



# Investigating Chemistry



## Study Kits

Where a lesson requires specific items of equipment, this is provided in a separate study kit for the lesson.

Each study kit is provided in an equipment tray for ease of storage. The lid of each tray is printed for easy inventory control.



Equipment trays are used for ease of storage

## Student Chemistry Kit

Some lessons require access to general-purpose chemistry equipment. This equipment is provided in a Student Chemistry Kit.

The Student Chemistry Kit is housed in an equipment tray for ease of storage.

## Teacher Chemistry Kit

A Teacher Chemistry Kit is also available. This contains all of the equipment provided in the Student Chemistry Kit, but also includes a chemical balance and a set of reagent and stopper bottles (for distributing chemicals to students).

## Chemistry Simulation Software

Some lessons require access to chemistry simulation software. This software provides an interactive simulation of a chemistry laboratory, allowing experimental procedures to be carried out using simulated laboratory equipment.

## Running and Managing Lessons

Multimedia science lessons may be run on a standalone PC, over a local computer network (LAN), or via the Internet.

Student progress and performance may be automatically tracked using the following optional management software:

- ClassAct classroom-based management software
- ClassCampus online learning management software

The reporting facilities provided by the learning management software also allow the teacher to automatically report on the progress and performance of individual students, or of the class as a whole.

Investigating Chemistry is part of the comprehensive Investigating Science program, which has been designed for use by students from Grade 9 upwards.

The program includes multimedia science lesson materials, interactive assessment, and scientific equipment.

Investigating Chemistry comprises 23 multimedia science lessons for student use. Each lesson covers a specific topic area, and provides essential theory, hands-on practical activity and continuous student assessment.

For ease of use, each lesson has the same structure:

- Lesson overview
- Theory presentation
- One or more practical activities containing automatic student assessment and guidance
- On-screen student workbook for recording of practical results
- Supporting on-screen help and reference information
- An on-screen Assessment test

Practical activities take a wide range of forms, including:

- Experiments involving scientific equipment
- Discovery through on-screen applications and simulations
- Research based tasks

## Lesson Topics

### Investigating Chemistry:

- Separating Mixtures
- Evaporation
- Purification
- Distillation
- Chromatography
- Enthalpy
- Acids and Bases
- Decomposition
- Redox 1
- Redox 2
- Reactivity
- Salts
- Atomic Structure and Ions
- Titration
- Stoichiometry 1
- Stoichiometry 2
- Conductivity
- Electrolysis of Liquids
- Electrochemistry
- Dispersive Liquids
- Acid Rain
- Chemical Bonding
- Solubility



# Investigating Chemistry

## Ordering Information:

### Standalone or LAN Delivery of Multimedia Science Lessons

For lessons that are to run on standalone computers or over a local area network, the order codes are listed below. Each lesson is provided as a site license.

#### Investigating Chemistry:

- ST85 CH01/SL Separating Mixtures
- ST85 CH02/SL Evaporation +
- ST85 CH03/SL Purification + ‡
- ST85 CH04/SL Distillation +
- ST85 CH05/SL Chromatography +
- ST85 CH06/SL Enthalpy + ‡
- ST85 CH07/SL Acids and Bases + ‡
- ST85 CH08/SL Decomposition +
- ST85 CH09/SL Redox 1 + ‡
- ST85 CH10/SL Redox 2 + ‡
- ST85 CH11/SL Reactivity +
- ST85 CH12/SL Salts + ‡
- ST85 CH13/SL Atomic Structure and Ions + ‡
- ST85 CH14/SL Titration + ‡
- ST85 CH15/SL Stoichiometry 1 +
- ST85 CH16/SL Stoichiometry 2 + ‡
- ST85 CH17/SL Conductivity + ‡
- ST85 CH18/SL Electrolysis of Liquids +
- ST85 CH19/SL Electrochemistry + ‡
- ST85 CH20/SL Dispersive Liquids +
- ST85 CH21/SL Acid Rain +
- ST85 CH22/SL Chemical Bonding ‡
- ST85 CH23/SL Solubility +

Lessons marked + require access to either a Student Chemistry Kit or Teacher Chemistry Kit.

Lessons marked ‡ require students to use the Chemistry Simulation Software.

### Internet Delivery of Multimedia Science Lessons

To order versions of the lessons that will run over the Internet via the ClassCampus online management system, replace the /SL suffix with /AL.

For example, ST85 CH01/AL is the online version of the Separating Mixtures lesson.

Please note that in order to run lessons via ClassCampus, your school will require a valid Institution Class Campus Registration Annual License (order code **CCOLL/AL**).

## Ordering Information (continued):

### Study Kits

The following study kits provide any further equipment required for the related Investigating Chemistry lessons:

- ST85 CH01 Separating Mixtures Study Kit
- ST85 CH05 Chromatography Study Kit
- ST85 CH07 Acids and Bases Study Kit
- ST85 CH17 Conductivity Study Kit
- ST85 CH18 Electrolysis of Liquids Study Kit
- ST85 CH22 Chemical Bonding Study Kit
- ST85 CH23 Solubility Study Kit

No other lessons in the Investigating Chemistry range require study kits.

### ST85 CHSS Student Chemistry Kit

Contains general-purpose chemistry equipment for student use. Students may also need to access additional items from the Teacher Chemistry Kit.

For further information please refer to the *Scitek Level 4 Chemistry Kit* factsheet.

### ST85 CHIP Teacher Chemistry Kit

Contains one Student Chemistry Experiment Set, plus additional items that are only required on a per-lab basis. These include a precision chemical balance, reagent bottles and dropper bottles.

For further information please refer to the *Scitek Level 4 Chemistry Kit* factsheet.

### ST85 CL20/SSL Chemistry Simulation Software (20-user student license)

This software provides an interactive simulation of a Chemistry laboratory.

### Datalogging Equipment:

The following datalogging equipment is used for selected Investigating Chemistry lessons:

- **SCI DL DataLog 120 - Data Logger** (required for use with the following sensors)
- **SCI TE Temperature Sensor** (required for Enthalpy lesson)
- **SCI CO Colorimeter** (required for Dispersive Liquids lesson)

For further information please refer to the *Data Logging Equipment* factsheet.

### Other items required but not supplied:

- Chemicals (and certain other consumable items) are not provided, but should be readily available from local suppliers. Please contact LJ Create for further guidance.

Investigating Science Program

	No.	Average time
Investigating Chemistry lessons	23	115 minutes
<b>Total</b>		<b>44 hours</b>