

Physical Science

The MicroPhySci Kit provides an academically challenging laboratory curriculum for students in grades 7-10. It is intended as the laboratory portion of a physical science course providing a full year of labs.

We have designed the MicroPhySci Kit in order to make teaching and preparation very convenient for the instructor. It contains all materials necessary except for a few common household items. **The kit contains sufficient materials to do every experiment five times.**

LAB EXPERIMENTS:

1. Metric Measurements
2. Density
3. Chemical Reactions
4. Electrolysis of Water
5. Acids, Bases, and Indicators
6. Friction
7. Work
8. Levers
9. Pulleys
10. Energy
11. Buoyancy
12. Atomic Motion and Diffusion
13. Electrical Circuits
14. Magnetism
15. Sound Waves
16. Light Waves
17. Convex Lenses

MICROPHYSCI KIT CONTENTS:

10 Chemicals, 36 different types of equipment, 112 page manual – all in a plastic “shoe box”.



Earth Science

The Earth Science has 36 activities covering 10 major areas. All labs are well documented with an extended background to assist with learning.

The lab kit activities have the following titles.

- I. Layers of the Earth
 1. Egg Lab
- II. Basic Tectonics.
 1. Subduction and Accretion
 2. Divergent Boundaries
- III. Waves, Earthquakes and Tsunamis
 1. Wave Motion
 2. Liquefaction
 3. Tsunami Waves
- IV. Volcanoes
 1. Volcanic Eruption
 2. Hot Spots
- V. Rock Cycle
 1. Viewing Igneous Rocks
 2. Igneous Rock Formation
 3. Viewing Sedimentary Rocks
 4. Making a Fossil
 5. Metamorphic Rock
 6. - 8. Making a Rock, Parts 1, 2, 3
- VI. Mineral Identification
 1. The Silica Tetrahedron
 2. Identifying Minerals, Color
 3. Identifying Minerals, Luster
 4. Identifying Minerals, Hardness
 5. Identifying Minerals, Streak
 6. Identifying Minerals, Cleavage
 7. Identifying “Mystery” Minerals
- VII. Topography
 1. Making Contour Lines
 2. Labeling Maps
 3. Using a Topographical Map
- VIII. Oceans
 1. Wind Driven Ocean Currents
 2. The Salinity of Ocean Water
 3. Ocean Water Temperatures
- IX. Weather
 1. The Angle of the Sun
 2. Making a Barometer
 3. Reading a Weather Map
- X. Astronomy
 1. The Phases of the Moon
 2. Visible and Invisible Sun Light
 3. Ultra-Violet Light
 4. Scintillation Lab

QSL offers innovative science lab kits for home schools and small schools that are academically sound and “ready-to-go”. The labs help to make teaching science easy regardless of the teacher’s experience or science background. Order online, by phone or by mail.

Quality Science Labs are:

- Teacher friendly
- Fast, easy set up and clean up
- Well written, step-by-step manuals that guide you and your students through each experiment
- Any clean table can be a laboratory
- Great for homeschool parents and instructors teaching in or out-of-field
- Cost effective way to provide a real hands-on laboratory
- Designed to offer time savings and be more predictable than standard labs
- Makes science teaching accessible and achievable by almost anyone
- All kits are coordinated with popular text books.

Various microscopes available for biology and life science.

“The home labs from Quality Science Labs are just excellent. These people really know what they are doing! If you are teaching upper level science to your own children or to a small classroom, these are the kits you have been looking for. These are hard to find gems and we highly recommend them!”

- Rebecca Kochenderfer
Senior Editor & Co-Founder, Homeschool.com, Inc.

“Homeschool Friendly Stamp of Approval: Best in Science, 2004.”
- Homeschooling Parent Magazine



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Science Lab Kits



Science can be easy to teach!

Let Quality Science Labs, LLC help you teach science. Our kits are used by public and private schools, classrooms, independent study students and homeschoolers. The kits step students through real science experiments to help them better understand science topics.



Quality Science Labs, LLC

www.qualitysciencelabs.com

Biology

The Biology lab kit has 28 hands-on experiments covering the introduction to the microscope, cell labs, mitosis, bacteria, protozoa, fungus, plants, and 7 dissection labs.

This exciting addition to our lab kit lineup was designed by a biology teacher and homeschool mom. Now it's easy to include a complete biology lab with your curricula. Includes virtually everything needed except perishables.



LAB EXPERIMENTS:

1. Microscope: Structure and care
2. Microscope: Magnification
3. Preparing a Slide Using a Wet Mount
4. Microscope Drawings
5. Cell Lab: Prepare and view a Plant Cell
6. Cell Lab: Prepare and View Parts of a Plant Cell
7. Cell Lab: Prepare and View Animal Cells & Compare them to Plant Cells
8. Cell Lab: Observing Chloroplasts and Cytoplasmic Streaming
9. Cell Lab: A Selectively Permeable Membrane
10. Mitosis Lab
11. Bacteria Lab: Part 1 - Forms of Bacteria
12. Bacteria Lab: Part 2 - Soap for Killing Bacteria (Optional Lab)
13. Bacteria Lab: Part 3 - Antibiotics for Killing Bacteria (Optional Lab)
14. Protista Lab
15. Fungus Lab: Prepare and View Squash Fungus
16. Fungus Lab: Prepare and View Mushroom Structures
17. Fungus Lab: Prepare and View Yeast
18. Plant Lab: Monocot and Dicot Root, Leaf, and Stem
19. Plant Lab: The Parts of a Flower
20. Plant Lab: Internal Structures of Monocots and Dicots
21. Plant Lab: Plant Leaves
22. Dissection: Worm
23. Dissection: Crayfish
24. Dissection: Grasshopper
25. Dissection: Fish
26. Dissection: Frog
27. Dissection: Cow Eye
28. Dissection: Fetal Pig

QSL BIOLOGY LAB KIT CONTENTS:

10X magnifying glass, 150 ml beaker, blank slides, concave slides, cover slips (100), dissection kit (12 piece), plastic reusable dissection tray, 3 types of stain, lens paper, slide case, 8 prepared slides, 7 dissection specimens 278 page manual, and more

The Biology lab kit is available in three components.

- 1.) The equipment kit with the specimen kit and the manual
- 2.) The microscope
- 3.) A refill kit

To reuse the lab simply purchase a refill kit..

Chemistry

Now you can set up an affordable hands-on lab for your chemistry students. Based on the Microscale method, the MicroChem Kit offers a complete lab with virtually everything necessary to perform basic lab experiments. There is no need for fume hoods and other costly safety equipment. Disposal of waste products is not a problem because of the low quantities of actual chemical used (about 1/100th of the chemicals a typical lab would consume). The chemical reagents are ready to use and require no mixing or further preparation.

To use with many popular textbooks, simply follow the order listed on the coordination sheets included with the kits, and do the hands-on labs at the suggested times.

Designed for small schools, independent study and homeschool students, and instructors who may not be chemistry experts, the MicroChem Kit offers a virtually fail-safe method for including labs in your curriculum.

LAB EXPERIMENTS:

1. Paper Chromatography
2. Melting Points, Super Cooling
3. Electrical Conductivity of Several Solutions
4. Mole Ratios
5. Double Replacement Reactions
6. Oxidation-Reduction
7. Decomposition
8. Boyle's Law
9. Charles's Law
10. Solubility Product Constant
11. pH and pH Indicators
12. A Microscale Titration
13. Molar Mass by Titration
14. A Buffer Solution
15. Reaction Rates: The Effect of Concentration
16. Reaction Rates: The Effect of Temperature
17. Electrochemistry: Galvanic Cells



MICROCHEM KIT CONTENTS:

26 Chemicals, 27 different types of equipment, 119 page manual – all in a plastic “shoe box”. Developed with safety in mind, the kit contains no concentrated acids or bases. The equipment is mostly plastic to reduce breakage.

New: Optional Organic Chemistry Supplement.

This add-on to the MicroChem Kit gives you 4 additional experiments covering organic compounds and modeling. Help your students discover more about the fascinating area of organic chemistry.

Contains a lab manual, 101-piece molecular model kit, and **enough chemicals and equipment to do every experiment five times.**

Physics

The QSL Physics Lab kit helps teachers in small schools or home schools overcome the challenges often experienced with science experiments. The innovative hands-on laboratory exercises were developed to be convenient for teachers while clearly teaching a scientific principles.

These are serious physics lab experiments designed to prepare your students for higher education.



LAB EXPERIMENTS:

1. A Recording Timer, The acceleration of gravity
2. The Sum of vectors
3. Newton's Second Law
4. Acceleration on an Inclined Plane
5. Potential and Kinetic Energy
6. Coefficient of Friction
7. Work and Power
8. Projective Motion
9. Conservation Of Momentum
10. Hooke's Law, a Spring Constant
11. Centripetal Force
12. A Pendulum
13. The Speed of Sound in Air
14. Specific Heat of Aluminum
15. Latent Heat of Fusion
16. Refraction
17. Lenses
18. Wavelength of a Laser Beam
19. Wavelengths of the Visible Spectrum
20. An Electronic Breadboard
21. Ohm's Law
22. Capacitors
23. Diodes
24. Transistors

QSL PHYSICS LAB KIT CONTENTS:

58 different types of equipment and 150 page manual – all in a plastic container.