

Fourth Grade Science

Here is a list of all of the Science Skills students learn in Fourth Grade.

A. Materials

1. Compare properties of objects
2. Compare properties of materials

B. Matter and mass

1. Calculate density
2. Understand conservation of matter using graphs

C. States of matter

1. Identify and sort solids, liquids, and gases
2. Change-of-state diagrams: solid, liquid, and gas
3. Heating, cooling, and changes of state

D. Heat and thermal energy

1. Predict heat flow
2. Predict temperature changes
3. How is temperature related to thermal energy?

E. Physical and chemical change

1. Identify physical and chemical changes
2. Compare physical and chemical changes

F. Mixtures

1. Identify mixtures

G. Force and motion

1. Identify directions of forces
2. How do balanced and unbalanced forces affect motion?
3. How does mass affect force and acceleration?

H. Electricity

1. Introduction to static electricity and charged objects

I. Magnets

1. Identify magnets that attract or repel
2. Label magnets that attract or repel
3. Compare strengths of magnetic forces

J. Classification

1. Identify living and nonliving things
2. Identify mammals, birds, fish, reptiles, and amphibians
3. Identify vertebrates and invertebrates
4. Use evidence to classify mammals, birds, fish, reptiles, and amphibians
5. Use evidence to classify animals
6. Describe, classify, and compare kingdoms

K. Scientific names

1. Identify common and scientific names
2. Origins of scientific names
3. Use scientific names to classify organisms

L. Animals

1. Read and construct animal life cycle diagrams
2. Compare animal life cycles
3. Body systems: circulation and respiration
4. Body systems: digestion
5. Body systems: removing waste
6. Body systems: perception and motion

M. Plants

1. Classify fruits and vegetables as plant parts
2. Identify plant parts and their functions
3. How do plants make food?
4. Identify flower parts and their functions
5. Describe and construct flowering plant life cycles
6. Describe and construct conifer life cycles

N. Adaptations

1. Introduction to adaptations
2. Animal adaptations: beaks, mouths, and necks
3. Animal adaptations: feet and limbs
4. Animal adaptations: skins and body coverings

O. Traits and heredity

1. What affects traits? Use observations to support a hypothesis
2. Match offspring to parents using inherited traits
3. Identify inherited and acquired traits
4. Inherited and acquired traits: use evidence to support a statement
5. Read a plant pedigree chart
6. Read an animal pedigree chart

P. Cells

1. Identify functions of plant cell parts
2. Identify functions of animal cell parts
3. Plant cell diagrams: identify parts
4. Animal cell diagrams: identify parts
5. Plant cell diagrams: label parts
6. Animal cell diagrams: label parts
7. Compare plant and animal cells
8. Cell part functions: true or false

Q. Ecosystems

1. Identify ecosystems
2. Describe ecosystems
3. Identify roles in food chains
4. How does matter move in food chains?
5. Interpret food webs

R. Natural resources

1. Evaluate natural energy sources

S. Rocks and minerals

1. Identify minerals using properties
2. Identify rocks using properties
3. How do sedimentary rocks form?
4. Classify rocks as igneous, sedimentary, or metamorphic
5. How do rock layers form?

T. Fossils

1. Introduction to fossils
2. Identify and classify fossils
3. Compare fossils to modern organisms
4. Compare ancient and modern organisms: use observations to support a hypothesis
5. Interpret evidence from fossils in rock layers

U. Weather and climate

1. Read a thermometer
2. Compare temperatures on thermometers
3. Collect and graph temperature data
4. What's the difference between weather and climate?
5. Weather and climate around the world
6. Weather or climate? Cite text
7. Use climate data to make predictions
8. Use data to describe climates

V. Earth's features

1. Describe and graph water on Earth
2. Read a topographic map
3. Select parts of a topographic map

W. Engineering practices

1. Evaluate multiple design solutions to prevent flooding
2. Identify the best design solution to prevent hurricane damage

X. Units and measurement

1. Choose customary units of distance
2. Choose metric units of distance
3. Choose customary units of mass
4. Choose metric units of mass
5. Choose customary units of volume
6. Choose metric units of volume
7. Abbreviate time and length units
8. Abbreviate mass and volume units