

## **COURSE OUTLINE**

### **SUBJECT: SCIENCE**

**GRADE: 6**

Curriculum reflects NYSSLS and MYP Learning Criterion

#### **Anticipated student outcomes:**

*By June of this year, students in this class should be able to...*

- Make qualitative and quantitative observations. Make inferences based on those observations.
- Describe three states of matter and the relation to thermal energy.
- Understand phase changes along with reading a phase change diagram
- Describe physical versus chemical changes of matter.
- Integrate the steps of the scientific method in various classroom investigations.
- Measure the length, mass and volume of regular and irregular shaped objects using the appropriate lab instruments and convert within the metric system.
- Investigate the structure of atoms and molecules in the context of chemical reactions.
- Develop understandings of conservation of mass and energy.
- Recognize and access information from the Periodic Table of Elements.
- Understand the difference between an element, compound and mixture.
- Describe wave properties and model their interactions..
- Understand Newton's Laws.
- Observe, describe, and compare effects of forces on the motion of objects.
- Determine the speed of a moving object.
- Develop a model to show the relationship between kinetic and potential energy.
- Describe the different forms of energy and discuss energy transformations between them.
- Reflect upon the way Renewable and Non Renewable resources are used in the world.

**Materials required or used:**

To Be Determined

**Criteria for grading:**

Students will be graded using the averaging system. Students' grades will reflect their class participation, quizzes, homework, labs, projects and tests.

The course also engages the four IB Middle Years Program (MYP) learning and assessment Criteria.

Criterion A –Knowing & Understanding – through classroom presentations, demonstrations and evaluations

Criteria B and C – Inquiring & Designing and Processing - Evaluating by means of hands-on lab activities

Criterion D – Reflecting on the Impacts of Science through student created presentations, projects, and reflective pieces.

**Opportunities for Enrichment:** Approved sites for Article Reviews

[www.timeforkids.com](http://www.timeforkids.com)

[www.sciencenewsforkids.org](http://www.sciencenewsforkids.org)

[www.nytimes.com](http://www.nytimes.com)

[https://phet.colorado.edu/\\_m/](https://phet.colorado.edu/_m/)

*Outline developed by:* The Science Department

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