

G/T SCIENCE III– GRADE 8 CLASS DESCRIPTION

The Maryland State Department of Education's Standards Committee defines science as a "a body of knowledge developed through the process of investigating that is combined with thoughtful reflections guided by critical thinking skills. This body of knowledge is dynamic and has a dramatic impact on every aspect of social life." The Howard County Public School System science program is grounded in this vision of science. Throughout the middle school science program, the concepts of science are taught in conjunction with science skills and process in order to develop in students a deeper and richer understanding of scientific facts and principles.

Grade 8 Science III G/T Traditional and Integrated Curricula (To Be Revised Summer 2002)

Eighth grade students continue to develop skills and processes learned in sixth and seventh grade, including identifying and implementing elements of well-designed investigations. The expectation is that students will continue to apply the concepts of independent and dependent variables, controlled variables, and hypotheses. Students will have many opportunities to collect, organize, analyze, and present data. Because the focus in eighth grade is on physical science, the data they will collect will be related to the physical world around them.

The Essential Curriculum for Grade Eight Science includes seven units. They are as follows:

- Introduction to Physical Science
- Kinetic-Molecular Theory
- Atoms, Molecules, and Chemical Reactions
- Forces and Motion
- Electricity and Magnetism
- Energy Transformations and Environment Impacts
- Waves, Light, and Sound

Emphasis is placed on the G/T science research unit and the differentiated G/T objectives. The result is an increase in the depth and complexity of the topics being studied, commensurate with the learning needs of highly able or high achieving science students.