

Use Resource Link:	Year	Month	Title	Summary	Keywords
Biology	1998	December	Sorting molecules with electricity	Paper and gel electrophoresis	BioTech, Chemistry, Lab Tech
Biology	1998	October	Spying on an Invisible World	How to Connect a to a Camcorder	Microscopy
Biology	1998	September	Spooling the Stuff of Life	Extracting DNA in your Kitchen	Biology, BioTech
Biology	1998	August	Building a Conscousness of Streams	Volunteer stream monitoring	Ecology
Geology	1998	June	Detecting Subtle Tsunamis	How to build a microbarograph	Atmosphere, Geoscience, Lab Tech
Geology	1998	May	Waiter, There's a Hair in My Hygrometer	How to build a sensitive humidity sensor	Atmosphere, Geoscience, Lab Tech, Weather
Biology	1998	March	The Pleasures of Pond Scum	Growing algae on a windowshef	Biology, Botany, Ecology
Geology	1997	August	Getting a Charge out of Rain	Measuring the charge on rain drops.	Atmosphere, GeoscienceWeather
Biology	1997	July	How-to's of Butterfly Rookeries	How to raise butterflies a experimental animals	Biology, Entomology
Biology	1997	June	Getting Inside an Ants Head	Microscopic investigations of insect organs	Biology, Entomology, Microscopy
Geology	1997	January	Catching a Comet by Its Tail	Observing comets with simple instruments	Astronomy
Biology	1996	September	The Pleasures of Exploring Ponds	Turing an excusion to a local pond into a scientific adventure	Biology, Botany, Ecology, Lab Tech
Geology	1996	April	The New Backyard Seismology	Seismometer built from IC accelerometers	Geoscience, Lab Tech
Biology	1994	June	Genetically Altering Escherichia coli	Genetically Altering the Escherichia Coli, by John lovine, genetic engineering, a simple incubator, gene splicing to make anti-biotic resistant E. Coli, see "Grading the Gene Tests" by John Rennie (6/94 issue)	Biology, BioTech
Biology	1993	March	Flight-Testing Fruit Flies	Flight-Testing Fruit Flies, Janet M. Strong-Gunderson, learning in insects, raising Drosophila, a wind tunnel for insects, an aspirator for collecting flies, see "How Parasitic Wasps Find Their Hosts" by James H. Tumlinson, W. Joe Lewis and Louise E.M.	Biology, Entomology
Biology	1993	January	Biodiversity in the Backyard	Biodiversity in the backyard, Henry S. Horn, "species-area curves", mapping of flora in a suburban lawn, ref. to "How Many Species Inhabit the Earth", by Robert M. May (10/92 issue).	Biology, Ecology

Geology	1987	April	Making a barometer that works with water in place of mercury		Atmosphere Geoscience
Geology	1979	July	How to build a simple seismograph to record earthquake waves at home	How to build a simple seismograph to record earthquake waves at home, moving magnet type, with 741 op-amp based signal amplifier	Electronics, Geoscience, Lab Tech
Geology	1979	May	How to measure the size of the earth with only a foot rule or a stopwatch	How to measure the size of the earth with only a foot rule or a stopwatch, and other Classical methods	Geoscience
Biology	1979	January	How to make dazzling photomicrographs with simple and inexpensive equipment	How to make dazzling photomicrographs with simple and inexpensive equipment, Nice color photographs, Bright and dark field illumination (Kohler illumination), ref. to 4/68, color and polarizing illumination, ref. to 12/77 (polarization), ref. to 9/78 (in	Lab Tech, Microscopy, Optics
Geology	1978	May	What plumes of smoke tell about the structure of the atmosphere	What plumes of smoke tell about the structure of the atmosphere, pollution, killer fogs	Atmosphere
Biology	1976	February	Thin-layer chromatography: a convenient way of separating things that are very much alike	Thin-layer chromatography: a convenient way of separating things that are very much alike, Death of C.L. Stong, last article by C.L. Stong	Chemistry, Lab Tech
Biology	1975	February	The pleasures and problems of raising snails in the home, snail anatomy		Biology
Geology	1974	May	A plotting device for predicting the orbit of an earth satellite	A plotting device for predicting the orbit of an earth satellite, graph paper based calculator and elementary spherical trigonometry, some notes on weather satellite reception (ref. to 1/74)	Astronomy
Geology	1974	January	Weather-satellite pictures are picked up in the home	Weather-satellite pictures are picked up in the home, weather facsimile machine, ref to 5/73 (crystal oscillator)	Lab Tech, Weather
Biology	1972	October	An observatory built in a pond provides a good view of aquatic animals and plants	An observatory built in a pond provides a good view of aquatic animals and plants, underground/underwater construction	Biology, Botany, Ecology, Lab Tech
Biology	1970	June	The effects of gravity on plant growth, and the deposition and use of thin films	The effects of gravity on plant growth and the deposition and use of thin films, "geotropism", simple chemical vapor deposition, a thin film FET transistor and other components	BotanyPhysics

Biology	1970	March	How to study the life of a pond and to cultivate aquatic insects	How to study the life of a pond and cultivate aquatic insects, measurements of dissolved CO <sub>2</sub> , Oxygen and pH, a homemade pond for incubating aquatic insects	Biology, Botany, Ecology, Entomology
Biology	1969	October	The flow of blood, weather vanes, telescope mirrors and the conductivity of insulators	The flow of blood, weather vanes, telescope mirrors and the conductivity of insulators, 1) observing one's own eyes with a microscope by replacing a an ocular with an objective, 2) a simple remote wind vane, 3) preventing scratches while grinding mirror	Astronomy, Atmosphere, Biology, Lab Tech, Physics, Weather
Biology	1969	September	Antigens and antibodies are studied by their diffusion patterns in agar	Antigens and antibodies are studied by their diffusion patterns in agar, ref. to "Immunoelectrophoresis" by Curtis A. Williams Jr. (3/60 issue), gel electrophoresis device, ref. to 6/62 (power supply)	Biology, BioTech, Lab Tech
Biology	1969	July	The metabolic rate of small animals is measured in a homemade apparatus	The metabolic rate of small animals is measured in homemade apparatus, a simple spirometer to measure oxygen consumption rate of insects and a larger kymograph based unit for small animals	Biology, Lab Tech
Geology	1968	December	How to make a wave machine to simulate the building and destruction of beaches	How to make a wave machine and simulate the destruction of beaches	Ecology, Geoscience, Lab Tech
Biology	1968	April	Two methods of microscope lighting that produce color, Rheinberg illumination, phase contrast illumination		Microscopy
Biology	1967	August	A gauge to measure tiny changes in gas pressure; growth substances in plants, a simpler method to extract gibberelic acid (ref. to 8/64 -- chromatography)		Botany, Chemistry, Physics
Biology	1967	May	How to study learning in the sow bug and photograph tiny live crustaceans, photomicrography		Biology, Microscopy, Photography
Biology	1967	March	Two kinds of apparatus for growing plants in a controlled environment, greenhouses		Botany, Lab Tech

Geology	1966	May	A rain gauge, a fluid flip-flop, a sundial and a way of seeing crystals as they grow, automatic rain gauge, portable sundial		Astronomy, Microscopy, Weather
Biology	1966	April	How to perform experiments with animal cells living in tissue culture, an incubator		Biology
Geology	1966	March	On preserving the shapes of snow crystals, by catching snowflakes in dissolved plastic		Weather
Biology	1966	February	How to record and listen to the electrical signals produced by microscopic animals		Microscopy, Sound
Biology	1966	January	How to cultivate the slime molds and perform experiments on them, ref. to "Differentiation in Social Amoeba" by John Tylor Bohner (12/59 issue)		Biology, Botany
Biology	1965	November	How to isolate from samples of topsoil microorganisms that secrete antibiotics		Biology
Biology	1965	June	How to study the genetics of fruit flies with chromatograms viewed by ultraviolet lamp, includes color photos		Biology
Biology	1965	March	On collecting and preserving animals that live along the edge of the sea		Biology, Oceanography
Biology	1964	October	Experiments in phototaxis: the response of organisms to changes in illumination		Biology, Botany
Biology	1964	August	Extraction of growth promoting substances from cantaloupe; tests with rolling balls, gibberellic acid, Roger Hayward's experiments with ball bearings and the hydraulic ram, see also 10/88.		Botany, Physics
Geology	1963	April	How to construct a stream table to simulate geological processes		Geoscience

Biology	1962	November	How to build and maintain aquariums for organisms that live in the ocean		Biology, Oceanography
Biology	1962	June	Analysis of blood serum proteins by means of Zone Electrophoresis, ref. to "Electrophoresis", by G.W. Gray (12/51 issue)		Biology, Chemistry
Geology	1962	March	Growing crystals in silica gel mimics natural mineralization		Chemistry, Geoscience
Biology	1962	January	How to make an electrocardiogram of a water flea and investigate other bioelectric effects, loudspeaker-and-drum pen recorder (kymograph)		Biology, Electronics, Lab Tech
Biology	1961	July	An amateur uses paper chromatography to separate the constituents of mixtures, and a simple electrophoresis device with a ref. to 8/55, see 4/56 to cut hole in glass disk		Chemistry, Lab Tech, Optics
Biology	1961	May	Mostly on how to make impressions of biological specimens in plastic, more on well water siesmographs, including an electrical one, note on Stellafane (Walter Scott Houston to speak)		Biology, Electronics, Geoscience
Geology	1960	April	Apparatus to measure the coriolis force, and how to make a kymograph out of a tin can, how insects sense turns, a smoked drum recorder		Atmosphere, Lab Tech
Biology	1959	July	How to keep various reptiles healthy and happy in the home, various lizard traps, a simple heat engine using the magnetic properties of cigarette lighter flints		Biology, Physics

Biology	1958	December	On experiments with gibberellic acid which stimulates the growth of plants, a simple mercury vacuum pump for glow discharge tubes		Botany, Entomology
Biology	1958	March	How to cultivate harmless bacteria and perform experiments with them, see also 9/58		Biology
Geology	1957	July	Concerning simple and ingenious devices to record the waves made by earthquakes, a variety of siesmometer designs		Geoscience
Geology	1956	April	More about making a cloud chamber to reveal the paths of nuclear particles, liquid prism stellar spectroscope, stereo photos of the moon, correction for 1/56		Astronomy, Chemistry, Optics Photography
Biology	1955	December	About the preparation of microscope slides, the testing of telescopes and other matters, live specimin mounting, Focault mirror testing, short focus refractor lenses, cutting worm gears, a 10" Newtonian at Stellafane		Microscopy, Optics
Biology	1955	November	On the making of recording instruments and a moving model of the solar system, various strip chart recorders, an orerry		Astronomy, Lab Tech
Biology	1954	December	About cultivating algae from the soil and making steady telescope mountings		Astronomy, Biology Botany, Ecology, Lab Tech
Geology	1952	November	The study of rocks and the making of two relatively simple telescopes		Astronomy, Geoscience
Biology	1952	October	On the culture of plants without soil, and the behavior of the telescope-maker's pitch		Astronomy, Biology, Botany, Lab Tech