The Virginia Foundation for **Agriculture in the Classroom**
www.agintheclass.org

Agriculture…Where Does it Fit?

In every grade level!

Kindergarten

- ✓ *Scientific Investigation* – group plants based on color
- ✓ *Matter* – observe and describe colors, shapes, textures, relative size and weight of plants and animals
- ✓ *Life Processes* – explore how farm animals and crops change as they grow; identify their basic needs of food, water, and air; compare and contrast young plants and animals with their parents
- ✓ *Earth Patterns, Cycles, and Change* – investigate vegetable and animal growth; identify simple patterns in natural objects – veins in a leaf, spiral patterns in cones, shapes and colors of common seeds; understand that rain helps crops grow
- ✓ *Resources* – name ways to conserve water and energy

Imagine the possibilities!

First Grade

- ✓ *Scientific Investigation* – classify barnyard animals based on different properties and attributes so that similarities and differences become apparent
- ✓ *Life Processes* – conduct simple experiments related to plant needs by changing one variable; create and interpret a drawing of a plant, including seeds, roots, stems, leaves, blossoms, and fruit
- ✓ *Interrelationships in Earth/Space Systems* – discover how crops need the heat of the sun to grow
- ✓ *Earth Patterns, Cycles, and Change* – describe how seasons and weather cause gardens to undergo changes; relate a temperature and precipitation chart to the corresponding season
- ✓ *Resources* – identify and explain how Virginia's many natural resources which impact us
- ✓ *Geography* – locate on a map the places in the world that are too hot or cold to grow food
- ✓ *Economics* – explain the difference between consumers, who buy the food and fiber, and the farmer, who produces it

Second Grade

- ✓ *Scientific Investigation* –classify plants using multiple attributes
- ✓ *Life Processes* –describe the many changes of a vegetable from the time the seed is planted to when you eat it; construct and interpret diagrams of animal and plant life cycles
- ✓ *Living Systems* – understand interdependency by learning why bees and ladybugs are a gardener's friend; explain how erosion may cause a habitat to change
- ✓ *Interrelationships in Earth/Space Systems* – conduct an experiment to see how precipitation and sunlight effect plant growth
- ✓ *Earth Patterns, Cycles, and Change* – describe how weathering and erosion diminish available farm land; compare and contrast the responses of plants and animals to weather and seasonal changes
- ✓ *Resources* – trace the path from cotton plant to jeans; explore the many uses of the soybean; describe plant products grown in Virginia that are useful to people
- ✓ *Economics* – distinguish between natural resources (soil), human resources (farmer), and capital resources (tractor)

Third Grade

- ✓ *Scientific Investigation* – measure and plot plant growth
- ✓ *Life Processes* – explore how animals adapt to their environments; give examples of methods that animals use to gather and store food, find shelter, defend themselves, and rear young
- ✓ *Living Systems* – identify the organisms and relationships in a food chain; infer that most food chains begin with a green plant; identify the plants and animals in the schoolyard and surrounding environment
- ✓ *Interrelationships in Earth/Space Systems* – identify the nutrients from the soil, which plants need in order to grow; analyze and describe the different components of soil; evaluate the importance of soil to people
- ✓ *Earth Patterns, Cycles, and Change* – explain how seasons effect a gardener's choice of seed to plant; describe the water cycle and water's impact on the Earth
- ✓ *Resources* - research renewable energy sources, such as corn and soybeans; examine the need for soil conservation; compare and contrast human influences on the quality of air, water, and habitats
- ✓ *Economics* – explain how a farmer uses soil, workers, and machines to produce food and fiber

Fourth Grade

- ✓ *Scientific Investigation* – discover the effect of different variables on plant growth; use a bar graph to show the top Virginia commodities
- ✓ *Life Processes* – identify the structure and growth process of flower; create a model illustrating the reproductive process in typical flowering plants; compare and contrast different ways plants are pollinated; design and investigation to determine the relationship between the presence of sunlight and soil growth
- ✓ *Living Systems* – illustrate a farm food web; differentiate among positive and negative influences of human activity on ecosystems
- ✓ *Resources* – create a map of Virginia's natural resources; describe a variety of soil and land uses important in Virginia
- ✓ *Virginia Studies* – compare and contrast the farming methods and products of the colonists with those of the modern day; describe the role of mechanization in Virginia's economic transformation; identify and describe the agricultural products of Virginia

Fifth Grade

- ✓ *Scientific Observation* – collect and record data on organisms from your environment; use classification keys to identify rocks, minerals, and organisms
- ✓ *Force, Motion, and Energy* – investigate how bats use echolocation and explain why farmer's welcome bats
- ✓ *Living Systems* – investigate the distinguishing characteristics of organisms found in your area; draw, label, and describe the essential structures and functions of plant and animal cells
- ✓ *Earth Patterns, Cycles, and Change* – describe the impact of weathering and erosion on the earth and its inhabitants; draw and label the rock cycle and describe the major processes and rock types involved; describe how people change the Earth's surface and how negative changes can be controlled

Help students master the SOLs while learning about Virginia's largest industry!

Objectives courtesy of Virginia Standards of Learning; Chesapeake City Schools Checklist of Essential Knowledge, Skills, and Processes; and the Virginia Foundation for Agriculture in the Classroom