

## Grade 4 Science

4th Edition



### GENERAL SCIENCE

- Process skills, science tools, and scientific method

### EARTH SCIENCE

#### Earth

- **Changes on the earth:** volcanoes, earthquakes, frost, action, abrasion, weathering, erosion, deposition, landslides, avalanches
- **Landforms:** deltas, dunes, glaciers
- **Soil:** formation, conservation
- **Natural resources:** renewable resources (soil, water, trees, conservation, pollution, hydroelectric energy, wind energy, solar energy), nonrenewable resources (fossil fuels); reduce, reuse, recycle
- **Water and oceans:** water cycle, tides, waves, deep ocean currents, surface currents, ocean floor, ocean depths, ocean creatures

#### Space

- **Moon:** shape and size, atmosphere and temperature, mass and gravity, light, features (maria, mountains, craters, rilles), revolution, rotation, phases, eclipses

- **History of the moon:** man's theories, science, age of the moon

### LIFE SCIENCE

#### Living Things

- **Insects:** arthropods, body parts, protection, ways of eating, life cycles, metamorphosis, social insects
- **Spiders:** webs, getting food
- **Plants:** flowering plants, parts of a flower, pollination, seeds, seed dispersal, seed parts, plant life cycle, reproduction, methods of classification
- **Ecosystems:** environment, basic needs, resources, competition, partnerships, migration, hibernation, changes, pollution
- **Animal defenses:** adaptations (camouflage, mimicry), protection (armor and horns)

#### Human Body

- **Eyes:** parts of the eye, path of light through the eye, vision correction
- **Digestive system:** digestive tract and digestive process
- **Nutrition:** proteins, fats,

carbohydrates, vitamins, minerals, healthy diet planning

- **Skeletal-muscular system:** skeleton, parts of bones, marrow, joints, ligaments, cartilage, muscles, injuries

### PHYSICAL SCIENCE

#### Motion

- **Motion and machines:** forces, friction, work, simple machines (levers, pulleys, wheels and axles, inclined planes, screws, wedges)
- Energy
- **Electricity:** positive charges, negative charges, static electricity, current electricity, conductors, insulators, resistors, series circuits, parallel circuits
- **Magnetism:** magnetic field, uses of magnets, electromagnets, generators
- **Light:** sources of light, speed of light, transparent, translucent, opaque, shadows, visible spectrum, reflection, refraction, lens
- Matter
- **Measuring matter:** length, volume, mass, weight

# Grade 5 Science

4th Edition



## GENERAL SCIENCE

- Process skills, science tools, scientific method

## EARTH SCIENCE Earth

- **Layers of the earth:** characteristics of the core, mantle, and crust
- **Soil:** weathering, erosion, how soil is formed
- **Minerals:** characteristics of minerals, uses of gems, metals, and other minerals, mining
- **Rocks:** formation of igneous, sedimentary, and metamorphic rocks
- **Fossils:** contrasting creation and evolution, Genesis Flood, fossil formation, excavating and restoring fossils, dating and interpreting fossils
- **Layers of the atmosphere:** characteristics of the troposphere, stratosphere, mesosphere, thermosphere, exosphere, and ozone layer
- **Weather:** air, air pressure, temperature, air masses and fronts, winds, precipitation, clouds, storms, tornadoes, hurricanes, weather instruments, reading weather maps

## Space

- **Space technology:** regulating heat in spacecraft

## LIFE SCIENCE

### Living Things

- **Dinosaurs:** fossil evidence, extinction
- **Biomes:** characteristics, plant and animal life in the tundra, coniferous forest, deciduous forest, grasslands, desert, tropical rainforest, mountains, marine and freshwater biomes, wetlands
- **Ecosystems:** environment, population, habitat, food chain, food web, predator and prey, energy pyramid, competition, adaptation, migration, hibernation, symbiosis, instincts, learned behaviors, cycles (seasons, carbon, nitrogen, water), stresses (fires, floods, droughts, manmade), succession, native and invasive species, extinction, endangered species

### Human Body

- **Respiratory system:** nose, pharynx, larynx, vocal cords, trachea, bronchi, lungs, inhaling, exhaling, breathing muscles, asthma and other breathing difficulties, dangers of smoking
- **Circulatory system:** heart, arteries, veins, capillaries, blood cells, blood types, donation blood, excretory system

## PHYSICAL SCIENCE

### Energy

- **Heat:** potential and kinetic energy, thermal energy, temperature, changing states of matter, thermal expansion, conduction, convection, radiation, fuel, unwanted heat, applications to space technology
- **Sound:** sound waves, frequency, speed, pitch, volume, timbre, echoes, ultrasound, music, acoustics
- **Light:** electromagnetic waves, properties of waves, visible spectrum, refraction, reflection, colors, mirrors, lasers, electromagnetic spectrum

### Matter

- **Measuring matter:** volume, mass, weight, density
- **States of matter:** solids, liquids, and gases
- **Physical changes:** melting, freezing, vaporization, boiling, evaporation, condensation
- **Atoms and molecules:** identifying atoms, molecules, elements, and compounds
- **Mixtures:** evenly and unevenly mixed mixtures, characteristics of solutions

## Grade 4 Heritage Studies

3rd Edition



### Focus

- Developing a biblical worldview through the study of American history (end of Civil War to end of World War II)

### Geography

- Map skills: hemispheres, equator, latitude/longitude, and prime meridian
- Natural resources; climates
- Regions

### World History

- World War I
- World War II

### American History

- Indians
- The fifty states (states, history, landmarks)
- Inventions: communication, transportation
- American Industrial Revolution
- Spanish-American War
- American expansion and urbanization
- Territories

### Government

- Branches of American government
- Voting

- Citizenship

### Economics

- Stock market
- Supply and demand

### Culture

- Languages
- Adjustment of immigrants in America
- Evangelism and missionary work

### Social Studies Skills

- Cause and effect
- Timeline
- Primary sources

## Grade 5 Heritage Studies

4th Edition



### Time Period

- AD 1400 to the present

### Map Skills

- Cardinal and intermediate directions, map symbols and key, map scales, map grids, latitude and longitude, time zones

### Kinds of Maps

- Globe, historical, physical and relief, road map, distribution map, political, map projection, regions/state capitals

### American History

- Chronological presentation
- Events and personalities from pre-Columbus to the present
- Biblical evaluations of events, actions, and attitudes

### Government

- Biblical philosophy
- Roles of the three branches of government

### Economics

- Inventions
- Stock market
- Supply and demand

### Culture

- Languages
- Religions
- Customs