Questions

Questions for your child's teacher:

- What tests are required of my child?
- How do I get my child tested or evaluated when struggling?
- When children are absent or tardy, please have the teacher or school staff call parents.
- How could a teacher issue poor progress reports when they never inform the parent of poor performance?
- My child is having trouble with science, where can I get additional help?

Activities for Home

What can I do to help my child

- Contact the teacher/school to schedule time for help on locating resources related to science.
- Monitor your child's progress (check homework, missing assignments, etc.)
- Provide homework space with lighting and a quiet area in the home.
- Be sure your child gets plenty of rest each week .
- Take advantage of science educational resources (i.e. books, OGT materials and homework help) at the Cleveland Public Library to link home and school
- Encourage your child to participate in science fairs or tutoring opportunities.

A Message from the CMSD ~School Parent Organization~

Dear parents,

One of the most important things you can give your child is your time. Becoming actively involved in your child's education provides the encouragement your child needs to become successful. A parent brings about a cohesive team.

NOTES:

Cleveland Metropolitan School District

What should my ninth grader learn about Science?

Earth and Space Sciences

- Explain how evidence from stars and other celestial objects (moon, comets) provide information about the processes that cause changes in the make-up and size of the universe.
- Explain that many processes occur in patterns (i.e. weather) within the Earth's systems.
- Explain the 4.5 billion-year-history of Earth and the 4 billion-year-history of life on Earth based on observable scientific evidence in the geologic record.
- Describe the finite or limited nature of Earth's resources and those human activities that can conserve (recycling paper, glass, etc) or deplete (fossil fuel, pollution) Earth's resources.
- Explain the processes that move and shape Earth's surface.
- Summarize the historical development of scientific theories and ideas, and describe emerging issues in the study of Earth and space sciences.

Life Sciences

- Explain that cells are the basic unit of structure and function of living organisms, that once life originated all cells come from pre-existing cells, and that there are a variety of cell types.
- Explain the characteristics of life as indicated by cellular processes and describe the process of cell division and development. (i.e.
- Explain the genetic mechanisms and molecular basis of inheritance.
- Explain the flow of energy and the cycling of matter through biological and ecological systems (cellular, organisms and ecological).
- Explain how evolutionary relationships contribute to an understanding of the unity and diversity of life.
- Explain the structure and function of ecosystems and relate how ecosystems change over time.
- Describe how human activities can impact the status of natural systems.
- Describe a foundation of biological evolution as the change in gene frequency of a population over time. Explain the historical and current scientific developments, mechanisms and processes of biological evolution.

Physical Sciences

- Describe that matter is made of minute particles called atoms and atoms are comprised of even smaller components. Explain the structure and properties of atoms.
- Explain how atoms react with each other to form other substances and how molecules react with each other or other atoms to form even different substances.
- Describe the identifiable physical properties of substances (e.g., color, hardness, conductivity, density, concentration and ductility). Explain how changes in these properties can occur without changing the chemical nature of the substance.
- Explain the movement of objects by applying Newton's three laws of motion.
- Demonstrate that energy can be considered to be either kinetic (motion) or potential (stored).
- Explain how energy may change form or be redistributed but the total quantity of energy is conserved.
- Demonstrate that waves (e.g., sound, seismic, water and light) have energy and waves can transfer energy when they interact with matter.
- Trace the historical development of scientific theories and ideas, and describe emerging issues in the study of physical sciences.

Science and Technology

- Explain the ways in which the processes of technological design respond to the needs of society.
- Explain that science and technology are interdependent; each drives the other.

Scientific Inquiry

- Participate in and apply the processes of scientific investigation to create models and to design, conduct, evaluate and communicate the results of these investigations.

Scientific Ways of Knowing

- Explain that scientific knowledge must be based on evidence, be predictive, logical, subject to modification and limited to the natural world.
- Explain how scientific inquiry is guided by knowledge, observations, ideas and questions.
- Describe the ethical practices and guidelines in which science operates.
- Recognize that scientific literacy is part of being a knowledgeable citizen.