

Materials and Equipment Lists

Science K–12

Elementary School Science Lists

Kindergarten	1
Grade 1	2
Grade 2	3
Grade 3	4
Grade 4	5
Grade 5	7

Middle School Science Lists

Grade 6	9
Grade 7	11
Grade 8	13

High School Science Lists

Integrated Physics and Chemistry	15
Biology	17
Chemistry	19
Physics	21
Geology, Meteorology, Oceanography	23

KINDERGARTEN SCIENCE

MATERIALS AND EQUIPMENT LIST

Laboratory and Field Materials

Required ¹

- Balances (1 per 2 students)
- Bowls, plastic (1 per student)
- Computer (1 per classroom)
- Cups, paper or plastic (1 per student)
- Hand lenses (1 per student)

Recommended ²

Large Equipment

- Aquarium and accessories (1 per classroom)
- Clock (1 per classroom)
- Egg incubator (1 per classroom)
- Terrarium and accessories (1 per classroom)

Small Equipment

- Beakers, plastic, 250 mL (2 per student)
- Cars, toys with removable parts (1 per 2 students)
- Construction set (1 per 4 students)
- Eye droppers, plastic (1 per 2 students)
- Colored geometric shapes set (1 set per 2 students)
- Lamp or light source (1 per 4 students)
- Magnet sets (1 per 2 students)
- Scissors, primary (1 per student)
- Thermometer with backing, non-rolling, non-mercury (1 per student)
- Various noise making devices (1 per student)

Consumables

- Aluminum foil
- Bags, plastic with zipper seals
- Crayons, wax
- Nails, small
- Paper, construction
- Paste
- Soil samples
- Soil, potting
- Spoons, plastic
- String for measurement
- Textured materials, such as sand paper, silk, (1 set per 2 students)

Outdoor Field Area

- Natural site for observation
- Local area: native plants, including trees, shrubs, grasses, with a water source for animals

Audiovisuals

- Graph, personal growth

Safety Materials and Equipment

Required

- Eye/ face wash (1 per classroom)
- Fire blanket (1 per classroom)
- Fire extinguisher (1 per classroom)
- First-aid kit (1 per classroom)
- Materials Safety Data Sheets (1 set)
- Safety goggle disinfecting equipment or materials (1 per classroom)
- Safety goggles (1 pair per student)

Recommended

- Sink: hot and cold water (1 per classroom)
- Transport cart (1 per classroom)

¹ Required lists are specified by the TEKS at this grade level.

² Recommended lists were generated by analyzing the concept TEKS at each grade level. We encourage teams of teachers at local levels to make decisions regarding the needs of their individual science programs.

FIRST GRADE SCIENCE

MATERIALS AND EQUIPMENT LIST

Laboratory and Field Materials

Required ¹

- Hand lenses (1 per student)
- Clock with second hand (1 per classroom)
- Computers (at least 1 per classroom)
- Balances (1 per 2 students)
- Thermometer with backing, non-rolling, non-mercury (1 per student)

Recommended ²

Large Equipment

- Aquarium with accessories (1 per classroom)
- Egg incubator (1 per classroom)
- Terrarium and accessories (1 per classroom)

Small Equipment

- Beakers, plastic, 250 mL (1 per student)
- Bodkin needle and thread (1 per 2 students)
- Bowls, plastic (1 per student)
- Construction blocks (1 set per 2 students)
- Eyedroppers, plastic (1 per student)
- Geometric shapes set, colored (1 set per 2 students)
- Lamp or light source (1 per 4 students)
- Magnet set (1 set per 2 students)
- Metal samples including iron (1 set per 2 students)
- Metric rulers (1 per student)
- Scissors, primary (1 per student)
- Various noise-making devices (1 per student)

Living/Preserved Specimens

- Animals and plants
- Seeds such as peas, corn and beans

Audiovisuals

- Graph, pictorial (1 per classroom)
- Video, Sources of Water (1 per classroom)

Outdoor Field Area

- Natural site for observation
- Local area: native plants, including trees, shrubs, grasses, with a water source for animals

Consumables

- Aluminum foil
- Bags, plastic with zipper seals
- Bowls, plastic
- Crayons, wax
- Cups, paper
- Cups, plastic
- Ice source
- Nails, small
- Measuring objects (string, paper clips, washers)
- Paper, construction
- Paste
- Rock samples (1 set per 2 students)
- Soil, potting
- Spoons, plastic
- Soil samples: sand, silt, clay, loam (1 set per 2 students)
- Textured objects, such as sand paper, silk, wax paper (1 set per 2 students)

Safety Materials and Equipment

Required

- Eye/ face wash (1 per classroom)
- Fire blanket (1 per classroom)
- Fire extinguisher (1 per classroom)
- First-aid kit (1 per classroom)
- Materials Safety Data Sheets (1 set per school)
- Safety goggle disinfecting materials or equipment (1 set per classroom)
- Safety goggles (1 pair per student)

Recommended

- Sink: hot and cold water (1 per classroom)
- Transport cart (1 per classroom)

¹ Required lists are specified by the TEKS at this grade level.

² Recommended lists were generated by analyzing the concept TEKS at each grade level. We encourage teams of teachers at local levels to make decisions regarding the needs of their individual science programs.

SECOND GRADE SCIENCE

MATERIALS AND EQUIPMENT LIST

Laboratory and Field Materials

Required ¹

- Balances (1 per 2 students)
- Clock, with second hand (1 per classroom)
- Computers (at least 1 per classroom)
- Hand lenses (1 per student)
- Measuring cups (1 set per 4 students)
- Meter sticks (1 per 4 students)
- Rulers, metric (1 per student)
- Thermometer, non-mercury (1 per student)

Recommended ²

Large Equipment

- Aquarium with accessories (1 per classroom)
- Egg incubator (1 per classroom)
- Terrarium and accessories (1 per classroom)

Small Equipment

- Beakers, plastic, 250 mL (2 per student)
- Cars, toy (1 set per classroom)
- Eyedroppers, plastic (1 per student)
- Fan, small (1 per classroom)
- Flashlight with batteries and bulb (1 per 2 students)
- Lamp or other light source (1 per 2 students)
- Magnet sets (1 per 2 students)
- Musical instruments, rhythm band (1 set per classroom)
- Nail and hammer (1 per classroom)
- Rock sample set: sedimentary, igneous, and metamorphic (1 per 2 students)
- Scissors, primary (1 per student)
- Thermometer, outdoor (1 per classroom)

Audiovisuals

Charts

- Constellation, simple
- Growth
- Water cycle
- Wind speed

Graphs, pictorial

Living/Preserved Specimens

- Animals and plants

Consumables

- Aluminum foil
- Bags, plastic with zipper seals
- Crayons, wax
- Cups, paper
- Measuring objects, including paper clips, string, washers, bolts
- Nails, small
- Paper, construction
- Paste
- Soil, potting
- Spoons, plastic
- Soil samples: clay, loam, silt, sand (1 set per 2 students)

Outdoor Field Area

- Natural site for observation
- Local area: native plants, including trees, shrubs, grasses, with a water source for animals

Safety Materials and Equipment

Required

- Eye/face wash (2 per classroom)
- Fire blanket (1 per classroom)
- Fire extinguisher (1 per classroom)
- First-aid kit (1 per classroom)
- Materials Safety Data Sheets (1 set per school)
- Safety goggle disinfecting materials or equipment (1 set per classroom)
- Safety goggles (1 pair per student)

Recommended

- Sink: hot and cold water (1 per classroom)
- Transport cart (1 per classroom)

¹ Required lists are specified by the TEKS at this grade level.

² Recommended lists were generated by analyzing the concept TEKS at each grade level. We encourage teams of teachers at local levels to make decisions regarding the needs of their individual science programs.

THIRD GRADE SCIENCE

MATERIALS AND EQUIPMENT LIST

Laboratory and Field Materials

Required ¹

- Balances, pan (1 per 2 students)
- Calculators (1 per student)
- Cameras, disposable (1 per 2 students)
- Clock with second hand (1 per classroom)
- Compasses, magnetic (1 per 2 students)
- Computer (at least one per classroom)
- Hand lenses (1 per student)
- Magnet sets (1 per 2 students)
- Meter sticks (1 per 4 students)
- Microscopes (1 per 4 students)
- Rulers, metric (1 per student)
- Sound recorders (1 per classroom)
- Thermometer, non-mercury (1 per student)

Recommended ²

Large Equipment

- Aquarium with accessories (1 per classroom)
- Egg incubator, egg (1 per classroom)
- Inclined plane (1 per 4 students)
- Microscopes, stereo (1 per 2 students)
- Planetarium, hand-held (1 per classroom)
- Terrarium with accessories (1 per classroom)

Small Equipment

- Beakers, graduated, plastic, 250 mL (2 per student)
- Car, wooden toy (1 per 2 students)
- Cylinders, graduated, plastic, 100 mL (1 per 2 students)
- Eye dropper (1 per student)
- Graphing boards (1 per classroom)
- Graphing mats (1 per classroom)
- Hardness test, triangular file (1 per 2 students)
- Lamp, aluminum reflector and bulb (1 per 4 students)
- Rock and mineral samples (1 per 2 students)
- Scissors (1 pair per student)
- Thermometers, outdoor (1 per classroom)

Living/Preserved Specimens

- Animals and plants
- Seeds such as peas, corn and beans

Audio-Visuals

- Charts - Growth
- Charts - Renewable, non-renewable and inexhaustible resources
- CD-ROM, Video - earthquakes and/or glaciers

Consumables

- Aluminum foil
- Bags, plastic with zipper seal
- Balloons
- Clay, modeling
- Crayons, wax
- Cups, paper
- Glue, school
- Magazines for cutting
- Measuring objects: washers, paper clips, chalk
- Nails, small
- Paper, construction
- Paste
- Pencils, colored
- Soil, potting
- Soil samples (1 set per 2 students)
- Spoons, plastic

Safety Materials and Equipment

Required

- Eye/ face wash (1 per room)
- Fire blanket (1 per room)
- Fire extinguisher (1 per room)
- First-aid kit (1 per room)
- Materials Safety Data Sheets (1 set per school)
- Safety goggle disinfecting materials or equipment (1 per room)
- Safety goggles (1 pair per student)

Recommended

- Sink: hot and cold water (1-2 per room)
- Transport cart (1 per room)

¹ Required lists are specified by the TEKS at this grade level.

² Recommended lists were generated by analyzing the concept TEKS at each grade level. We encourage teams of teachers at local levels to make decisions regarding the needs of their individual science programs.

FOURTH GRADE SCIENCE

MATERIALS AND EQUIPMENT LIST

Laboratory and Field Materials

Required ¹

- Balances (1 per 2 students)
- Calculators (1 per student)
- Cameras, disposable (1 per 2 students)
- Clock with second hand (1 per classroom)
- Compasses, magnetic (1 per 2 students)
- Computer (1+ per classroom)
- Meter sticks (1 per 4 students)
- Microscopes, stereoscopic (1 per 4 students)
- Rulers, metric (1 per student)
- Scissors (1 pair per student)
- Sound recorders (1 per classroom)
- Thermometer, non-mercury (1 per student)

Recommended ²

Large Equipment

- Aquarium with accessories (1 per classroom)
- Hot plate (1 per classroom)
- Incubator, egg (1 per classroom)
- Terrarium with accessories (1 per classroom)

Consumables

- Aluminum foil
- Bags, plastic with zipper-type seal
- Clay, modeling
- Crayons, wax
- Cups, paper
- Glue, school
- Nail, small
- Paper, construction
- Paste
- Pencil, colored
- Salt and water for concentrations
- Soil, potting
- Soil samples: clay, loam, sand, silt (1 set per student)
- Spoons, plastic
- Straws
- Sugar cubes

Small Equipment

- Electric circuit kit including knife-blade switch, lamp and base (1 per 2 students)
- Beakers, plastic, graduated:
 - 1000 mL (5 per classroom)
 - 250 mL (2 per student)
- Graphing mat (1 per classroom)
- Lamp, aluminum reflector (1 per 4 students)

- Magnet set (1 set per 2 students)
- Mirrors, plastic (1 per 2 students)
- Spinning top with pump action (1 per 4 students)
- Rocks, limestone samples (1 per student)
- Thermometers, outdoor (1 per classroom)
- Weather vane (1 per classroom)

Living/Preserved Specimens

- Animals and plants
- Seeds such as peas, corn and beans

Outdoor Field Area

- Natural site for observation
- Local area: native plants, including trees, shrubs, grasses, with a water source for animals

Audiovisuals

Charts

- Water cycle
- Clouds
- Geologic time tables
- Wind speed
- Constellations
- Life-cycle of butterfly
- Vinegar
- Dinosaurs or other animals from the past

Videos

- Streams and rivers
- Volcanoes
- Tides and/or hurricanes

Safety Materials and Equipment

Required

- Eye/face wash (1 per room)
- Fire blanket (1 per room)
- Fire extinguisher (1 per room)
- First-aid kit (1 per room)
- Materials Safety Data Sheets (1 set per school)
- Safety goggle disinfecting materials or equipment (1 set per room)
- Safety goggles, splash-proof (1 per student)

Recommended

- Sink (3 per room)
- Transport cart (1 per room)

¹ Required lists are specified by the TEKS at this grade level.

² Recommended lists were generated by analyzing the concept TEKS at each grade level. We encourage teams of teachers at local levels to make decisions regarding the needs of their individual science programs.

FIFTH GRADE SCIENCE

MATERIALS AND EQUIPMENT LIST

Laboratory and Field Materials

Required ¹

- Balance, triple beam (1 per 2 students)
- Calculator (1 per student)
- Cameras, disposable (1 per 2 students)
- Clock with second hand (1 per classroom)
- Collecting nets(1 per student)
- Compass, magnetic (1 per 2 students)
- Computer (1 per classroom)
- Hand lens (1 per student)
- Hot plate (1 per 4 students)
- Magnet (1 set per 2 students)
- Meter stick (1 per 4 students)
- Microscope, stereoscopic (1 per 4 students)
- Scissors (1 pair per student)
- Sound recorder (1 per classroom)
- Rulers, metric (1 per student)
- Thermometer, non-mercury (1 per student)

Recommended ²

Large Equipment

- Aquarium with accessories (1 per classroom)
- Globe, Earth (1 per classroom)
- Globe, lunar (1 per classroom)
- Egg incubator (1 per classroom)
- Planetarium, hand-held (1 per classroom)
- Terrarium with accessories (1 per classroom)

Small Equipment

- Electric kit: knife-blade switch, lamp and base, electric bell, copper wire, nail (1 per 4 students)
- Beakers, plastic, graduated, 400 mL (1 per student)
- Beakers, Pyrex, graduated:
 - 250 mL (1 per 2 students)
 - 600 mL (1 per 4 students)
- Burner, propane or Bunsen burner (1 per classroom)
- Conductometer (1 per classroom)
- Cylinders, plastic, graduated, 100 mL (1 per 2 students)
- Battery, dry cell, 6 volt (1 per 4 students)
- Eye dropper (1 per student)
- Geologic cross-cut diagram (1 per classroom)
- Iron filings (1 package per 2 students)
- Lamp with aluminum reflector (1 per 4 students)
- Lens, 2 convex (1 set per 2 students)
- Mineral set (1 per 2 students)

- Mirrors, plastic (1 per student)
- pH paper (2 vials per classroom)
- Prism (1 per 2 students)
- Rock sets: sedimentary, igneous, and metamorphic (1 set per 2 students)
- Thermometer, outdoor (1 per classroom)
- Tree ring samples (1 set per 4 students)
- Tuning fork and rubber hammer (1 per 2 students)

Consumables

- Aluminum foil
- Bags, plastic with zipper seal
- Baking soda
- Beef bouillon cubes
- Coal
- Coffee can with lids
- Fertilizers
- Glue, school
- Paper, construction
- Paper, simple graphing
- Pencils, colored
- Pots, plants
- Salt
- Soil, potting
- Solar tinting sheets for windows
- Source of ice
- Spoons, plastic
- Sugar
- Vinegar

Living/Preserved Specimens

- Animals and plants
- Seeds such as peas, corn and beans

Audiovisuals

Charts

- Water cycle
- Carbon cycle
- Coal and oil formation
- Life cycle of tree
- Lunar phases
- Nitrogen cycle
- Tidal schedule

Videos

- Adaptive characteristics of organisms
- Rain forest
- Serengetti

Outdoor Field Area

- Natural site for observation
- Local area: native plants, including trees, shrubs, grasses, with a water source for animals

Safety Materials and Equipment

Required

- Aprons (1 per student)
- Eye/face wash (1 per room)
- Fire blanket (1 per room)
- Fire extinguisher (1 per room)
- First-aid kit (1 per room)
- Materials Safety Data Sheets (1 set per school)
- Safety goggle disinfecting materials or equipment (1 set per room)
- Safety goggles, splash-proof (1 per student)

Recommended

- Sink: hot and cold water (3 per room)
- Transport cart (1 per room)

¹ Required lists are specified by TEKS at this grade level.

² Recommended lists were generated by analyzing the concept TEKS at each grade level. We encourage teams of teachers at local levels to make decisions regarding the needs of their individual science programs.

SIXTH GRADE SCIENCE

MATERIALS AND EQUIPMENT LIST

Laboratory and Field Materials

Required ¹

- Balances, triple beam (1 per 2 students)
- Beakers, plastic, graduated:
 - 100 mL (1 per student)
 - 250 mL (1 per student)
 - 400 mL (1 per student)
- Calculators (1 per student)
- Compasses, magnetic (1 per 2 students)
- Computer probes (1 set per computer)
- Computers (at least 1 per classroom)
- Field equipment
- Graduated cylinders, plastic, graduated:
 - 10 mL (1 per 2 students)
 - 100 mL (1 per 2 students)
- Hot plates (1 per 4 students)
- Magnets (1 set per 2 students)
- Meter sticks (1 per 4 students)
- Microscopes (1 per 4 students)
- Petri dishes (1 set of 4 per 4 students)
- Spring scales (1 per 4 students)
- Telescope (1 per class)
- Test tubes (6 per 4 students)
- Thermometer, non-mercury (1 per student)
- Timing devices (clocks, stop watches)
- Weather instruments (outdoor thermometer, barometer, sling psychrometer)

Recommended ²

Large Equipment

- Aquarium with accessories (1 per room)
- Computer probes (1 per room)
- Electric fan (1 per room)
- Globe, Earth (1 per room)
- Inclined plane with force mechanism (1 per 2 students)
- Insect collecting nets (1 per 2 students)
- Insect killing jar (1 per 2 students)
- Insect pins (2 boxes per room)
- Lamp, aluminum reflector (1 per 2 students)
- Model, Animal cell (1 per room)
- Model, Human torso (1 per room)
- Model, Lung (1 per room)
- Model, Plant cell (1 per room)
- Planetarium showing tilt of Earth on axis (1 per room)
- Planetarium, illuminated, hand-held (1 per room)
- Steam engine (1 per 4 students)
- Electric generator (1 per 4 students)
- Terrarium with accessories (1 per room)

Small Equipment

- Compasses, magnetic (1 per 2 students)
- Eye droppers (1 per 2 students)
- Games, Food web (1 per room)
- Herbarium paper (5 sheets per 2 students)
- Herbarium paste (2 bottles per room)
- Hot hands (1 per 2 students)
- Metric rulers (1 per student)
- Microscope slides, blank (2 boxes per room)
- Microscope slides, depression (1 per 2 students)
- Microscope cover slips, plastic (2 boxes per room)
- pH paper or litmus paper (2 vials per room)
- Plant press (1 per room)
- Rock samples: sedimentary, igneous, and metamorphic (1 set per 2 students)
- Rods, stirring (1 per 2 students)
- Scissors (1 per student)
- Test tube holder (1 per 2 students)
- Test tube racks (1 per 2 students)
- Thermometer, outdoor (1 per room)

Living/Preserved Specimens

- Meal worms, aquatic snails or earthworms
- Plants seeds
- Microscope slides, prepared:
 - muscle cells
 - blood cells
 - nerve cells
 - plant and animal
 - chromosomes stained

Consumables

- Aluminum foil
- Bags, plastic with zipper seal
- Brush, artist
- Clay, modeling
- Compost pile
- Glue, school
- Kitchen chemicals - lemon juice, vinegar, baking soda, ammonia, liquid detergent, carbonated drink, tea, coffee
- Pans, aluminum pie
- Paper, construction
- Paper, simple graphing
- Pencils, colored
- Pots, plant
- Soil, potting
- Spoons, plastic
- Water filtering kit or plastic beakers and filtering material

Audiovisuals

Videos and CD-ROMs

- Mountain Building
- Volcanic activity
- Solar system: meteorites, comets, asteroids
- Space travel

Outdoor Field Area

- Natural site for observation
- Local area: native plants, including trees, shrubs, grasses, with a water source for animals

Charts and Transparencies

- Energy pyramid
- Rock cycle
- Atmospheric composition
- Clouds
- Composing
- Food pyramid
- Human organ systems
- Production of energy for human use
- Solar system

Safety Materials and Equipment

Required

- Aprons (1 per student)
- Eye/face wash (1 per room)
- Fire blanket (1 per room)
- Fire extinguisher (1 per room)
- First-aid kit (1 per room))
- Materials Safety Data Sheets (1 set per department)
- Safety goggle disinfecting materials or equipment (1 set per room)
 - Safety goggles, splash-proof (1 per student)

Recommended

- Sink: hot and cold water (1 per 4 students)
- Transport cart (1 per classroom)

¹ Required lists are specified by TEKS at this grade level.

² Recommended lists were generated by analyzing the concept TEKS at each grade level. We encourage teams of teachers at local levels to make decisions regarding the needs of their individual science programs.

SEVENTH GRADE SCIENCE

MATERIALS AND EQUIPMENT LIST

Laboratory and Field Materials

Required ¹

- Balance, triple beam (1 per 2 students)
- Beakers, plastic
 - 100 mL (1 per student)
 - 250 mL (1 per student)
 - 400 mL (1 per student)
- Calculators (1 per student)
- Compasses, magnetic (1 per 2 students)
- Computer probes (1 set per computer)
- Computers (at least 1 per room)
- Dissecting equipment (1 kit per 2 students)
- Field equipment
- Graduated cylinders, plastic
 - 10 mL (1 per 2 students)
 - 100 mL (1 per 2 students)
- Hot plates (1 per 4 students)
- Magnets (1 set per 2 students)
- Meter sticks (1 per 4 students)
- Microscopes, compound (1 per 4 students)
- Plant press (2 per room)
- Petri dishes (1 set of 4 per 4 students)
- Safety goggles (1 pair per students)
- Spring scales, 10 N (1 per 4 students)
- Telescopes (1 per room)
- Test tubes (5-6 per 4 students)
- Thermometer, non-mercury (1 per student)
- Timing devices (e.g., clocks, stop watches)
- Weather instruments (1 per room)
 - outdoor thermometer
 - barometer,
 - sling psychrometer
 - wind vane
 - rain gauge

Outdoor Field Area

- Natural site for observation
- Local area: native plants, including trees, shrubs, grasses, with a water source for animals

Recommended ²

Large Equipment

- Aquarium with accessories (1 per room)
- Anemometer (1 per room)
- Cart, Mechanical or Dynamic (1 per 2 students)
- Computer probes (1 per room)
- Lever system kit (using meter sticks) (1 per 4 students)
- Model, cell (1 per room)

- Model, Human skeleton (1 per room)
- Model, Human torso (1 per room)
- Model, Lung demonstration (1 per room)
- Planetarium, hand-held (1 per room)
- Pulley kit with suspension system (1 per 4 students)
- Spirometer (1 per room)
- Stethoscope (1 per 2 students)
- Stream table kit (1 per room)
- Terrarium (1 per room)
- Tracks, potential and kinetic (1 per 4 students)

Small Equipment

- Brushes, beaker (1 per 4 students)
- Compasses, magnetic (1 per 2 students)
- Dissecting kit (1 per 2 students)
- Dropping bottles (1 per student)
- Eye droppers (1 per student)
- Flask, Erlenmeyer, 1000 mL (4 per room)
- Herbarium paper (5 sheets per 2 students)
- Herbarium paste (2 bottles per room)
- Hot hands (1 per 2 students)
- Insect nets (1 per 2 students)
- Insect killing jar (1 per 2 students)
- Insect pins (2 boxes per room)
- Lamp, aluminum reflector (1 per 4 students)
- Metric rulers (1 per student)
- Microscope cover slips, plastic (2 boxes per room)
- Microscope slides (2 boxes per room)
- Microscope slides, depression (1 per 2 students)
- Petri dishes (1 per student)
- Rods, glass, stirring (1 per 2 students)
- Test tube holder (1 per 2 students)
- Test tube racks (1 per 2 students)

Living/Preserved Specimens

- Fish and other animals
- Paramecium and other protists
- Seeds, bulbs, plant cuttings, rhizomes
- Microscope slides, prepared
 - blood cells
 - sperm cells
 - cheek cells

Consumables

- Bags, plastic with zipper seal
- Bottles, thermos (1 per classroom)
- Lamp, aluminum reflector (1 per 4 students)
- Pots
- Soil

- Steel wool (1 bundle per classroom)
- Thermometers, oral, disposable sleeve (1 per 2 students)
- Wood splints

Chemicals

- Iron filings
- Sulfur

Audiovisuals

- Field Guides: Wildflower, Insect, etc. (4 copies per room)

CD-ROM or Video

- Emergence of Seeds or Flow of Blood (1 per classroom)

Charts

- Asexual and sexual reproduction
- Ecological succession
- Human body system (digestive, circulatory)
- Periodic Table of Elements
- Photosynthesis
- Renewable/ non-renewable/ inexhaustible Energy
- Solar system

Safety Materials and Equipment

Required

- Aprons (1 per student)
- Eye/face wash (1 per room)
- Fire blanket (1 per room)
- Fire extinguisher (1 per room)
- First-aid kit (1 per room)
- Materials Safety Data Sheets (1 set per room)
- Safety goggle disinfecting materials or equipment (1 set per room)
- Safety goggles, splash-proof (1 per student)

Recommended

- Transport cart (1 per room)
- Sink: hot and cold water (1 per 4 students)

¹ Required lists are specified by TEKS at this grade level.

² Recommended lists were generated by analyzing the concept TEKS at each grade level. We encourage teams of teachers at local levels to make decisions regarding the needs of their individual science programs.

EIGHTH GRADE SCIENCE

MATERIALS AND EQUIPMENT LIST

Laboratory and Field Materials

Required ¹

- Balances, triple beam (1 per 2 students)
- Beakers
 - 100 mL (1 per student)
 - 250 mL (1 per student)
 - 400 mL (1 per student)
- Calculators (1 per student)
- Computer probes (1 set per computer)
- Computers (at least 1 per room)
- Dissecting equipment (1 kit per 2 students)
- Field equipment
- Graduated cylinders, plastic
 - 10 mL (1 per 2 students)
 - 100 mL (1 per 2 students)
- Hot plates (1 per 4 students)
- Meter sticks (1 per 4 students)
- Microscopes, compound (1 per 4 students)
- Petri dishes (1 set of 4 per 4 students)
- Spring scales, 10N (1 per 4 students)
- Telescope (1 per class)
- Test tubes, 20 mL (6 per 4 students)
- Thermometer, non-mercury (1 per student)
- Timing devices (e.g., clocks, stop watches)
- Water test kits (1 per 4 students)
- Weather instruments (1 set per room)

Recommended ²

Large Equipment

- Anemometer (1 per class)
- Aquarium and accessories (1 per room)
- Astrolabes (13) (1 per 2 students)
- Barometer (1 per room)
- Globe, Earth (1 per room)
- Inclined plane, Hall's carriage, weight hangers and slotted weights (1 per 4 students)
- Lamp, aluminum reflector
- Map of Northern Hemisphere (1 per room)
- Collision Ball Demonstrator (1 per room)
- Rain gauge (1 per room)
- Sling Psychrometer (1 per room)
- Stream table and accessories (1 per room)
- Terrarium (1 per room)
- Thermometer, outdoor (1 per room)
- Wind vane (1 per room)

Small Equipment

- Calculators (1 per 2 students)
- Dissecting kit (1 per 2 students)
- Eye droppers (1 per student)

- Field guides (1 set per room)
- Flask, 1000 mL (4 per room)
- Herbarium paper (2 pug per room)
- Herbarium paste (2 per room)
- Hot hands (1 per 2 students)
- Insect killing jar (1 per 2 students)
- Insect nets (1 per 2 students)
- Insect pins (2 boxes per room)
- Metric rulers (1 per student)
- Microscope cover slips (2 boxes per room)
- Microscope slides (2 boxes per room)
- Microscope slides, depression (1 per 2 students)
- Plant press (2 per room)
- Rock types set (1 set per 2 students)
- Rods, stirring (1 per 2 students)
- Slinky and wave demonstration rope (1 per room)
- Static electricity kit (1 per 2 students)
- Test tube holder (1 per 2 students)
- Test tube racks (1 per 2 students)
- Thermometer, oral with disposable sleeves (1 per 2 students)

Living/Preserved Specimens

- Invertebrates such as brine shrimp
- Plants, variety
- Seeds with known genetic ratios

Consumables

- Bags, plastic with zipper seal
- Soil, potting
- Chemicals
 - Acid, dilute Nitric
 - Acid, dilute Sulfuric
 - Baking soda
 - Calcium Chloride
 - Phenol Red
 - Vinegar

Audiovisuals

Charts (1 per room)

- Earth's Climatic Zones
- Earth's Prevailing Winds
- Lunar Cycle
- Nitrogen, Carbon, and Water Cycles
- Ocean Currents
- Periodic Table of Elements
- Tides

Outdoor Field Area

- Natural site for observation
- Local area: native plants, including trees, shrubs, grasses, with a water source for animals.

Safety Materials and Equipment

Required

- Aprons (1 per student)
- Eye/face wash (1 per room)
- Fire blanket (1 per room)
- Fire extinguisher (1 per room)
- First-aid kit (1 per room)
- Materials Safety Data Sheets (1 set per department)
- Safety goggle disinfecting materials or equipment (1 per room)
- Safety goggles, splash-proof (1 per student)

Recommended

- Transport cart (1 per room)
- Sink: hot and cold water (1 per 4 students)

¹ Required lists are specified by TEKS at this grade level.

² Recommended lists were generated by analyzing the concept TEKS at each grade level. We encourage teams of teachers at local levels to make decisions regarding the needs of their individual science programs.

INTEGRATED PHYSICS AND CHEMISTRY

MATERIALS AND EQUIPMENT LIST

Laboratory and Field Materials

Recommended *

Large Equipment

- Ammeter (1 per 2 students)
- Balance, triple beam (1 per 2 students)
- Ball and ring (1 per room)
- Bimetallic strip (1 per room)
- Bunsen burners (1 per 2 students)
- Calculator, graphing (1 per 2 students)
- Clock with second hand (1 per room)
- Computer, resident (1 or more per room)
- Computer probes, light, sound, temperature, magnetic, photogate (1 of each per room)
- Conductivity tester (1 per 2 students)
- Conductometers (1 per 2 students)
- Density block sets (1 per 2 students)
- Dynamic carts (1 per 2 students)
- Friction blocks (1 per 2 students)
- Hall's Carriage (1 per 2 students)
- Hammer, rubber (1 per 2 students)
- Hot plate (1 per 4 students)
- Inclined planes with pulley attachment (1 per 2 students)
- Interference tubes (1 per 2 students)
- Lamp, aluminum reflector (1 per 2 students)
- Lever system kit (using meter sticks) (1 per 2 students)
- Magnets, pair of bar (1 per 2 students)
- Mass sets, hooked (1 per 2 students)
- Optics kit (1 per 2 students)
- Optics bench kit (1 per 4 students)
- Overflow cans (1 per 2 students)
- Power supply (or dry cell) (1 per 4 students)
- Prism (1 per 2 students)
- Pulley kit with suspension system (1 per 4 students)
- Resonance apparatus (1 per 4 students)
- Ring stand with 4" ring (1 per 2 students)
- Ripple tank generator for overhead (1 per room)
- Slinky spring (1 per room)
- Stop watch (1 per 2 students)
- Tuning fork set, various frequencies (1 per room)
- Tuning forks, same frequency (1 per 2 students)

Small Equipment

- Scale, spring, 10 N capacity (1 per 2 students)
- Scale, spring, 2.5 N capacity (1 per 2 students)

- Beakers
 - 100 mL (1 per student)
 - 250 mL (1 per student)
 - 600 mL (1 per 4 students)
 - 1000 mL (4 per room)
 - 2000 mL (4 per room)
- Bottles, plastic wash (1 per 2 students)
- Bunsen burners, wing tips (1 per 2 students)
- Copper insulated wire (1 roll per room)
- Alligator clips for electric circuit (1 per 2 students)
- Cork borer set and sharpener (1 per room)
- Cylinder, graduated
 - 10 mL (1 per 2 students)
 - 100 mL (1 per 2 students)
 - 1000 mL (2 per classroom)
- Dropping bottles (2 per student)
- Eye droppers (2 per student)
- Flask, Erlenmeyer
 - 250 mL (1 per student)
 - 1000 mL (4 per classroom)
 - 2000 mL (2 per classroom)
- Friction pad, fur (1 per 2 students)
- Friction pad, silk (1 per 2 students)
- Friction pad, wool (1 per 2 students)
- Funnels, short stem (1 per 2 students)
- Iron filings (1 can per room)
- Knife blade switch (1 per 2 students)
- Lamp base and bulb for circuit (1 per student)
- Litmus paper (1 vial per 2 students)
- Meter sticks (1 per 2 students)
- Metric rulers (1 per student)
- Mortar and pestle (1 per 2 students)
- pH paper (1 vial per 2 students)
- Pith balls, pair coated in graphite and metal (1 per 2 students)
- Polarized lens set (1 per 2 students)
- Prism (1 per 2 students)
- Protractor (1 per 2 students)
- Voltmeter (1 per 2 students)
- Wave demonstration spring (1 per classroom)
- Samples: elements, compounds, and mixtures (1 per 2 students)
- Sets of substances of varying densities (1 per 2 students)
- Solar cell (1 per room)
- Spatulas (1 per 2 students)
- Spectroscopes, quantitative analysis (1 per 2 students)
- Steel spheres (1 per 2 students)

- Stirring rods (1 per 2 students)
- Stop watches (1 per 4 students)
- Stoppers, rubber and cork (assorted) to fit flasks and test tubes (1 per 2 students)
- Test tube holder (1 per 2 students)
- Test tube rack (1 per 2 students)
- Test tubes, 15 X 125 (5 per student)
- Test tubes, 20 X 150 (5 per student)
- Thermometer, metal back, alcohol, calibrated (1 per student)
- Tongs, beaker (1 per 2 students)
- Triangular file (2 per room)
- Watch glasses (1 per 2 students)
- Wire screen, ceramic centered (1 per 2 students)

Living/Preserved Specimens

- Microorganisms for acid rain investigation

Audiovisuals

Chart

- Periodic Table of Elements (1 per room)

Consumables

- Salt for density solutions

Outdoor Field Area

- Natural site for observation
- Local area: native plants, including trees, shrubs, grasses, with a water source for animals
- Rod, glass (1 per 2 students)
- Rod, rubber (1 per 2 students)

Safety Materials and Equipment

Required

- Chemical resistant aprons (1 per student)
- Eye/ face wash (2 per room)
- Fire blanket (1 per room)
- Fire extinguisher (1 per room)
- First-aid kit (1 per room)
- Materials Safety Data Sheets (1 set per room)
- Safety goggles, splash-proof (1 per student)
- Safety goggle disinfecting materials or equipment (1 per room)

Recommended

- Emergency safety shower (1 per room)
- Transport cart (1 per room)
- Sink: hot and cold water (1 per 4 students)

* Recommended lists were generated by analyzing the concept TEKS at each grade level. We encourage teams of teachers at local levels to make decisions regarding the needs of their individual science programs.

BIOLOGY

MATERIALS AND EQUIPMENT LIST

Laboratory and Field Materials

Recommended *

Large Equipment

- Aquarium with accessories (1 per room)
- Autoclave (1 per room)
- Balance, triple beam (1 per 4 students)
- Bird feeder (1 per room)
- Bunsen burners (1 per 2 students)
- Calculator, graphing (1 per 2 students)
- Clock with second hand (1 per room)
- Computer probes (1 per room)
- Computer, resident (1 or more per room)
- Cork borer set and sharpener (1 per room)
- Dissecting kit (1 per 2 students)
- Dissecting pan (1 per 2 students)
- Hot plate (1 per 4 students)
- Incubator for eggs (1 per room)
- Incubator oven (1 per room)
- Microscope, compound (1 per 2 students)
- Microscope, stereo (1 per 2 students)
- Mobile, plant (1 per room)
- Model, Human Torso (1 per room)
- Model, Meiosis (1 per room)
- Model, Mitosis (1 per room)
- Plant press (2 per room)
- Ring stand (1 per 2 students)
- Ring stands, 3" ring (1 per 2 students)
- Ring stand clamp (1 per 2 students)
- Stirrer, magnetic (1 per room)
- Survey collection, animals (1 per room)
- Survey collection, plants (1 per room)
- Terrarium with accessories (1 per room)
- Test tube basket (1 per 6 students)
- Test tube racks (1 per 2 students)

Small Equipment

- Agar plates, starch
- Beakers, Pyrex
 - 100 mL (2 per student)
 - 250 mL (2 per student)
 - 400 mL (1 per student)
 - 600 mL (1 per student)
 - 1000 mL (1 per 4 students)
 - 2000 mL (1 per 4 students)
- Brush, flask (1 per 4 students)
- Brushes, beaker (1 per 4 students)
- Clamps, pinch (1 per student)
- Cylinder, graduated
 - 10 mL (1 per 2 students)
 - 100 mL (1 per 2 students)
 - 500 mL (1 per 4 students)

- Dichotomous keys (1 per 2 students)
- Dishes, culture (1 per student)
- DNA structure and protein synthesis activity kit (1 per 2 students)
- Dropping bottles, 10 ml (4 per student)
- Eye droppers (2 per student)
- File, triangular (2 per room)
- Flask, Erlenmeyer
 - 125 mL (1 per student)
 - 250 mL (1 per student)
 - 500 mL (1 per 2 students)
 - 1000 mL (1 per 4 students)
 - 2000 mL (1 per 4 students)
- Funnels, short stem (1 per 2 students)
- Herbarium labels (1 package per 4 students)
- Herbarium paper (2 package per room)
- Herbarium paste (2 jars per room)
- Inoculating loops (1 per 2 students)
- Insect killing jar (1 per 2 students)
- Insect nets (1 per 2 students)
- Insect pins (2 boxes per room)
- Lens, hand (1 per student)
- Meter sticks (1 per 2 students)
- Metric rulers (1 per student)
- Microscope cover slips, plastic (2 boxes per room)
- Microscope slides (2 boxes per room)
- Microscope slides, depression (1 per student)
- Mortar and pestle (1 per 2 students)
- Nets, insect collecting (1 per 2 students)
- Pens, wax marking (1 per 2 students)
- Petri dishes (1 per student)
- Pipet, 1 mL graduated (1 per 2 students)
- Pipet, 10 mL graduated (1 per 2 students)
- Pipet, 5 mL graduated (1 per 2 students)
- Pots, planting, plastic (2 per student)
- Rods, glass stirring (1 per 2 students)
- Spatulas, 4" stainless (1 per student)
- Sphygmomanometer (1 per 2 students)
- Stethoscope (1 per 2 students)
- Stopper, rubber, assorted to fit flasks and test tubes
- Test tube brushes, regular (1 per 4 students)
- Test tube brushes, small (1 per 4 students)
- Test tube holders (1 per 2 students)
- Test tubes, Pyrex 20 X 150 mm (3 per student)
- Test tubes, Pyrex 10 X 75 mm (3 per student)
- Thermometer, oral with disposable sleeve (1 per 2 students)
- Thermometers, alcohol 10 - 110° C (1 per 2 students)

- Tongs, beaker (1 per 2 students)
- Trays, dissecting (1 per 2 students)
- Tubing, dialysis (1 roll per class)
- Variation and evolution kit (2 per class)

Living/Preserved Specimens

- Aquatic plants, Elodea
- Brine shrimp
- Cultures
 - Bacillus cereus
 - Bacillus subtilis
 - Escherichia coli
- Living plant and animal specimens
- Protist cultures
- Seeds for DNA studies
- Slides, prepared
 - animal cells and tissues
 - plant cells and tissues
- Yeast suspension

Audiovisuals (1 per room)

CD ROMs and Videos

- Cell structure and function
- Classification
- Evolution processes
- Location and function of body systems
- Meiosis
- Mitosis
- Plant anatomy and physiology
- Photosynthesis, respiration and cellular energy
- Planting flats, plastic (1 per 2 students)

Charts

- Bacteria
- Human body systems
- Prokaryotic and eukaryotic cells
- Viruses
- Carbon, oxygen, nitrogen and water cycles

Consumables

- Cotton swabs
- Food coloring
- Food products for testing
- Kidney from meat market

- Lamp, aluminum reflector (1 per 4 students)
- Milk
- Nitrogen fertilizer
- Scissors
- Starch

Outdoor Field Area

- Natural site for observation
- Local area: native plants, including trees, shrubs, grasses, with a water source for animals
- Greenhouse

Safety Materials and Equipment

Required

- Eye/ face wash (1 per room)
- Fire blanket (1 per room)
- Fire extinguisher (1 per room)
- First-aid kit (1 per room)
- Laboratory aprons (1 per student)
- Materials Safety Data Sheets (1 set per room)
- Safety goggle disinfecting materials or equipment (1 per laboratory)
- Safety goggles, splash-proof (1 per student)

Recommended

- Drench hose (1 per room)
- Transport cart (1 per room)
- Sink: hot and cold water (1 per 4 students)

* Recommended lists were generated by analyzing the concept TEKS at each grade level. We encourage teams of teachers at local levels to make decisions regarding the needs of their individual science programs.

CHEMISTRY

MATERIALS AND EQUIPMENT LIST

Laboratory and Field Materials

Recommended *

Large equipment

- Balance, electronic (1 per 4 students)
- Barometer (1 per classroom)
- Burner, Bunsen or Tirrill (1 per 2 students)
- Calculators, graphing (1 per 2 students)
- Calorimeter (1 per 2 students)
- Centrifuge (1 per classroom)
- Clock, with second hand (1 per room)
- Computer (1 or more per room)
- Computer probes (1 per room)
 - temperature
 - pH
 - barometric pressure
 - Geiger Miller tube
- Condensers (1 per 2 students)
- Conductivity apparatus (1 per room)
- DC source, 0-12 v. 5 amp with leads (1 per room)
- Desiccator (1 per room)
- Drying oven (1 per room)
- Electrolysis apparatus (1 per room)
- Geiger counter (1 per room)
- Hot plate (1 per 4 students)
- Magnetic stirrer (1 per 4 students)
- pH meter, hand (1 per 4 students)
- Spectrophotometer (1 per room)
- Spectroscope (1 per student)
- Spectrum tubes (1 of each element per room)
- Spectrum tube power supply (1 per room)

Small Equipment

- Beakers
 - 100 mL (2 per student)
 - 250 mL (1 per student)
 - 400 mL (1 per student)
 - 600 mL (1 per student)
 - 1000 mL (1 per 2 students)
- Bottles, dropper, 10 mL (3 per student)
- Bottles, dropper, 30 mL (3 per student)
- Burets, 50 mL (1 per student)
- Ceramic square (1 per 2 students)
- Clamps (1 per 2 students)
 - test tube
 - 3 prong jaw
 - buret, double
 - pinch
 - utility
- Cobalt-blue glass (1 per 2 students)
- Condenser (1 per 4 students)
- Cork borer (1 set per room)

- Crucible (1 per 2 students)
- Crucible cover (1 per 2 students)
- Cup, plastic foam, 16 oz (1 per student)
- Cylinder, graduated (1 per 2 students)
 - 10 mL
 - 50 mL
 - 100 mL
 - 1000 mL
- Cutter, metal (1 per room)
- Droppers, medicine (3 per student)
- Droppers, pipet (1 per student)
- Evaporating dish (1 per student)
- File, triangular (2 per room)
- Flask, distilling, 250 mL (1 per 2 students)
- Flask, filter, 500 mL (1 per 2 students)
- Flask, volumetric
 - 100 mL (1 per 4 students)
 - 1000 mL (1 per classroom)
 - 250 mL (1 per 4 students)
 - 500 mL (1 per 8 students)
- Flasks, Erlenmeyer
 - 100 mL (1 per 2 students)
 - 1000 mL (1 per 4 students)
 - 250 mL (1 per 2 students)
 - 500 mL (1 per 2 students)
- Funnels, long stem (1 per student)
- Funnels, short stem (1 per student)
- Lighter, burner (1 per 4 students)
- Litmus, red & blue (6 boxes per room)
- Meter stick (1 per 2 students)
- Molecular model set (1 per 4 students)
- Mortar and pestle (1 per 4 students)
- Paper, chromatography (1 box per room)
- Paper, filter, assorted sizes (1 box each per room)
- Paper, pH (6 boxes per room)
- Parafilm (1 roll per room)
- Pencils, glass marking (1 per 2 students)
- Pipets, glass, 1 mL, graduated (1 per 2 students)
- Pipets, glass, 10 mL, graduated (1 per 2 students)
- Pipets, glass, 5 mL, graduated (1 per 2 students)
- Ring support with clamp -2" & 4" (1 per 2 students)
- Ring stand, 20" (1 per 2 students)
- Ring stand screen (1 per 2 students)
- Rubber policeman (1 per student)
- Rubber suction bulb (1 per 2 students)
- Ruler, metric (1 per student)
- Small rubber bands (1 box per room)

- Spatula/scopula (1 per student)
- Spot plate (1 per 2 students)
- Stirring rod, glass (1 per student)
- Stoppers, cork, assorted
- Stoppers, rubber, 1 hole and 2 hole, assorted
- Stoppers, rubber, solid, assorted
- Test tube holder (1 per student)
- Test tube rack (1 per 2 students)
- Test tubes, large (5 per student)
- Test tubes, medium (5 per student)
- Test tubes, small (5 per student)
- Thermometers, -20 to 150°C (1 per student)
- Thermometers, electronic (1 per 4 students)
- Tong, crucible (1 per 2 students)
- Tongs, beaker (1 per 2 students)
- Triangle, 1 1/2", clay-covered (1 per 2 students)
- Tubing, plastic connecting (50' per room)
- Tubing, rubber connecting (50' per room)
- Tubing, capillary, glass, melting point (1 vial per classroom)
- Tubing, glass, assorted
- Tubing, rubber, 1/4" ID (100' per room)
- Tweezers or forceps (1 per 2 students)
- Wash bottles, plastic (1 per 2 students)
- Watch glass (1 per 2 students)
- Weighing bottle (1 per 2 students)
- Wire gauze, ceramic center, 5" x 5" (1 per 2 students)
- Wire, nichrome or platinum (1 per 2 students)

Charts (1 per room)

- Common ions
- Oxidation-reduction potential
- Periodic Table of Elements
- Spectrum

Safety Materials and Equipment

Required

- Chemical resistant aprons (1 per student)
- Emergency safety shower (1 per room)
- Eye/face wash (2 per room)
- Fire blanket (1 per room)
- Fire extinguisher (1 per room)
- First-aid kit (1 per room)
- Fume hood (1 per room)
- Materials Safety Data Sheets (1 set per room)
- Safety goggle disinfecting materials or equipment (1 set per room)
- Safety goggles, splash-proof (1 per student)

Recommended

- Transport cart (2 per room)
- Sink: hot and cold water (1 per 4 students)

* Recommended lists were generated by analyzing the concept TEKS at each grade level. We encourage teams of teachers at local levels to make decisions regarding the needs of their individual science programs.

PHYSICS

MATERIALS AND EQUIPMENT LIST

Laboratory and Field Materials

Recommended *

Large Equipment

- Ammeter triple range: 0 - 1.5, 3 (1 per 2 students)
- Balance, triple beam (1 per 2 students)
- Bunsen Burner (1 per 2 students)
- Clamps 4" (1 per 2 students)
- Calculator, graphing (1 per 2 students)
- Caliper, micrometer (1 per 2 students)
- Caliper, vernier (1 per 2 students)
- Calorimeter (1 per 2 students)
- Cart, dynamics set (1 per 2 students)
- Cathode ray tube, sealed with screen (1 per room)
- Clock with second hand (1 per room)
- Cloud chamber (1 per 2 students)
- Collision Apparatus-two dimensions (1 per 2 students)
- Computer probes tube (1 per room)
 - sound
 - magnetic
 - light
 - photogate
 - temperature
 - pendulum
 - Geiger Miller
- Computer (1 or more per room)
- Conservation of Momentum Apparatus (1 per room)
- Coulomb's Law Apparatus (1 per 2 students)
- Discharge tubes, vacuum (1 per room)
- Electroscope, measuring (1 per 2 students)
- Galvanometer, center zero (1 per 2 students)
- Hall's carriage (1 per 2 students)
- Hammer, rubber (1 per 2 students)
- Hot plate (1 per 2 students)
- Inclined plane (1 per 2 students)
- Induction coil (1 per room)
- Lab masses set, brass (1 per 2 students)
- Lab masses set, hooked (1 per 2 students)
- Lamps, aluminum reflector (1 per 2 students)
- Light source, intense for ripple tank (1 per room)
- Magnets, strong, bar, pair (1 per room)
- Magnets, strong, horseshoe (1 per room)
- Optical bench set (1 per 2 students)
- Optics kit (1 per 2 students)
- Pendulum support (1 per 2 students)
- Power supply: AC, DC (1 per 2 students)
- Pulley with clamp for table edge (1 per 2 students)
- Resonance tube, 50 cm (1 per 2 students)
- Ring clamp (1 per 2 students)
- Ring stand (1 per 2 students)

- Ring stand screen (1 per 2 students)
- Ring, 4" (1 per 2 students)
- Ripple tank assembly, complete (1 per room)
- Ripple tank wave generator (1 per room)
- Slotted weights set (1 per 2 students)
- Stop watch (1 per 2 students)
- Stroboscope (1 per room)
- Trajectory apparatus (1 per 2 students)
- Tuning fork set, 256 Hertz and above (1 per 2 students)
- Voltmeter triple range: 0-1.5, 3, 30A (1 per 2 students)
- Weight hangers (1 per 2 students)

Small Equipment

- Ball and ring (1 per room)
- Beakers, Pyrex, 400 mL (1 per 2 students)
- Beakers, Pyrex, 600 mL (1 per 2 students)
- Bimetallic strip (1 per classroom)
- Carbon paper (2 packages per room)
- Compasses, magnetic (2 per student)
- Cylinder, graduated, 10 mL (1 per 2 students)
- Cylinder, graduated, 50 mL (1 per 2 students)
- Cylinder, graduated, 500 mL (1 per 6 students)
- Cylinder, graduated, 1000 mL (1 per 6 students)
- Eye dropper (1 per student)
- Friction block with hook (1 per 2 students)
- Friction pads, fur (1 per 2 students)
- Friction pads, silk (1 per 2 students)
- Friction pads, wool (1 per 2 students)
- Handbook of Physical Constants (1 per room)
- Iron filings (1 box per room)
- Magnet, horseshoe (1 per room)
- Magnets, bar (1 per student)
- Magnets, bar, pair (1 per room)
- Mass, known specific heat, metal, small (1 per 2 students)
- Mass, unknown specific heat, metal, small (1 per 2 students)
- Nail, large iron (1 per 2 students)
- Nylon thread (1 spool per room)
- Paper clips (10 per student)
- Paper, white craft (1 roll per room)
- Pendulum bob (1 per 2 students)
- Pith ball pair, graphite or metal coated (1 per 2 students)
- Polarized lens (1 per room)
- Prism (1 per room)
- Protractor (1 per 2 students)
- Recorder timer (1 per 2 students)
- Recorder timer carbon discs (1 package per 2 students)

Safety Materials and Equipment

- Recorder timer tape (1 per 2 students)
- Resistors 2 @ 5 ohms power rating, 5 - 10 watts (1 per 2 students)
- Resistors 2 @ 10 ohms power rating, 5 - 10 watts (1 per 2 students)
- Resistors 2 @ 15 ohms power rating, 5 - 10 watts (1 per 2 students)
- Resistors 2 @ 30 ohms power rating, 5 - 10 watts (1 per 2 students)
- Rods, rubber (1 per 2 students)
- Rods, glass (1 per 2 students)
- Ruler, metric (1 per 2 students)
- Scale, spring 2.5N (1 per 2 students)
- Scale, spring 10N (1 per 2 students)
- Scale, spring, 20N (1 per 2 students)
- Screw driver (1 per 2 students)
- Slinky (1 per 2 students)
- Switch, knife blade (1 per 2 students)
- Tag board (1 per 2 students)
- Thermometers, Celsius, -2 - 110 °C, alcohol (1 per 2 students)
- Tracing paper (1 per 2 students)
- Twine, heavy cotton (1 ball per room)
- Wave motion rope (1 per 2 students)
- Wire, Copper, insulated, 18 gauge (100 m per room)

Audiovisuals

CD ROMs (1 set per room)

- Illustrations of Laws of Thermodynamics
- Photo Electric Effect
- Role of electromagnetic spectrum

Charts (1 per room)

- Electromagnetic spectrum
- Periodic Table of Elements
- Meter stick (1 per 2 students)

Consumables

- Dry ice
- Sheets of cardboard
- Wax

Outdoor Field Area

- Natural site for observation
- Local area: native plants, including trees, shrubs, grasses, with a water source for animals.

Required

- Aprons (1 per student)
- Eye/ face wash (2 per room)
- Fire blanket (1 per room)
- Fire extinguisher (1 per room)
- First-aid kit (1 per room)
- Materials Safety Data Sheets (1 per room)
- Safetygoggle disinfecting materials or equipment (1 set per room)
- Safety goggles, splash-proof (1 per student)

Recommended

- Transport cart (1 per room)
- Sink: hot and cold water (1 per 4 students)

* Recommended lists were generated by analyzing the concept TEKS at each grade level. We encourage teams of teachers at local levels to make decisions regarding the needs of their individual science programs.

GEOLOGY, METEOROLOGY, OCEANOGRAPHY

MATERIALS AND EQUIPMENT LIST

Laboratory and Field Materials

Recommended *

Large Equipment

- Balances, triple beam (1 per 2 students)
- Calculators, and software (1 per student)
- Clock with second hand (1 per room)
- Computer probes (1 per 2 students)
 - temperature
 - light
 - magnetic
- Computer (1 or more per room)
- Containers for hot water baths (3 per room)
- Hot plate (1 per room)
- Stream table kit (1 per room)

Small Equipment

- Air pollution kit (1 per 2 students)
- Beakers, 250 mL Pyrex (1 per student)
- Beakers, 400 mL Pyrex (1 per student)
- Eye dropper (1 per student)
- Cylinder, graduated, 100 mL (1 per 2 students)
- Lamps, aluminum reflector (1 per 2 students)
- Mineral cleavage kit (1 per 2 students)
- Mineral samples (1 set per 2 students)
- Moh's hardness sample kit (1 per 2 students)
- Overflow can (1 per 2 students)
- Rock Type Sets: sedimentary, igneous, and metamorphic (1 set per 2 students)
- Rock samples: dolomite, limestone (1 per 2 students)
- Rulers, metric (1 per student)
- Streak plates (1 per student)
- Syracuse staining dish, 64 mm (1 per 2 students)
- Thermometers, alcohol (2 per student)
- Tongs, beaker (1 per 2 students)

Living and Preserved Specimens

- Aquatic and terrestrial plants

Software and CD-ROMs (1 per 4 students)

- Historical development of Earth's formation
- Historical development of plate tectonics and methods of verification
- Origin of fossil fuels and their environment and economic impact
- Space Age discoveries about planets
- Tides, bores and tsunamis

Audio-Visuals

- Charts, Ocean Floor (1 per room)
- Earthquake Epicenter Bulletin, U.S. Government Printing Office (1 subscription per class)

Maps, wall (1 per room)

- Earthquake watch kit, Pacific-centered,
- Climatic data from cities in each climatic zone (1 per student)
- Local water resources, average annual rainfall, etc.
- World, relief
- Earth's climatic zones

Consumables

- Clay, modeling
- Containers, plastic or glass, circular
- Cups, Styrofoam
- Food coloring
- Phenyl Salicylate, (100 grams per classroom)
- Salt
- Soil, potting
- Straws, clear

Outdoor Field Area

- Natural site for observation
- Local area: native plants, including trees, shrubs, grasses, with a water source for animals

Safety Materials and Equipment

Required

- Aprons (1 per student)
- Eye/face wash (2 per room)
- Fire blanket (1 per room)
- Fire extinguisher (1 per room)
- Materials Safety Data Sheets (1 set per room)
- First-aid kit (1 per room)
- Safety goggle disinfecting materials or equipment (1 set per laboratory)
- Safety goggles, splash-proof (1 per student)

Recommended

- Transport cart (1 per room)
- Sink: hot and cold water (1 per 4 students)