

# 8<sup>th</sup> GRADE SCIENCE SYLLABUS

## TEXT BOOKS:

Glencoe / Science Level Blue (each student receives a copy for the year)

Glencoe / Life's Structure and Function (in classroom set only and student packets)

### Unit 1: Conducting Scientific Investigations

Blue Level Text: Chapter 1 / Section 2

- Review and apply metric measurement
- Review number and unit conversion; decimal to scientific notation and vice versa
- Review and apply stages of a scientific investigation
- Basic in-class safety practices; safety contracts
- Rocket Project

### Unit 2: Matter and the Structure of the Periodic Table

Blue Level Text: Chapters 14 – 17 / ALL Sections

- Inside the Atom; The Parts and Their Charges
- Structure of the Periodic Table; How Does Structure Determine Order
- Atomic Structure and Why Chemical Bonds Form; Why Atoms Come Together
- Understanding Chemical Reactions
- Conservation of Matter

### Unit 3: Basic Cell Functions / DNA and Genetics

Life's Structure and Function Text: Chapters 2 – 5 / Selected Sections

- Review of Basic Cell Part Functions
- Exchange of Vital Materials Needed for Life; Active / Passive Transport Methods
- Cell Division; Sexual and Asexual
- Structure of DNA
- Heredity and Genetics

### Unit 4: The Electromagnetic Spectrum / Astronomy Beyond The Solar System

Blue Level Text: Chapters 13 and 24 / Selected Sections

- The Characteristics of Waves
- The Doppler Effect and Redshifted Light Waves
- Characteristics of Stars
- The Sun Compared to Other Stars
- Nebulas, Star Clusters, Galaxies and Other Exotic Objects
- Journey Through Space with CELESTIA

### Unit 5: Motion as Related to Acceleration and Momentum

Blue Level Text: Chapters 18 and 19 / Selected Sections

- Describing, Measuring and Graphing Motion
- Collisions and Momentum
- Conservation of Energy / Momentum
- Battle of the Eggs Project

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**Your Guide To Success In Science This Year**

**STUDENT MATERIALS AND BEING PREPARED FOR CLASS:**

Most days will require that a student comes to class with the following materials:

- Science Binder (1 inch is best) with graph paper
- One subject spiral notebook
- Pencils and Pens (colored pencils occasionaly)
- Textbook
- Assignment Notebook

Home work assignments are always posted on the white board and should be recorded in the assignment notebook. Textbooks need to be covered.

**BEHAVIOR AND PARTICIPATION:**

Up to 30 participation points can be earned for every quarter. The following items determine how participation points are assessed:

Please pay attention to the instruction. We're all trying to do a job – let's make sure we do the best we can! Students are expected to be prepared for class and make a meaningful contribution to classroom discussions, activities and lab work on a regular basis. This includes being prepared to answer questions when called upon, taking an active role in discussions, activities and labs - not just letting someone else do the work. This is how you PARTICIPATE in science class.

Please don't be late to class. Unexcused tardiness will not be tolerated. Students that are late must have a PASS! Tardiness can lead to after school consequences.

Gum chewing or eating food is normally NOT ALLOWED! Eating food or chewing gum can lead to a loss of participation points.

Respect of people and property is expected. Obvious acts of disrespect will result in a loss of participation points or worse depending on how severe the behavior is.

**HOME WORK :**

1. Most home work assignments involve reading, summary notes or review/practice. Open notes quizzes may occur from time to time. Your notes or note taking sheets should be complete. Be prepared to discuss review assignments when they are due.
2. Quarterly grades are calculated on a straight points system. Assignments are not weighted although tests and quizzes usually involve a high number of points.
3. Home work is expected to come in on time. The ZAP program in the building will be enforced strictly.
4. Your work is YOUR WORK! DON'T CHEAT! Cheating is a serious offense and will not be tolerated. Since some of the quizzes are open note, using another students notes or copies of another students notes is considered cheating! Note taking assignments must be in the students own written hand writing! Students wanting to generate notes using word processing software must be approved before hand by teacher.

**RESTROOM BREAKS AND LEAVING THE CLASSROOM:**

If a student needs to use the restroom or leave the room for any other reason, they must FIRST get permission from the teacher then properly sign out. Leaving the room for any reason is a privilege involving trust. Abuse of this privilege will result in losing it.