

# Science of the Physical World

## Course Syllabus

### 2021-2022

#### **8<sup>th</sup> Grade Science Teachers/ email:**

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**School Phone:** (470) 254-7090

**Textbook:** Physical Science: HMH Georgia Science

#### ***Course Description***

The 8<sup>th</sup> Grade Physical Science curriculum provides students with the necessary knowledge and skills to transition from elementary physical science standards to high school physical science standards (see Fulton County Systemwide Science Vertical Instructional Framework). The course is designed to provide students with an introductory overview of the common concepts in physical science including but not limited to the nature of matter, laws of conservation and energy, motion, forces, and energy transformation. These concepts are investigated through observing, collecting, summarizing, analyzing, and presenting, results of scientific investigations and fieldwork designed for students to develop the appropriate skills in science as inquiry.

*\* Within this course, accommodations and modifications will be implemented based on students' current Individualized Education Plan (IEP). For specific goals and objectives and instructional levels, refer to your child's IEP.*

*Other supplemental materials include hand-outs, parallel curriculum texts, direct instruction programs and study guides.*

**NOTE: The middle school physical science curriculum is not intended to take the place of the high school physical science curriculum.**

#### ***Outcome Expectations***

At the end of this course, students should be able to:

1. Use appropriate scientific tools to observe, record, organize, analyze, interpret, write, and present the results of scientific investigations clearly and accurately.
2. Examine the scientific view of the nature of matter including their properties, types, forms, movement and changes.
3. Recognize that there are more than 100 elements on the Periodic Table grouped according to their properties.
4. Explain the forms, transformations, transfer, and conservation of energy.
5. Demonstrate and determine the relationships between forces, mass, and motion of objects.
6. Demonstrate the effects of simple machines on work.
7. Identify the characteristics of waves including the mechanical and electromagnetic waves and describe their behavior in different medium/surfaces.
8. Recognize that every object exerts gravitational force on other objects proportional to their respective masses and relative to electrical energy transfer.
9. Demonstrate the advantages and disadvantages of series and parallel circuits relative to electrical energy transfer.
10. Investigate and explain that electric circuits and magnets can exert mutual forces on each other. Describe the applications of these forces.

## ***Course Outline***

### **First Semester:**

Scientific Method & Measurement  
Properties and States of Matter  
Atomic Theory  
Basic Chemistry  
Motion & Newton's Laws

### **Second Semester:**

Motion & Newton's Laws  
Waves, Sound & Light  
Fluids  
Electricity & Magnetism

## ***Grading***

Grades are determined as follows:

Tests/Projects	50%
Quizzes	40%
Homework/Practice	10%

Fulton County Academic Grading Scale

A	90 and above	C	70-79
B	80-89	F	69 and below*

\*By state rule, any grade below 70 is failing.

## ***Suggested Supplies (NOT MANDATORY)***

Pen or Pencil  
Loose-leaf Paper

## ***Absence Make-Up Procedures***

FCBOE Policy JBD - Upon returning to school following an absence, it is the student's responsibility to contact the teachers to request make-up work. Make-up work must be completed by the student within the time specified by the teacher. At Taylor Road Middle School, the student will be given the same amount of time to make up the work as the student was absent unless other arrangements are mutually agreed upon.

## ***Provision for Improving Grades***

1. Opportunities designed to allow students to recover from a low or failing cumulative grade will be allowed when all work required to date has been completed and the student has demonstrated a legitimate effort to meet all course requirements including attendance.
2. Teacher will determine when and how students with extenuating circumstances may improve their grades.

## ***Extra Help***

I am available most mornings from 8:00 – 8:45 a.m. for extra help. Please make an appointment with the teacher at least 24 hours ahead of time to ensure that there are no scheduling conflicts. A pass to come to the room will be written in the student's agenda.

***Homework***

Homework will be assigned at teacher discretion and based on the depth of the concept(s) we will be covering in class and as an extension of classroom activities.

***Teacher/Parent/Student Communication***

Parents may contact at the school by calling or by using e-mail. Messages are generally returned within 24 hours of receipt. In addition, face-to-face conferences may be requested to discuss a student's progress or behavior.

***Classroom Rules***

1. Come to class prepared to learn.
2. Obtain permission before speaking or leaving your seat.
3. Respect others.
4. Respect school property and the property of others.

***Discipline***

To ensure the proper learning environment in the classroom, all students are expected to demonstrate a positive attitude toward learning. If discipline problems arise, they will be handled on an individual basis.