: September 16

Week 2: September 23

*No Classes: September 28 - October 9 (Yom Kippur and Sukkot)*

Week 3: October 14

Week 4: October 21

Week 5: October 28

Week 6: November 4

Week 7: November 11

Week 8: November 18

*No Classes: November 23 – Thanksgiving Week*

Week 9: December 2

Week 10: December 9

Make Up Week: December 16

### Winter

Week 1: January 11

Week 2: January 20

Week 3: January 27

Week 4: February 3

Week 5: February 10

Week 6: February 17

Week 7: February 24

Week 8: March 3

Week 9: March 10

Week 10: March 17

Make Up Week: March 24

<b>Instructor's Name:</b>	<b>Samantha Star</b>
<b>Instructor's Email:</b>	<b>samantha.star.education@gmail.com</b>
<b>Instructor's Skype:</b>	<b>Samantha_star</b>
<b>Instructor's Phone:</b>	<b>514-655-2811</b>
<b>Instructor's WhatsApp:</b>	<b>514-655-2811</b>

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### **Description of Class:**

This class is an introduction to the physical sciences including basic chemistry, geology, astronomy and physics. These sciences make the world go around and having a strong introduction in the field will help students succeed later on with their science studies. Middle school students are natural scientists, who with a little direction can walk in the footsteps of Isaac Newton, Marie Curie and Nicola Tesla (to just name a few!) With the help of these famous scientists, we will learn about the scientific method, writing lab reports, and get familiar with the periodic table, gravity, states of matter and much, much more!

This class will use a combination of live and virtual labs.

### **Class Approach:**

Students will be asked to complete reading and research ahead of time so that our class time can focus on lectures, discussions, activities, etc. Students are encouraged to take a hands-on approach to learning.

### **Goals:**

Students will be able to:

- Explain the scientific method
- Distinguish between physical and chemical change
- Explain the states of matter and their properties
- Become familiar with the periodic table of elements
- Interpret data from graphs
- Use formulas for density, mass, and volume to find values
- Use formulas for speed, velocity, distance and time to find values

### **Textbook:**

Science Fusion – Module H – Matter and Energy

Science Fusion – Module I – Motions, Forces and Energy

Science Fusion – Module J – Sound and Light

The above interactive worktexts are all available from [www.amazon.com](http://www.amazon.com) for about \$10 - \$15 each. They are by the publisher Houghton Mifflin Harcourt

### **Additional Supplies/Resources Needed:**

- Webcam
- Microphone
- Notebook
- Pencil
- Paper

Students may join in when labs and experiments are completed by the teacher. Supply lists for these labs will be sent out 2-3 weeks prior to the experiment. Students are not obliged to follow along at home, the teacher will complete the experiment/lab live as well.

### **Requirements:**

Students are expected to take part in class discussions and demonstrate a knowledge of the homework completed beforehand.

### Weekly Homework:

Weekly homework will vary and will average approximately 1-2 hours per week.

### Homework Policy:

Weekly homework will be due prior to class. Late assignments will be penalized 5% per day, for a maximum of 3 days. After 3 days, the student will not receive any marks for late homework. Late quizzes, exams and papers will not be accepted.

If you will have an issue meeting a deadline, please contact me to discuss.

### Additional Policies:

Attendance is expected at all classes. There will be a strict zero-tolerance policy in regard to plagiarism and cheating. "Cheating" is defined as unauthorized help on an examination or assigned course material. A student must not receive from any other student or give to any other student any information, answers, or help during an exam. A student must not "steal" the answers from an unsuspecting student during an exam. "Plagiarism" is defined as the taking of a person's ideas, words, or information and claiming those properties as one's own. The use of all ideas, words, or information from any source must be properly referenced and due credit must be given to its author. All cheating and plagiarism infractions will result in a grade of "0" for the assignment.

### Evaluation:

Class Participation – 10%

Term Project – 25%

Homework Exercises – 40%

Unit Quizzes - 25%

### Grading Scale:

Percentages/Grades

100-90: A

89-80: B

79-70: C

69-60: D

59 – 0: No effort: F

### Anticipated Weekly Course Schedule:

Week	Topic
Week 1	Introduction, Syllabus Review, Matter
Week 2	Energy
Week 3	Energy - Lab
Week 4	Atoms and the Periodic Table
Week 5	Atoms and the Periodic Table Continued
Week 6	Interactions and Matter
Week 7	Solutions, Acids, and Bases
Week 8	Solutions, Acids, and Bases – Lab
Week 9	Motions and Forces
Week 10	Motions and Forces – Lab
Week	Topic

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<b>Week 1</b>	Work, Energy and Machines
<b>Week 2</b>	Work, Energy and Machines - Lab
<b>Week 3</b>	Electricity and Magnetism
<b>Week 4</b>	Electricity and Magnetism - Lab
<b>Week 5</b>	Introduction to Waves
<b>Week 6</b>	Sound
<b>Week 7</b>	Sound – Lab
<b>Week 8</b>	Light
<b>Week 9</b>	Light - Lab
<b>Week 10</b>	Wrap-Up Week

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