

Standard of Learning Quick Reference Sheet

Science – Life Processes, Earth Patterns, Cycles and Change and Resources

Kindergarten –

Senses

Animal and Plant Growth

Shapes and Forms of common natural objects

Change over time

Materials can be reused, recycled and conserved.

ID, explain how to conserve water and energy (Civics: sharing, taking turns, saving for the future, difference between basic needs and wants)

Grade One –

Plants and animals have life needs and functional parts

Plants and animals respond to temperature, light, precipitation

ID natural resources

Factors that affect air and water quality

Recycling, reusing, and reducing the consumption of natural resources

Use of land as parks and recreational facilities

(Civics: natural resources, human resources and capital resources – limits on resources, choices about producing and consuming goods and services)

Grade Two –

Living organisms

Habitats change over time

Weather and seasonal changes affect plants and animals

Weathering and erosion of the land surface

Plants produce oxygen and food and useful products

Plants provide homes and food for animals and prevent soil from washing away

(Civics: comparing communities, ancient history)

Grade Three –

Animals responding to life needs: gathering food, hibernation, migration, camouflage, behaviors

Relationships among organisms in aquatic and terrestrial food chains

Environments support diversity of plants and animals that share limited resources

Soil provides support and nutrients for plants: a natural resource to be conserved

Topsoil is a natural product of subsoil and bedrock

Rock, clay, silt, sand and humus are components of soils

Animal and plant life cycles

Processes involved in the water cycle/water supply and conservation

Interdependency of plants and animals

Human effects on quality of air, water and habitat

Conservation, resource renewal, habitat management and species monitoring

Natural forms of energy, renewable and non-renewable resources

(Civics: discovery of America, rights and responsibilities, conflicts over rights)

Grade Four –

Structures/processes of typical plants

Plants and animals in an ecosystem interact with one another and the environment (including humans)

Watershed and water resources

Animals and plants as natural resources

Forests, soil and land as resources

Minerals and energy sources

(Civics: variety of crops/economic growth patterns in Virginia, maps)

Grade Five –

The rock cycle/weathering and erosion

Classification and structure

Ocean environment

(Civics: how geography and climate influence how Native Americans live)

Grade Six –

Watersheds

Cycles (water, CO₂, N)

Food webs and pyramids

Life processes (respiration, etc)

Management of renewable resources

Cost/benefit tradeoffs in conservation practices

Grade Seven – Life Science

Cells

Classification

Ecosystem dynamics and human activity

Change/evolution/diversity

(Civic and economics: fundamental rights, media/bias, economic impact of consumption)