



Science Curriculum – Third Grade

Capital's science curriculum is aligned with state and national standards. Teachers utilize research-based materials and strategies to provide all students with experiences in the life, earth, and physical sciences while developing critical thinking and problem-solving skills. Students will develop an understanding of important science concepts as they demonstrate process skills such as observing, measuring, predicting, and communicating. The science curriculum engages students in hands-on, inquiry-based, integrated units which serve as a foundation for success in an increasingly-complex scientific and technological world.

This year your child's curriculum will include the following:

Cycle One: Human Body

- How do bones, muscles, and joints function together in humans to enable movement, protection and support?
- How does the structure of the different types of joints (gliding, hinge, ball and socket) enable the human body to move?
- How do models demonstrate how bones, muscles, and joints work in the human body to enable movement, provide support, and demonstrate protection of vital organs?
- What are the similarities and differences in structure and function between a human skeleton and other vertebrates?
- How do different body parts respond to visual, auditory, and tactile stimuli?
- What common diseases or problems of the muscular and skeletal systems affect our bodies?
- What are the similarities and differences in the skeleton of an infant to that of an adult human?
- How can the structure and function of the skeletal system be used to group vertebrates?
- How do muscles move bones in response to signals from the brain?
- How do different body parts respond to visual, auditory, and tactile stimuli?

Cycle Two: Water

- How does the property of a material determine the way in which it interacts with water?
- How does the slope of the land determine the rate at which water flow?
- What happens when hot water and cold water interact? Which way does the energy flow? How do you know?
- What happens to liquid water when it freezes? Does the mass of the water increase?
- How does air temperature and surface area affect the rate of evaporation?
- Where does condensation come from? What is condensation?
- Do all earth materials interact with water in the same way? Explain.
- What factors affect the ability of water to transfer energy to other objects?

EIE Water Water

- Why do you think it is important to stop pollution in all areas of the environment, not just water?
- What types of problems do environmental engineers address and what are sources of those problems?
- Which materials work the best for filtering different types of contaminated water?
- What criteria do you think we should use to measure whether or not a water filter material works well?
- How can we use our knowledge of how different filter materials work, our creativity, and the Engineering Design Process to design and improve a water filter that cleans contaminated "Mystery Water"?

Cycle Three: Earth Materials

- How are properties used to identify, sort, and classify rocks and minerals?
- What kind of simple tools are used to help determine the properties and how are the tools used?
- How does acid rain affect rocks that contain calcite? What kinds of rocks would be good choice for building material? Why?

For more information about your child's Science curriculum, please contact your child's teacher or call the Curriculum Office at 857-4228.