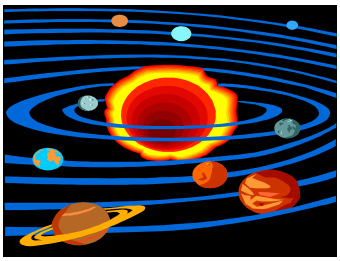

Grade 5 Science

Earth and Space

Water Cycle
Weather Patterns
Solar System

Life Science

Classification-
Animals/Plants
Ecosystems

Physical Science

Mass/Matter
Energy

Technology

Technology in our Lives

Grade 5 Teacher Guide
Classifying Organisms

Strand

Life Science 1

Resources

Scott Foresman Science Book Chapter 1
Leveled Readers: (Science)
Classifying Organisms (BL)
Grouping Living Things (OL)
The CAT Family (A)

Essential Questions

- Why do we classify?
- How do we classify vertebrates?
- How do we classify invertebrates?
- How are other organisms classified?

Vocabulary

- class
- classify
- invertebrate
- kingdom
- phylum
- pupa
- species
- vertebrate

Concepts

- Living things are different but share similar structures.
- Single-celled organisms have various roles in the environment.
- Protists interact with plants and organisms in the environment.

Assessments

Scott Foresman Chapter 1 test
Teacher created test using ExamView Pro

Web Sites

www.brainpop.com

Grade 5 Teaching Guide
Plants

Strand

Life Science 1, 2, 3, 9, 11

Resources

Scott Foresman Science Book Chapter
Leveled Readers (Science)
Plants (BL)
Sunflowers and the Story of Plants (OL)
FOOD and Farming (A)

Essential Questions

- How do leaves help a plant?
- How do stems and roots help a plant?
- How do plants reproduce?
- How do plants grow?

Vocabulary

- photosynthesis
- xylem
- phloem
- pollen
- pollination
- embryo
- spore
- tropism
- growth hormone

Concepts

- Similar cells are organized to form structures (i.e. tissue, organs) in plants and animals.
- Green plants use carbon dioxide, water, and sunlight energy to turn minerals and nutrients into food for growth, maintenance, and reproduction.
- How seed bearing plants reproduce.
- How plants without seeds reproduce.
- Fctors that affect plant growth.

Assessment

Teacher made assessment or S. F. Chapter 4 test.
Teacher created test using ExamView Pro

Web Sites

http://www.ftexploring.com/photosyn/photosynth.html

http://library.thinkquest.org/3715/

Grade 5 TeacherGuide
Interactions in Ecosytems

Strand

Life Science 7, 8

Resources

Scott Foresman Science Book Chapter 5
Leveled Readers (Science)
Interactions in Ecosystems (BL)
Inside Ecosystems (OL)
Build an Aquarium (A)

Environments Kit by Foss

Essential Questions

- What is an ecosystem?
- What are land biomes?
- What are water ecosystems?
- How do organisms interact?
- How does energy move in ecosystems?
- What cycles occur in ecosystems?

Vocabulary

- ecosystem
- population
- community
- niche
- habitat
- energy pyramid
- cycle

Concepts

- Variation in light, temperature, and soil content are largely responsible for the existence of different kinds of organisms an population densities in a ecosystem.
- Identification of living and non-living parts of an ecosystem.
- Characteristics of land biomes and giving examples of plants and animals that live in each.
- How organisms have adapted to the physical conditions in their biome.
- Compare and contrast relationships between organisms in an ecosystem.
- Trace the flow of energy in a system (i.e. electricity in a circuit to produce heat, light, sound, or magnetic fields).
- Organisms grow, die, and decay and new organisms are produced from the materials o dead organisms.

Assessment

Teacher made assessment or S.F. chapter 5 test.
Teacher created test using ExamView Pro

Web Sites

www.quia.com/pages/sci225.html

http://www.epa.gov/teachers/ecosystems.htm

http://magma.nationalgeographic.com/ngexplorer/0403/quickflicks/

Grade 5 TeacherGuide
Changes in Ecosytems

Strand

Life Science 5, 7, 8

Resources

Scott Foresman Science Book Chapter 6
Leveled Readers (Science)
Change in Ecosystems (BL)
How Ecosystems Change (OL)
Changing World (A)

Environments Kit by Foss

Essential Questions

- How do ecosystems change?
- How do species change?
- How do changes cause more changes?
- How are other organisms classified?

Vocabulary

- inherit
- mutation
- structural adaptation
- behavioral adaptation
- pesticide
- extinct

Concepts

- Changes in the environment affect organisms (i.e. some organisms move in, others move out; some organisms survive and reproduce, others die).
- Many characteristics of an organism are inherited from the genetic ancestors of the organism (i.e. eye color, flower color)
- Some characteristics result from the organism's interactions with the environment (i.e. flamingos eat a certain crustacean that makes their feathers to be pink).
- Adaptations to their environment may increase the survival of a species.

Assessment

Teacher made assessment or S.F. chapter 6 test.
Teacher created test using ExamView Pro

Web Sites

http://archive.greenpeace.org/climate/ctb/index.html

http://www.environmentaldefense.org/page.cfm?tagID=11341

Grade 5 Teacher Guide
Water on Earth

Strand

Earth Science 10, 11

Resources

Scott Foresman Science Book Chapter 7
Leveled Readers (Science)
Water on Earth (BL)
Earth's Water (OL)
Underwater Explorers (A)

Essential Questions

- How can the oceans be described?
- Where is fresh water found?
- What is the water cycle?
- How do clouds form?

Vocabulary

- salinity
- aquifer
- water table
- reservoir
- evaporation
- condensation
- precipitation
- sublimation
- sleet

Concepts

- 75 percent of the surface of the Earth is covered by water.
- The properties and features of water in the oceans.
- The various forms of fresh water.
- The process of getting fresh water to where it is used.
- Compare and contrast ocean water and fresh water.
- The water cycle is influenced by temperature, pressure, and the topography of the land.
- How atmospheric pressure affects the water cycle.
- The formation of clouds and their role in the water cycle.

Assessment

Teacher made assessment or S.F. chapter 7 test.
Teacher created test using ExamView Pro

Web Sites

http://www.kidzone.ws/water/

http://www.42explore.com/water.htm

http://www.kathimitchell.com/water.htm

Grade 5 Teacher Guide
Weather Patterns

Strand

Earth Science 6, 7, 8, 9

Resources

Scott Foresman Science Book Chapter 8
Leveled Readers (science)
Weather Patterns (BL)
Changing Weather (OL)
Drought(A)

Essential Questions

- How does air move?
- What are air masses?
- What causes severe weather?
- How are weather forecasts mad

Vocabulary

- convection current
- air mass
- front
- barometer
- anemometer
- rain gauge
- climate

Concepts

- Air pressure relates to altitude, convection currents, and the water cycle.
- What happens when two air masses meet.
- Compare and contrast causes and structure of types of severe weather.
- How weather data is collected and analyzed.
- Natural events are often predictable and logical.
- Compare and contrast weather and climate.
- How climates have changed over time.

Assessment

Teacher made assessment or S.F. chapter 8 test
Teacher created test using ExamView Pro

Web Sites

http://english.unitecnology.ac.nz/resources/units/weather/sites.html

http://earthquake.usgs.gov/learning/kids/

http://www.fema.gov/kids/hurr.htm

Grade 5 Teacher Guide
Matter and It's Properties

Strand

Physical Science 1, 2, 3

Resources

Scott Foresman Science Book Chapter 11
Leveled Readers (science)
Matter and It's Properties (BL)
Properties of Matter (OL)
Pioneers of Physics (A)

Essential Questions

- What are properties of matter?
- How do atoms combine?
- How do phase changes occur?
- What are mixtures and solutions?

Vocabulary

- elements
- atom
- proton
- neutron
- electron
- compound
- saturated
- concentrated
- dilute

Concepts

- The weight of an object always equals the sum of its parts.
- The properties of materials (e.g., density ad volume) can be compared and measured (e.g., using rulers, balances, and thermometers).
- Materials may be made of parts too small to be seen without magnification.
- Elements combine to form molecules.
- Salt has common properties.
- Matter is conserved during heating and cooling.
- The mixtures are physical combinations of materials and an be separated by physical means.
- Mixtures and solutions have differences and similarities.

Assessment

Teacher made assessment or S.F. chapter 11 test
Teacher created test using ExamView Pro

Web Sites

http://www.quia.com/jg/504943.html

http://teacher.scholastic.com/dirt/sinking.htm

http://www.edu.pe.ca/vrcs/2001/homework/gr9/matter.html

http://www.brainpop.com/science/matter/massvolumeanddensity/

Grade 5 Teacher Guide
Changes in Matter

Strand

Physical Science 2, 3

Resources

Scott Foresman Science Book Chapter 12
Leveled Readers (science)
Changes in Matter (BL)
Changing Matter (OL)
Baking Chemistry (A)

Essential Questions

- What are chemical changes?
- What are some kinds of chemical reactions?
- How are chemical properties used?
- How is chemical technology used in our lives?

Vocabulary

- physical change
- chemical change
- combustion
- reactant
- product
- chemical equation
- polymer

Concepts

- The differences between physical and chemical change.
- Materials made by chemically combining two or more substances may have properties that differ from original materials.
- Different materials can be physically combined to produce different substances.
- Differences in chemical properties of substances are used to identify compounds.
- Technology has areas which have improved human lives (i.e. transportation, communication, nutrition, sanitation, health care, entertainment).

Assessment

Teacher made assessment or S.F. chapter 12 test
Teacher created test using ExamView Pro

Web Sites

http://www.brainpop.com/science/matter/propertychanges/

http://www.chem4kids.com/files/matter_intro.html

http://www.mecas.org/LAD/Tasks/Science3-4/PhysicalChemicalChange.pdf

Grade 5 Teacher Guide
Changing Forms of Energy

Strand

Physical Science 1, 4, 5, 12

Resources

Scott Foresman Science Book chapter 14
LeveledReaders (science)
Changing Forms of Energy (BL)
How Energy Changes (OL)
Generating Power (A)

Essential Questions

- What is energy?
- What is sound energy?
- What is light energy?
- What is thermal energy?

Vocabulary

- energy
- kinetic energy
- potential energy
- electromagnetic
- radiation
- thermal energy
- conduction
- convection

Concepts

- Knowledge to trace the flow of energy in a system (i.e. electricity in a circuit to produce heat, light, sound, or magnetic fields).
- Energy can be described as stored energy (potential) or energy of motion (kinetic).
- There are many ways in which energy can be transformed from one type to another.
- Waves travel at different speeds trough different materials..
- Heat has ways to move from one object to another.
- Some materials conduct heat better than others.
- Convection, radiation, and convection are methods of heat transfer

Assessment

Teacher made assessment or S.F. chapter 14 test
Teacher created test using ExamView Pro

Web Sites

http://www.eia.doe.gov/kids/energyfacts/science/formsofenergy.html

http://www.energyquest.ca.gov/

http://www.thinkquest.org/library/cat_show.html?cat_id=118

Grade 5 Teacher Guide
Earth in Space

Strand

Space and Technology 13, 14, 15

Resources

Scott Foresman Science Book Chapter 17
Leveled Readers (science)
Earth in Space (BL)
The Earth and Its Neighbors (OL)
Moon Landings (A)

Essential Questions

- In what ways does Earth move?
- What are the parts of the solar system?
- What are comets and asteroids?
- What s known about the Moon?

Vocabulary

- solar system
- revolution
- axis
- rotation
- space probe
- comet
- asteroid
- satellite
- Moon phases

Concepts

- The Earth tilts on its own axis as it rotates and revolves around the Sun causes changes in season, length of day, and energy available.
- The angle that the rays of the Sun strike the surface of the Earth determines the amount of energy received and thus the seasons of the year.
- The effect of the tilt of the Earth on polar climates.
- The planets differ in size, characteristics, ad composition and that they orbit the Sun in our Solar System.
- Knowing the arrangement of the planets and the asteroid belt in our Solar System.
- The parts of a comet.
- The features of the Moon.
- The relative positions of the Moon, Earth, and Sun during each of the phases of the Moon.
- The role of the relative positions of the Sun and Moon on Earth's tides.

Assessment

Teacher made assessment or S.F. chapter 17 test
Teacher created test using ExamView Pro

Web Sites

http://edtech.kennesaw.edu/web/solar.html

http://www.mce.k12tn.net/samplers/our_solar_system.htm

http://members.aol.com/gca7sky/planets.htm

http://www.kidsites.com/sites-edu/space.htm

http://www.sciencemonster.com/

Grade 5 Teacher Guide
Technology in Our Lives

Strand

Space and Technology 1, 2, 3, 4

Resources

Scott Foresman Science Book Chapter 18
Leveled Readers (science)
Technology in Our Lives (BL)
Technology Today (OL)
Cars: Past, Present, and Future (A)

Models and Design Kit by Foss

Essential Question

- What is technology?
- How has technology changed transportation?
- How have computers changed society?
- What technology is used in space?

Vocabulary

- technology
- inventor
- manufacturing
- assembly line
- microchip
- World Wide Web
- space station

Concepts

- New inventions often lead to other new inventions and ways of doing things.
- Areas in which technology has improved human lives (i.e. transportation, communication, nutrition, sanitation, health care, entertainment).
- A solution to one scientific problem can create another problem.
- Extend and refine knowledge of ways that, through the use of science processes and knowledge, people can solve problems, make decisions, and form new ideas.

Assessment

Teacher made assessment or S.F. chapter 18 test
Teacher created test using ExamView Pro

Web Sites

http://www.pbs.org/wgbh/buildingbig/

http://sciencespot.net/Pages/kdztech.html

http://www.greatachievements.org/

http://www.thetech.org/revolutionaries/