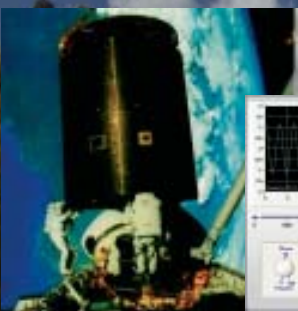


The Logical Interface

Supporting Science Educators since 1988

Electronic Equipment
Power Supplies
Signal Generators
Electronic Balances

Software and DVDs. Ideal
for use with Interactive
Whiteboards



The Educational Technology Experts

Prices include GST. Many of the products in this catalogue are available for 14 day trial.

Electronic Balances

Atronic Balances from \$265.00 (Ex GST)

Atronic electronic balances are economical, robust balances ideal for school use. They are our most popular balance for schools. Easy to use and calibrate.

Features

- Capacity from 300 g to 5000 g
- Precision 0.01g to 0.1 g
- Battery power and AC Adapter.
- External Calibration
- Stainless steel pan.
- Non-slip adjustable levelling feet.
- Tare
- Optional cover



Adam Balances from \$185.00 (Ex GST)

Adam balances provide a range of precision and pricing that make them ideal for educational applications.

The Adam Core series is an excellent choice for simple operation and economy. The Adam Highland series are lightweight, rugged precision portable balances suitable for a wide range of weighing applications

Features

- 15 weighing units. Zero Tracking . Backlit LCD display.
- Capacity tracker. ShockProtect™ overload three-point protection.
- Can be stacked for storage (120mm pan size only).
- Removable draught shield (120mm pan size only).
- Stainless steel pan. Non-slip adjustable levelling feet.
- Below balance weighing with hanger.
- Battery power (6 x AA Batteries) and AC Adapter.
- Dual tare keys.
- Simple 4 button operation.
- Internal or External calibration



Ohaus Balances

The Ohaus® Scout *Pro* offers superior performance in a portable balance. This top selling, affordable, portable balance offers more choices and more performance than ever before. **Capacity:** 200 g to 6000 g and **Resolution:** 0.01 g to 1 g.

Ohaus Adventurer *Pro* balances are ideal for general laboratory, industrial and educational applications requiring multiple weighing units. These balances are the economical way to weigh with precision. **Capacity:** 65 to 260 g **Resolution:** 0.1 mg.

Pioneer analytical balances are designed for basic routine weighing in a variety of laboratory, industrial and education applications. With the right combination of performance and features, Pioneer balances offer uncomplicated performance for all your basic weighing needs. **Capacity:** 65 g to 210 g **Resolution:** 0.1 mg



Contact us for pricing and ranges of our electronic balances or goto <http://www.logint.com.au/html/products.html> and follow the links to our online catalogue.

Sensors/Biology

pH, Conductivity, Temperature, Salinity and mV (from \$210).

These industrial strength hand held sensors provide the perfect solution for field and laboratory measurement. They are ideal for people who want reliable, accurate and easy to use sensors. A range of models available including

- ◆ 7011 pH/mV/Temperature
- ◆ 7021 conductivity/TDS/Temperature
- ◆ 7200 pH/mV/conductivity/TDS/Temperature
- ◆ PL 500 pH/mV/Temp Meter
- ◆ PL 500R pH/mV/Temp/RS 232



Features include (selected models)

- Microprocessor based for fast and accurate measurements.
- Waterproof housing rated to IP 67.
- Large LCD display provides pH, or Conductivity, and Temperature Simultaneously.
- Simple to calibrate with built in keyboard.
- Automatic temperature compensation.
- Multi-functions with Data-hold, Max/Min.
- Low battery and consumption indicator with auto power shut off after 10 minutes.
- Easy to replace electrode module and the type of electrode would be recognized automatic
- Memory stores/recalls up to 20 points. Min/Max storage and recall
- Auto shut off after 10 minutes of non use.
- Backlight for operating conveniently anytime.
- RS-232 output for capturing data on PC directly. (PL-500R only) ally.



Contact us for pricing and full specifications

SUNFLOWER: MULTIMEDIA LIBRARY FOR SCIENCE: BIOLOGY

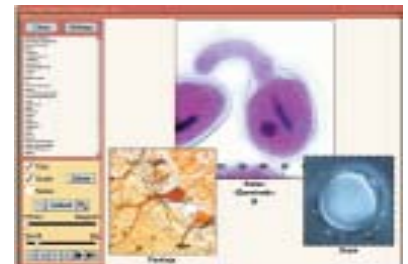
The Multimedia Library for Science is a suite of thirteen multimedia programs for secondary science. with a wealth of resources including Examples, Activities, Worksheets and Teacher's Notes in PDF format. For complete details and preview downloads visit our web site at www.logint.com.au.

**Site Licence
\$218.90 per Title**

Cells

A collection of micrographs of cells linked to diagrams.

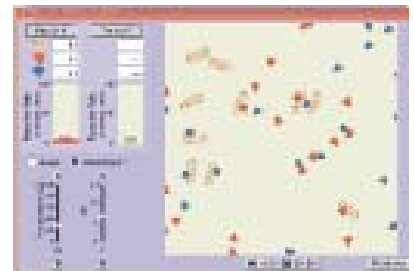
- Enhance microscope practical work
- Show the main features and relative sizes of animal and plant cells
- Demonstrate how specialized cells are adapted to their functions



Enzymes

Simulates enzyme-catalysed reactions.

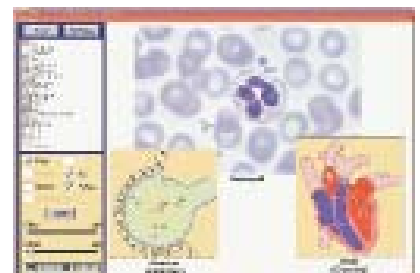
- Show the lock and key theory of enzyme action
- Demonstrate how enzymes denature
- Compare simulated results to real experiments.
- Examine the effect of concentration, pH and temperature on the rate of an enzyme catalysed reaction.



Circulation

This software uses animations and micrographs to examine

- The structure of the heart and its function
- The transport function of the circulatory system and blood composition
- Gas exchange in alveoli and diffusion in body tissues
- The structure of arteries, veins and capillaries.



Also available Osmosis Photosynthesis, Plants, Digestion and Predator-Prey.

All 8 titles available for \$1,73.00 save \$319.00

Biology

Drosophila Genetics Lab *New Version 6*

Site Licence
\$548.90

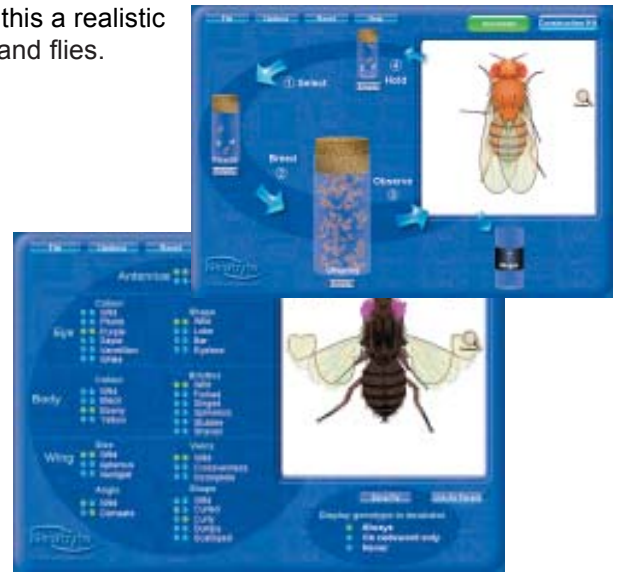
Save months of breeding with this powerful NEW software!

In this simulation students count, categorise and record each fly, making this a realistic science experience. Superb graphics enhance the unlimited generations and flies.

7 types of inheritance:

- Single Gene
- Double Gene
- Sex-linked Gene
- Incomplete Sex-Linked Dominance
- Linked Gene
- Dominant Mutations
- Lethal Gene

- Teacher options include control of the number of flies
- **Black-line masters** make lesson preparation easy.
- Reporting on student accuracy makes monitoring simple.
- Linked Gene
- Dominant Mutations
- Lethal Gene



Food Webs - Ponds

Construct hundreds of food chains and webs using up to 45 organisms and then model the populations.

Site Licence
\$548.90

Incorporate digital photography and data logging. Use your own species pictures in the software. Students can replace existing pictures with those they have taken during their own pond study and even enter their own species into the environment. Integrate physical data collected about your pond by altering the physical parameters of the environment. The modelling software then works with your own ponds physical data and species.

- Personalise the software by having your school pond as the title, or background.
- Change the web easily during modelling to allow for the introduction of species and a changing ecosystem.
- Control levels of Sewage Pollution, Phosphate, Nitrate, Turbidity and Thermal Pollution.
- Various graph types including biomass pyramid.
- Data can be saved as text or printed out for later analysis.
- Food Webs and modelling data can be easily saved.
- Model your food webs for up to 2 years.
- Web site support with additional species, pond environments and much more.



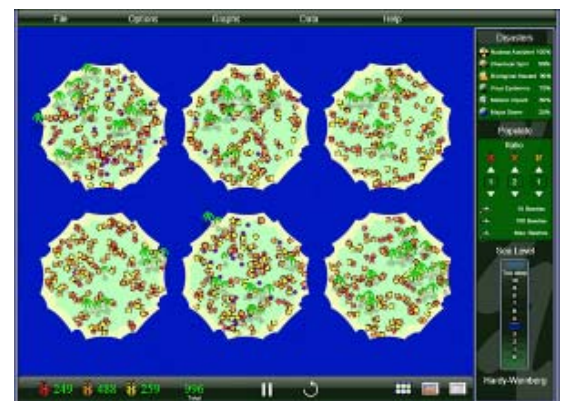
Evolution: Genetic Diversity

Highly visual and interactive, this software will captivate your students as each scenario unfolds. While graph and data displays are available, its visualisation of the genetic variation will keep their interest.

- Control sea level.
- Cause various disasters.
- Populate islands with single beetles or groups.
- Monitor Allele frequencies.

Encourage your students to discover, through experimentation, how population numbers and allele frequency are affected by:

- Isolation.
- Migration.
- Disasters.
- Founder effect.
- Small populations.
- Population bottlenecks.
- Hardy-Weinberg principles



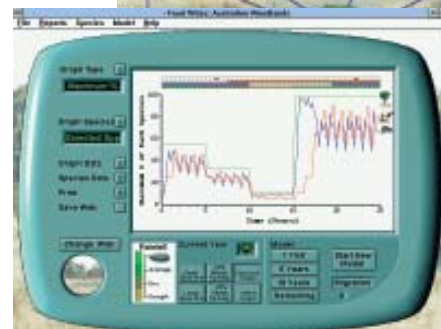
Biology

Food Webs: Australian Woodlands (Version 3)

Site Licence
\$328.90

This outstanding software allows your students to investigate the food chains and webs of one of our most common community types.

- Construct hundreds of food chains and webs using the 30 organisms available.
- Discover the relationships between organisms
- Investigate the influence of introduced species such as the rabbit, fox and cat.
- Up to 30 species can be modelled over 25 years.
- Change the web easily during modelling to introduce a new species and change the ecosystem.
- Control rainfall, droughts and bushfires.
- Introduce farming into the ecosystem.
- Save data as text files for later analysis in spreadsheets etc



Pea Plant Genetics (Version 6)

This GENETIC BREEDING SIMULATION enables your students to collect and analyse raw data from experiments which take only a few minutes instead of months. NEW Features include:

- 6 genotype display modes including TpTp, TT or +t.
- Teacher blocking of genotype dominant gene display.
- Unlimited generations.
- Unlimited plants in each generation.
- Hold selected plants, then use them as the next parents.
- Use labelled jars to record each plant type, or just drop the plant into the morgue and record it by hand.

Site Licence
\$328.90

Inheritance investigated includes:

- Single, Double and Triple Gene
- Co and Incomplete Dominance

108 reproducible pages contain 24 experiments to guide students through 5 types of inheritance.



Natural Selection Series

Site Licence
\$137.50 per Title

All three only
\$341.00

Peppered Moths

This simulation directly involves the student in the predation process by allowing them to prey on moths under different pollution conditions. Your students will gain a first-hand understanding of why a population of coloured moths can be replaced by one dominated by dark colours as a result of a change in the physical environment. Graph and data tracks population variations.



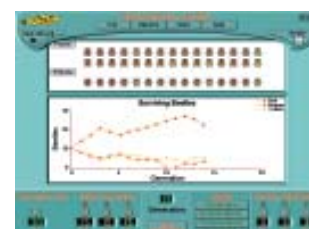
Frogs

This simulation directly involves the student in the predation process by allowing them to prey on frogs of different colour and poison characteristics. Excellent for advanced studies in natural selection, this program explores the selective advantage of brightly coloured poisonous frogs. Mimicry as a survival strategy can also be studied. Population trends are observed and analysed over 20 generations.



Beetles

Examine the effects of predation on subgroups within a population and the effect of population size on the viability of such subgroups. Great for dealing with ecological concepts which relate to population size, diversity and evolution. Students can alter the initial beetle population and relative predation rates of the three beetle colours over 15 generations.



Biology

eDNA

Site Licence
\$548.90

eDNA is a digital tool for the simulation of genetic engineering exercises. eDNA makes it possible for you to carry out as many DNA-exercises as you want, with as many students as you like.

eDNA is designed to simulate real-life research with an intuitive interface that makes it easy to get started. Manuals are included with the eDNA software describing the theoretical background of exercises in detail. In eDNA you can carry out several different exercises, with many different genomes and enzymes.

The software includes an electrophoresis apparatus, a PCR-apparatus and dishes for bacterial culturing. eDNA is non-linear, which means that genomes and enzymes may be combined in any chosen order. Price includes full site licence.

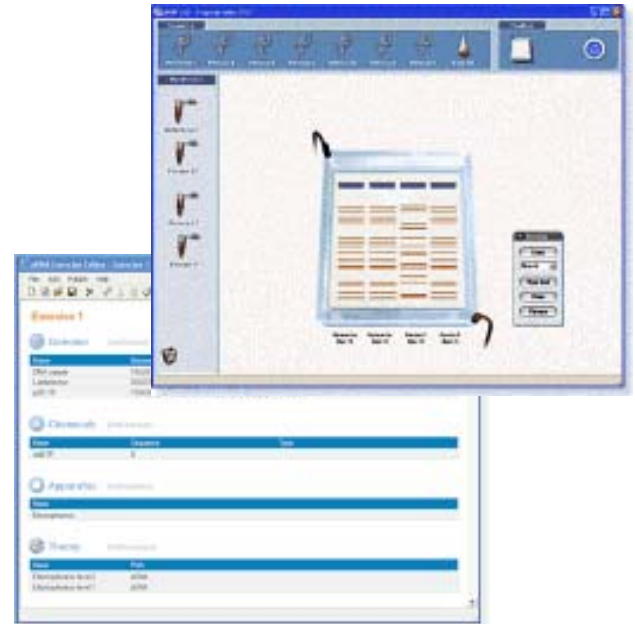
- **Restriction Analysis**
- **DNA Fingerprinting** using RFLP and PCR
- **Paternity Analysis** using RFLP and PCR
- **Phylogenetic Trees** using RFLP and PCR
- **Genomic Library**
- **Sequencing and Translation**

Theory Resources

Along with eDNA a large number of theory resources are provided. They are designed so that you easily can adapt them to your classes.

Topics covered include:

- DNA, DNA Fingerprinting, Electrophoresis
- Paternity Analysis, Phylogenetic Trees
- Construction of DNA Map and Genomic Library



Rocky Shore Ecology

Site Licence
\$438.90

Your students will be able to study the physical, chemical and biological factors influencing the ocean rock platform communities of N.S.W. and Victoria or any other state if you wish to build your own transects. This software is also excellent as a comparison study to allow your students to contrast the rock platform with another environment.

This software features **an extensive manual of blackline masters** which includes:

- Classroom studies
- Computer simulation studies
- Extensive organism profiles
- Blank data sheets for your own field trip

Study sheets include:

- ◆ Zonation
- ◆ Adaptations
- ◆ The Environment
- ◆ Transect Studies
- ◆ Transect Profile
- ◆ Comparison Studies



Chemistry

Organic Chemistry **New**

Organic Chemistry is a modular resource with a menu driven structure that makes it ideal for any chemistry syllabus.

Topics covered include

- ◆ carboxylic acids
- ◆ alkanes and alkenes
- ◆ amides and amines
- ◆ DNA and amino acids
- ◆ halogenoalkanes
- ◆ hydrocarbons
- ◆ arenes
- ◆ isomerism
- ◆ bonding - hybridisation
- ◆ nitriles
- ◆ carbohydrates
- ◆ polymers
- ◆ new GCSE - KS4
- ◆ proteins
- ◆ carbonyl compounds

Contact us for the latest pricing .

Sulphuric Acid Production

Investigate the production of sulphuric acid with this interactive simulator which includes a molecular view of the catalyst surface and a detailed tutorial section.

In the model your students can examine:

- The path of the gases.
- Reactions involved in the process.
- The contact process and the effect of different catalysts.
- Effect of gas concentrations, pressure and temperature.

The catalyst section allows students to investigate the molecular interactions while still controlling the processes.

- Discover why extra oxygen is used.
- The effect of temperature on the catalyst.

The tutorial section develops a greater understanding of the various phases in the production of this important chemical.

Topics covered include:

- Historical aspects.
- SO₂ production.
- The Contact Process.
- Absorption, storage and transport.

Acid/Base Titrations (Version 4)

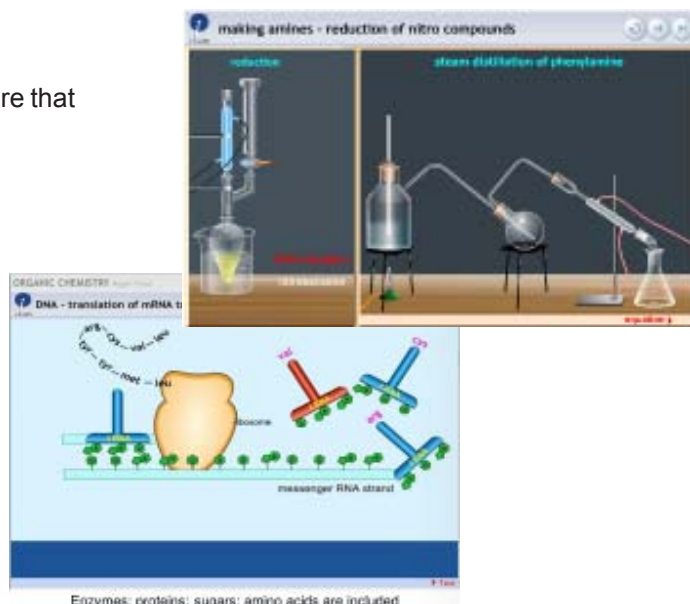
Your students can carry out titrations in minutes - with no broken glassware or split solutions.

Features

- 100 Unknown solution strengths, allowing teachers to set assignments.
- Student Quiz Options which allow your students to test themselves.
- Save data as text for later analysis.
- Save the last 6 titrations for instant recall.
- Print graphs and data for the last 6 titrations.

Indicators available:

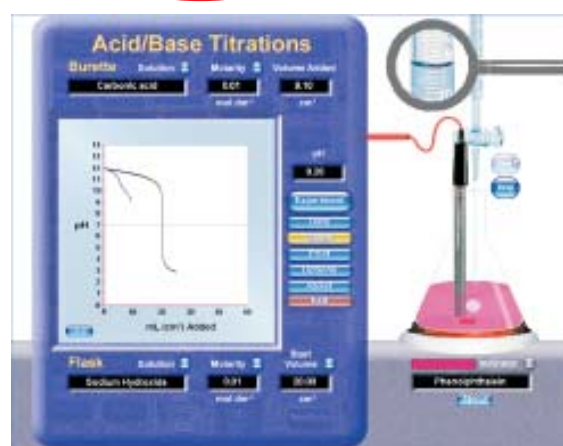
Methyl Orange, Methyl Red, Litmus, Bromothymol Blue, Phenolphthalein, Hypothetical IDEAL Indicator



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\$328.90



Site Licence
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Chemistry

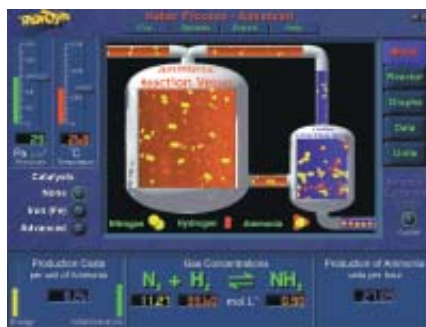
Haber Process

This simulation helps simplify the concepts involved in the Haber Process and the production of ammonia. It is ideal for teachers and students of all levels.

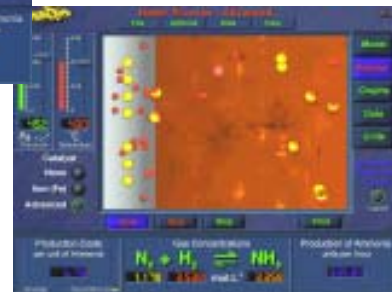
Includes Experiment Worksheets to study.

Features

- Data can be printed and exported for later use.
- Investigate ammonia equilibrium in a closed system, with and without catalysts.
- Full control over temperature, pressure, catalyst, gas concentrations and the units used.
- Extensive graph options allow the students to observe up to 12 different variables at once.
- Energy, maintenance and raw material costs can also be altered to help economically oriented investigations.



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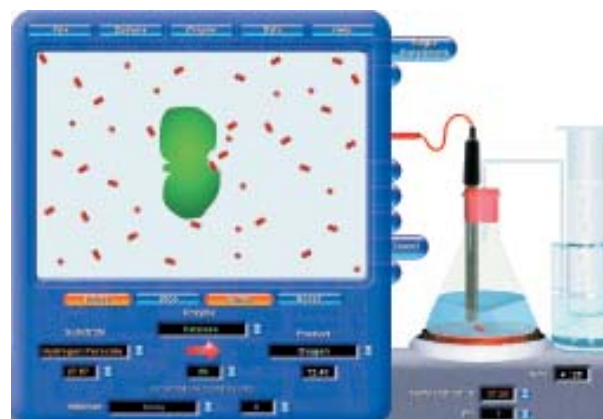
Enzyme Lab Version 6

Enzyme Lab encourages the use of scientific method, experimental design and discovery learning. The effects of pH, temperature, enzyme concentration and substrate concentration variation are easily demonstrated. Enzymes studied include Pepsin, Trypsin, Catalase, Amylases, Hydrolases and Lypases

This package also features an extensive manual of blackline masters which include studies such as:

- Enzymes as Catalysts
- Enzyme Structure, Enzyme Action
- Factors Affecting Enzyme Action
- Practical Uses for Enzymes
- Enzyme Nomenclature

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\$438.90

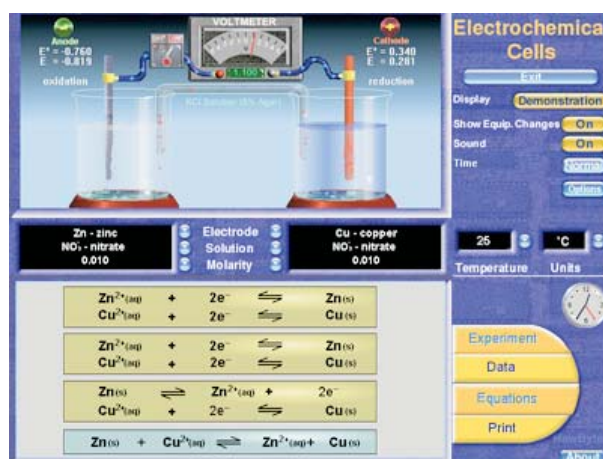


Electrochemical cells

Introductory and advanced electrochemical experiments can be conducted with this software using integrated experiment notes. **Control your electrode, salt, salt concentration and temperature at the touch of a button. Simple yet powerful screen layout** lets you select thousands of cell variations.

- Display half-cell & overall equations
- Electron flow
- Voltage
- Anion and Cation movement
- Anode and Cathode
- Oxidation and Reduction site
- E° for each half-cell
- E for each half-cell
- Electrode decay/deposits

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\$328.90



Unknown electrodes enable your students to investigate the relative activity of unknown metals and even determine their E° values. **Export or Print** data files and experiments. **Print cell layout** or entire screen. **Create your own custom experiments** which will appear within the program.

Chemistry

Gas Equilibrium Version 2

Equilibrium experiments at your fingertips! Using NO_2 and HI equilibrium reactions your students will easily investigate the physical and chemical factors which influence gas equilibrium. This versatile simulation allows experimental conditions to be controlled, including

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\$328.90

- Gas Concentrations either by $\text{moles}^{-1}\text{L}$ or number of moles.
- Volume, Pressure, Temperature.
- Add an inert gas **with or without changing the volume**.
- Introduce a CATALYST.



SUNFLOWER: MULTIMEDIA LIBRARY FOR SCIENCE : CHEMISTRY

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\$218.90 per Title

The Multimedia Library for Science is a suite of thirteen multimedia programs for secondary science. with a wealth of resources including Examples, Activities, Worksheets and Teacher's Notes in PDF format. For complete details and preview downloads visit our web site at www.logint.com.au.

Atoms and Ions

Using animation this software models the atom to

- Examines nuclear structure and determine atomic and mass numbers.
- Demonstrates how electrons are arranged in atoms with shell diagrams.
- Demonstrates how ions have stable electron arrangements.

Bonding

Uses a "sketchpad" to assist construction of bonding diagrams.

- Illustrates covalent and ionic bonding.
- Explains why elements only combine with certain other elements and in set ratios.
- Explores the bonding of complex molecules

Diffusion

Using animation this software illustrates diffusion of liquids and gases.

- Demonstrates how the particle model of gases and liquids explains diffusion.
- Demonstrates evaporation of liquids in vacuum and gas.
- Demonstrates the relationship between rate of diffusion and temperature.

Rates of Reaction

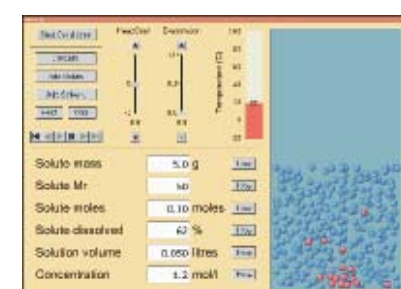
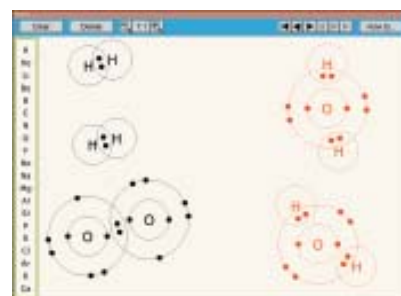
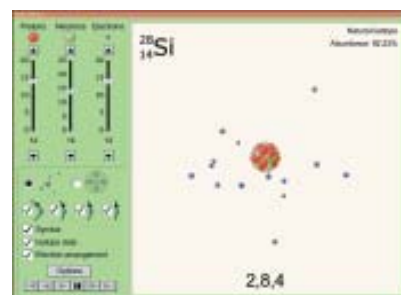
This software uses collision theory to model rates of reaction.

- Shows how particles must collide in order to react.
- Investigates activation energy and the rate of reaction
- Illustrates the relationship between energy of collisions rates of reaction
- Create virtual investigations without using chemicals

Dissolving

An interactive program that uses simulation and animation to

- demonstrates how substances dissolve.
- illustrates relative solubility of common substances.
- examine the factors effecting solubility.



Physics

Krucible: Virtual Physics Laboratory

From
\$198.00

Some science concepts can be difficult to explain - and even harder to illustrate practically in-class. But by using real-time simulation, Krucible's virtual laboratories bring physics to life.

Explore Waves, Energy and Forces: learners can run their own virtual experiments on-screen, taking measurements and plotting results, or explore 300 prepared activities and challenges - all in real time.

Krucible's four virtual laboratories create a perfect environment for learning and investigation. Graphically rich simulations instantly engage pupils of all ages.

Students can:

- plot experiment simulation data with a dynamic graph plotter
- use a notepad to record observations
- save and share experimental outcomes
- complete over 150 activities applying knowledge to more than 150 real life challenges.

- Demonstrates difficult physical concepts clearly.
- Encourages students to question and explore.
- Teaches experimental method and observational skills.
- Ideal for whole class or individual learning.
- Allows pupils to apply theory to real life challenges.



TLI Motion: Video Analysis Software

Site Licence
\$385.00

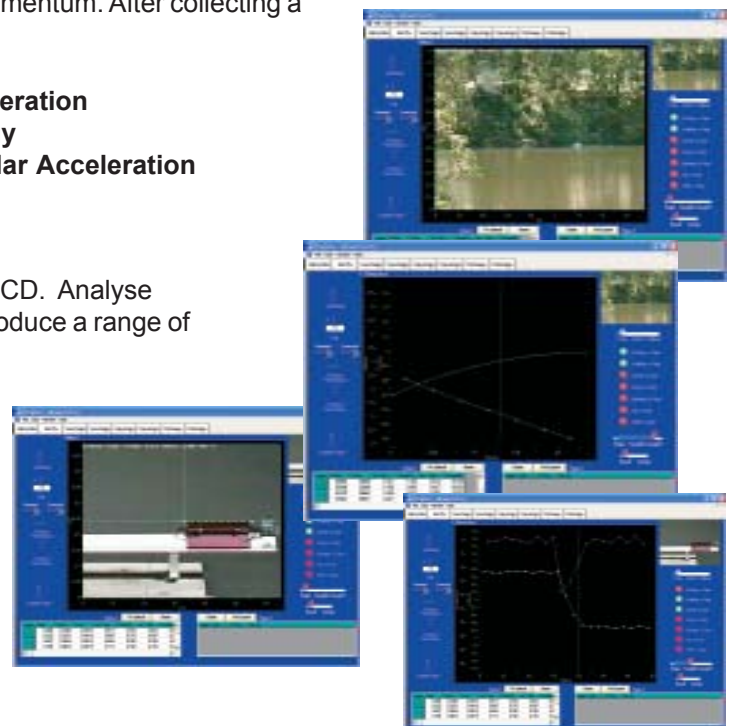
View digitised video clips of real world physical events on your computer screen for frame by frame motion analysis. Collect Position-Time data on screen, then use the software's powerful analysis features to study velocity, acceleration, force, energy, momentum. After collecting a video the following quantities may be graphically analysed.

- | | | |
|--------------------|--------------------|------------------------|
| • Position | • Velocity | • Acceleration |
| • Force | • Momentum | • Energy |
| • Angular Position | • Angular Velocity | • Angular Acceleration |
| • Angular Momentum | • Torque | |

All new easy to use interface. Bonus World in Motion software on CD. Analyse motion of one, or two objects. Use the software to analyse and produce a range of graphs demonstrating

- Position vs Time and Velocity vs Time
- KE and GPE
- Conservation of Momentum during collisions
- Projectile Motion

"A brilliant concept that allows analysis of otherwise impossible situations." Roger Kennett, Physics Teacher, The Kings School.



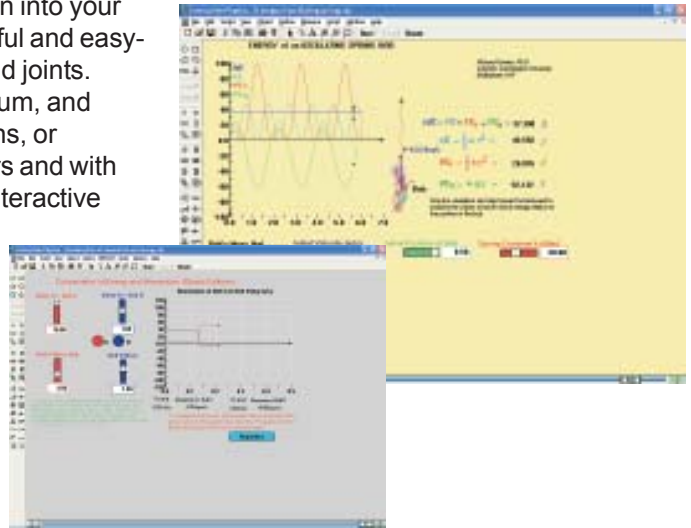
[Download evaluation version from our website](#)

Physics

Interactive Physics™

Interactive Physics makes it easy to integrate modeling and simulation into your physics curriculum. Create models by drawing onscreen with a powerful and easy-to-use graphic interface. Add objects like springs, dampers, ropes, and joints. Measure attributes of your objects like velocity, acceleration, momentum, and energy. You can also display these measurements as numbers, graphs, or animated vector displays. Widely adopted by many textbook publishers and with more than half a dozen awards and thousands of educational users, Interactive Physics is the standard in physics modeling and simulation solutions.

Single User	\$375	10 User	\$1,499
20 User	\$2,253	30 User	\$3,006



The Siege of Magnetoss

The Siege of Magnetoss is a completely self-contained unit of learning within the context of a 3D fantasy scenario. Students learn to use the principles of magnetism to help the people of the imaginary planet 'Magnetoss' trap and relocate a crazed robot that has been terrorizing their village. It's perfect for individualising classroom instruction and ideal as a self-motivating homework task. The educational component of the game follows a learning sequence designed by experienced science teachers. It has divided the topic of magnetism into five separate 'missions'

Site Licence
\$328.90

Mission 1:

Common items that contain magnets.
Magnets attract iron.

Mission 2:

Ferromagnetism.
The compass.
Composition of permanent magnets.

Mission 3:

North and south magnetic poles.
The Earth as a magnet.
Magnetic force.
Magnetic shielding.

Mission 4:

Magnetic fields.
Magnetic field lines.

Mission 5:

Electromagnetism.
The field around a solenoid.
Factors that affect the magnetic field of an electromagnet.



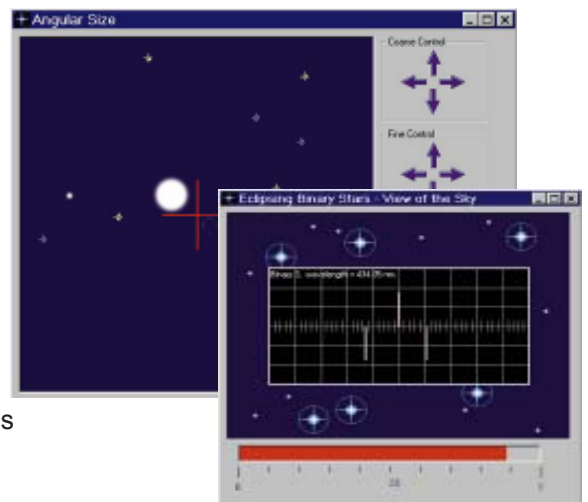
Virtual Astronomy Laboratory: Computer-Based Labs for Introductory Astronomy

Virtual Astronomy Laboratory puts some of astronomy's most useful instruments into the hands of students - precise telescope controls to measure angular size; a photometer to measure light intensity; and a spectrograph to measure Doppler-shifted spectral lines. Time-lapse and time-exposure photographic observing methods are also simulated.

Each lab activity provides everything required to perform a thorough investigation from start to finish - (1) Lab manual which includes background information and step-by-step instructions, (2) interactive simulations for hands-on data collection, and (3) on-screen assistance including input fields allowing students to enter and check their results.

Astronomy Lab Topics:

- Latitude, Axial Tilt, and Length of Day
- Celestial Coordinates
- Angular Size
- Measuring Planet Size
- Kepler's Laws
- Lunar Motion
- Planetary Motion
- Measurement of Saturn's Rings
- Stellar Occultation
- Circumpolar Stars
- Stellar Parallax
- Proper Motion of Stars
- Radial Motion of Stars



Single User	\$324.00
Lab-10 License	\$634.00
Lab-30 License	\$928.00
Unlimited Site Licence	\$1,255.00

Physics

Physics Demonstrations (DVDs)

Physics Demonstrations in Mechanics

A six part video program which presents a full range of physical demonstrations in mechanics. The series contains a comprehensive collection of video demonstrations, including Newton's Laws, circular motion, projectile motion, conservation of momentum and energy and angular momentum.

\$125 per DVD. Complete set of 6 DVD \$714.00

Physics Demonstrations in Light

A two part series presenting a wide range of demonstrations in light including refraction and total internal reflection, resonance and standing waves, Rayleigh scattering, diffraction, double and single slit interference, laser theory and holography.

\$125 per DVD. Complete set of 2 DVDs \$248.00

Physics of Space Flight

(Ideal for NSW Stage 6 Space Topic)

A three part series which presents physics principles as they apply to space flight and space related events. Spectacular NASA footage and computer animation is used throughout.

Part 1: Acceleration Machines: Launching a Space Vehicle

Part II: Physics in Space: Orbital Motion and Re-Entry

Part III: Gravity: Newton's Law of Universal Gravity, "slingshot effect" etc

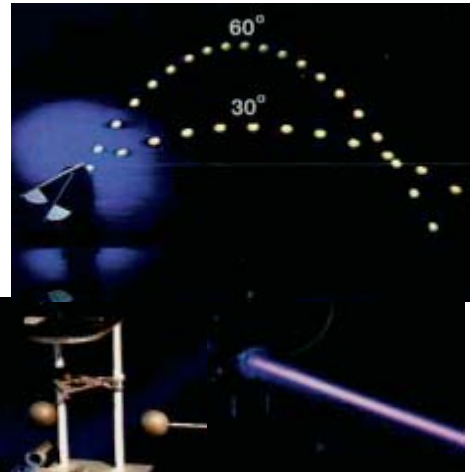
\$125 per DVD. Complete set of 3 DVDs \$357.00

Also available

Physics Demonstrations in Electricity and Magnetism (3 DVD set) \$357.00

Physics Demonstrations in Sound and Waves (3 DVD set) \$357.00

Physics Demonstrations in Heat (3 DVD set) \$357.00



SUNFLOWER: MULTIMEDIA LIBRARY FOR SCIENCE : Physics

Sunflower Multimedia physics library is a collection of software titles for physics including the following:

Colour

Colour gives you a virtual stage with which to explore the affects of coloured lights on coloured surfaces.

Force and Motion

Forces and Motion gives you 3D simulations of eight classic physics experiments including Displacement, velocity and acceleration, Newton's Laws of Motion and Conservation of Momentum and Energy.

Motors and Generators

Construct a 3D model of a motor or generator and explores how a wire with a current moves in a magnetic field, AC and DC Commutators.

Nuclear Physics

Nuclear Physics is a collection of simulations covering Rutherford's Scattering experiment, Radioactive decay, Fission and fusion reactions .

Simple Circuits

Use virtual components to construct series and parallel circuits.

Sound

Demonstrates sound wave propagation in a medium.

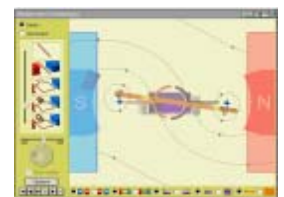
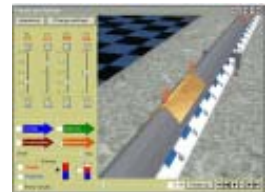
Waves

Demonstrates Reflection, Refraction, Diffraction and Interference.

Earth in Space

Explores the solar system, eclipses, tides, phases of the moon, stellar evolution and more.

Site Licence
\$218.90 per Title



Price Ex GST: \$199.00 (per title) Price Inc GST: \$218.90 (per title) Complete Series \$1599.00 (Ex GST), \$1758.90 (inc GST).
Includes 8 titles and 2 tools-Data Analyzer and Resource Builder.

Physics

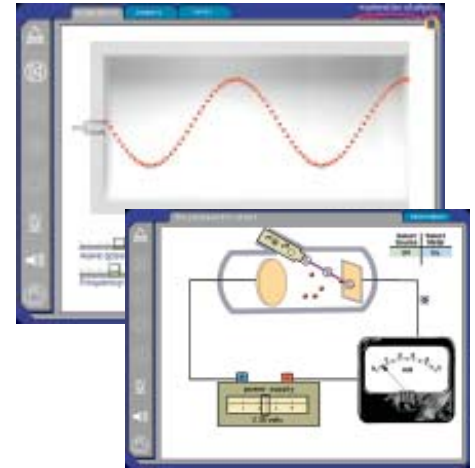
Exploration of Physics Simulation Library Volumes I and 2

A comprehensive library of physics simulations in two volumes.

Volume 1 includes 64 interactive simulations covering – mechanics, waves, heat, fluids, electricity & magnetism, and optics. The program uses a simulated lab approach allowing students to perform in-depth investigations.

Volume 2 includes 100 computer simulations encompassing a full-range of physical science topics. This software program utilizes a conceptual approach to teach physical science principles. The simulations are categorized into three learning levels: 1) introductory, 2) intermediate, and 3) advanced; addressing the needs of physics in junior and senior high school.

Single User	\$324.00	Lab-10 License	\$634.00
Lab-30 License	\$928.00	Unlimited Site Licence	\$1,255.00

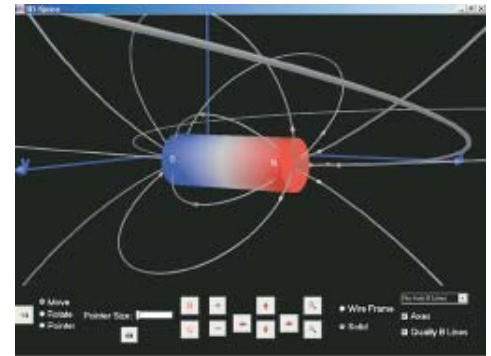


Electrostatics 3D and Magnetism 3D

Electrostatics 3D is an interactive software program that allows students to study electrostatics in a visually spectacular fashion! Electrostatics 3D utilizes colorful two-dimensional and three-dimensional graphics to display electric potential and electric field lines for various types of charged objects.

Similar to *Electrostatics 3D*, *Magnetism 3D* is an interactive software program that allows students to study magnetic fields using a variety of stunning visualization methods. *Magnetism 3D* utilizes colorful two-dimensional and three-dimensional graphics to display magnetic field lines for current-carrying straight wires, current-carrying wire loops, solenoids, and permanent magnets.

Individual Title		Both Titles	
Single User	\$231.00	Single User	\$380.00
Lab-10 License	\$417.00	Lab-10 License	\$712.00
Lab-30 License	\$619.00	Lab-30 License	\$1,068.00
Unlimited Site Licence	\$928.00	Unlimited Site Licence	\$1,557.00



FOCUS PHYSICS SOFTWARE

Interactive models, animated sequences and simulated experiments are integrated with reference sections where theory is explained and relevant formulae are derived.

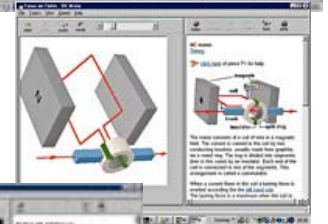
Focus on Fields

Features 16 interactive topics for senior physics including Alpha Particle Scattering, Motors and Generators, Magnetic Field plotting, Electromagnetic Induction, Force on a Current Carrying conductor, Mass Spectrometer, Millikan's Oil Drop Experiment, Motion in a Uniform Gravitational Field, Planetary orbits and Thompson's Experiment.

Focus on Waves

Features 16 interactive topics covering the study of fields at the senior physics level including Absorption of Gamma Rays, Diffraction Grating, Electromagnetic waves, Hydrogen Emission Spectra, Diffraction, Polarization, Transverse and Longitudinal waves, Measurement of the Speed of Sound, Standing waves, Superposition of waves and Young's Double Slit Experiment.

Site Licence \$218.90 per Title



Radioactivity Series

DISTANCE Experiment with the three types of radiation in both vacuum and air! Examine the relationship between radiation levels and distance from various radioactive sources.

ALPHA SCATTERING Simulate the work of Rutherford and more. Investigate the relationship between metal thickness, particle energy, target atomic number and alpha particle back scatter.

PENETRATION Experiment with alpha, beta and gamma radiation and a selection of target materials! Examine the effect of putting different barriers between various radioactivity sources.



Site Licence \$129.00 per Title
All three only \$375.00 including site licence

Physics

TLI WaveLab - Dual Channel Oscilloscope and Signal Generator

TLI Computer Wave Gen: Computer based Dual Channel Signal Generator

Ideal for use with Interactive Whiteboards

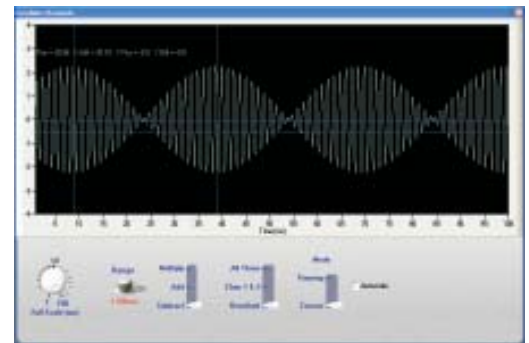
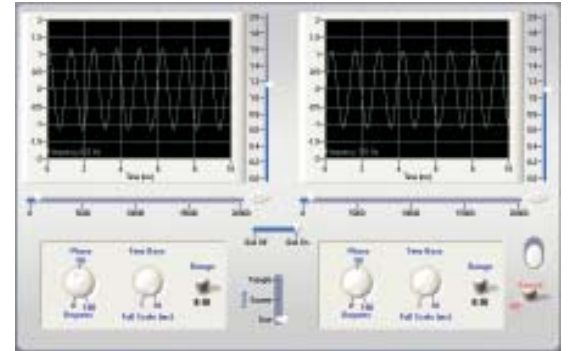
Turn your computer into a powerful Wave Laboratory. Create sine, square and triangle waves. Demonstrate beats, interference and other wave properties with our Computer Wave Lab - the perfect companion to our range of data loggers.

How it Works

By developing software that uses your computer's internal oscillator and multimedia capabilities to drive our interface, we have created a powerful Computer Wave Lab that replaces traditional signal generators at a fraction the cost. As each channel (speaker) is controlled individually we can create two sources of waves from the one oscillator ensuring the frequencies do not 'wander'. These "sources" can then be output to the computer's speakers, or through the Wave Lab interface to your oscilloscope, or data logger.

Features

- Generates waves of variable frequency to 20 kHz.
- Dual channel output to your data logger, or oscilloscope.
- Control phase difference between the two wave sources.
- Simply play through your computer speakers.
- Use the software on its own, or with the Computer Wave Lab interface.
- Oscilloscope mode converts the TLI WaveGen into a dual channel CRO for measurement of amplitude, period and phase difference.
- Use the oscilloscope mode to Add, subtract and multiply waves.



TLI CRO Computer Dual Channel Oscilloscope

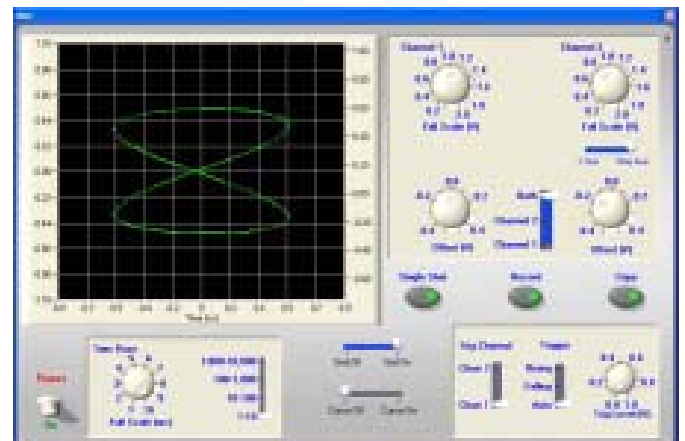
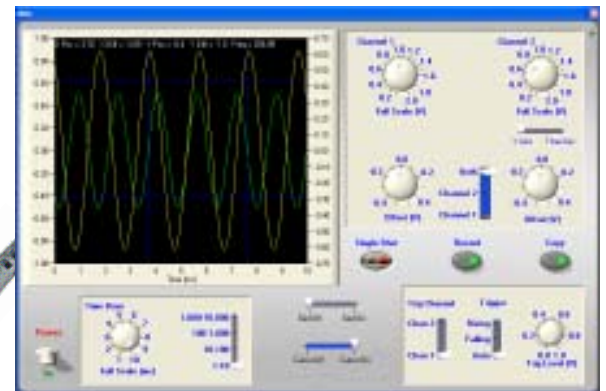
(Release 2 includes Voltage calibration)

TLI CRO turns your PC into a dual channel oscilloscope. Using your PC's sound card you can view input from a microphone, or optional interface. TLI CRO provides a traditional oscilloscope view with gain, offset, timebase, and trigger controls.

Now with our new oscilloscope probe to connect to other sources besides sound, such as AC voltage and current sources.

Features

- 16-bit acquisition
- 44 kHz sampling rate
- Optional oscilloscope probe for use with AC voltage sources etc
- Ideal for schools and other educational organisations.



Pricing

TLI WaveGen (Site)	\$332.00 (Ex GST)
TLI CRO (Site)	\$250.00 (Ex GST)
TLI WaveLab System (TLI CRO and TLI WaveGen Site)	\$490.00 (Ex GST)
TLI WaveGen (Single User)	\$75.00 (Ex GST)
TLI CRO (Single User)	\$75.00 (Ex GST)

Developed in Australia by
The Logical Interface

Site Price includes unlimited school site licence
and WaveGen Interface.
Download trial version from our website.

Physics

Hodson INDUCTION KIT

The 'Hodson INDUCTION KIT' provides a comprehensive set of equipment for investigating Magnetic Induction, Transformers and AC/DC Motors.

Students can

- assemble their own transformers, motors and generators and
- connect them to our TLI Wave Lab to control input amplitude and frequency, and our data loggers, or oscilloscopes to view the output.
- construct and investigate Induction Motors.
- investigate AC theory and resonance.
- measure the holding strength of an electromagnet and compare the holding strength between an AC and a DC magnet
- make a vibrator or a buzzer etc.

\$165.00



Signal Generator and Tri-Mode Signal Generator



Create

- sine waves,
- square waves,
- triangular waves.



Ideal for investigating properties of sound waves including

- ◆ frequency and pitch.
- ◆ amplitude.
- ◆ superposition and beats.

Tri-Mode Signal Generator includes all the features of the standard signal generator plus

- Regulated DC power supply 1.5 - 10 V and
- Audio amplifier.

With over five ranges 0.1 Hz - 100 KHz and high power output these signal generators are ideal for use with our and other brands of data loggers.

Standard Model \$485.00
Tri-Mode Model \$759.00

Power Supplies

Low Voltage

Output AC/DC 2,4,6,8,10,12 V selectable by illuminated switch. DC rectified and unfiltered. Current DC 5 A max. AC 6 A max. AC and DC can be used concurrently

Ideal for classroom use.

\$142.00



High Voltage

Output 0-500V DC, 0-300V /AC 50 mA max.

Inbuilt Voltmeter

\$510.00



Extra High Voltage

Input Voltage 220V-240V

Output 0-5000V DC, 3 mA max.

Inbuilt Voltmeter

\$605.00



Constant Current

Input Voltage 220V-240V

Output 2-30 mA 30 V DC

Inbuilt Current/Voltage meter

Ideal for the study of magnetic fields and induction.

\$223.00



Photo-Electric Effect

Uses a high sensitivity gas filled photo tube as a detector. Includes calibrated light filters of known wavelength and compact 12V light source. Ideal for investigating

- ◆ the Photo-electric Effect and
- ◆ determining Planck's Constant

\$561.00



Portable, Inexpensive and Flexible Interactivity is here and it's just a Pen! **Contact us for the latest pricing on AverMedia products**

Interactive Whiteboard technology continues to evolve. Today many teachers are adopting portable, hand held devices that combine the features of IWBs with the flexibility of a portable system. Portable systems can be used wherever there is a data projector - they can be used with existing whiteboards, walls and large projection surfaces. Portable systems can be infra-red or ultra sound based systems that still require the teacher to be at the board, or hand held wireless tablets that allow the teacher to move around the room.

The latest development in this technology is the wireless pen, which has all the features of the wireless tablet without the tablet! The AverPen writes on almost any surface. All you need is a computer, a digital projector and a wall.

The AVerPen was developed to increase interactivity between teacher and student or student groups while providing innovative new tools combined in an easy-to-use and highly mobile product. Each student or group will learn, collaborate and problem-solve together, while the built-in **Group Response System** provides immediate assessment. Imagine the ability to equip two or more classrooms with a full 21st Century interactive solution for the average cost of purchasing and installing a single Interactive Whiteboard!

Teacher pens are able to control all features as well as activate, limit, or expand student pen functions, and since the pens function on virtually any surface, mobility is greatly increased by eliminating the need to use a static board or carry a bulky state.

Say goodbye to board calibration, tablets, static teaching and constant whole-class instruction! Teach Anywhere, Learn Everywhere with AVerPen!



Portable Projection Cameras.

Avermedia Projection Cameras are perfect for science demonstrations, whether it be a dissection, a chemical reaction, or a physics demonstration. No longer will students crowd around a bench with limited, or no visibility while their teacher attempts to demonstrate a critical experiment.

AVerVision CP155

An economical yet robust FlexArm Camera with a 3.2 MP camera and 16X zoom. It provides the essential features for any classroom, including 720p HD output, wide-angle viewing and an incredible 24 frames per second recording. The A+ Interactive Software offers a wide range of project tools available for annotating and manipulating images.



AVerVision Mechanical Arm 355AF

The AVerVision V355AF features a 'One-touch' audio and video recording to USB Stick feature. A high frame rate (24fps) means that video reproduction is seamless. In addition, the V355AF has a 5 megapixel camera for crystal clear images and an 80X zoom so you can get up close to your subject. The V355AF has a large shooting area of 355mm x 280mm, which means that A4 pages can easily be displayed on screen.



AVerVision F50

With its 5 MP camera and 80X zoom, AVer's premiere FlexArm projection camera lets you annotate and record on the fly! Exclusive onboard annotation and one-touch recording directly to a USB flash drive makes the F50 perfect for the teacher that likes to keep things simple and easy. By combining the AVerVision F50 and the AP20 interactive pen you can remotely annotate images in real-time, without connecting to a computer. Plus, you can use the AP20 on almost any type of surface from any corner of the classroom.

The Logical Interface is not just another importer of educational equipment. We design and make our own equipment and continue to expand our locally produced products. We understand teachers needs. The manager, Phil Jones, has taught physics, IT and science in Europe and in Australia. He has been a lecturer in the DipEd program at Sydney Institute of Education (Sydney University). He has a BSc(HONS), MSc(HONS), DipEd. Phil is the author of many of the software titles sold through TLI and regularly presents workshops to schools and universities around Australia