

Science Program Goals Grades 6-12

Teachers will:

1. provide a balanced program of instruction that challenges the different abilities, interests, and skills of students in the areas of physical, life and earth sciences;
2. create a learning atmosphere where the teacher serves as a coach and the student is an active learner;
3. encourage students to ask questions, speculate, hypothesize, search for evidence and base conclusions on available data;
4. provide a learning environment where creativity and risk-taking are appreciated and encouraged;
5. stimulate students to develop an appreciation for, and curiosity about the natural world;
6. engage students in understanding a body of scientific knowledge and skills that will lead to a greater understanding of the world;
7. stimulate students to develop an awareness of the interaction of science, technology and society;
8. provide laboratory experiences that will promote an inquiry approach to science and develop competencies in using laboratory equipment and technologies; and
9. encourage students to understand that science is an ever changing body of knowledge.

Learning Experiences in science should lead all students to:

1. understand and apply basic concepts, principles and theories of biology, chemistry, physics, earth and space sciences and their interrelationships;
2. recognize and participate in scientific endeavors which are evidence based and use inquiry skills that lead to a greater understanding of the world;
3. identify and solve problems through scientific exploration, including the formulation of hypotheses, design of experiments, use of technology, analysis of data and drawing of conclusions.
4. select and use properly appropriate laboratory technology, equipment and materials, including measuring and sensing devices;
5. understand and use existing and emerging technologies which have an effect on society and the quality of life, including personal, academic and work environments;
6. analyze the possibilities and limits of science and technology in order to make and defend decisions about societal issues; and understand that the way in which scientific knowledge is formulated is crucial to the validity of that knowledge.