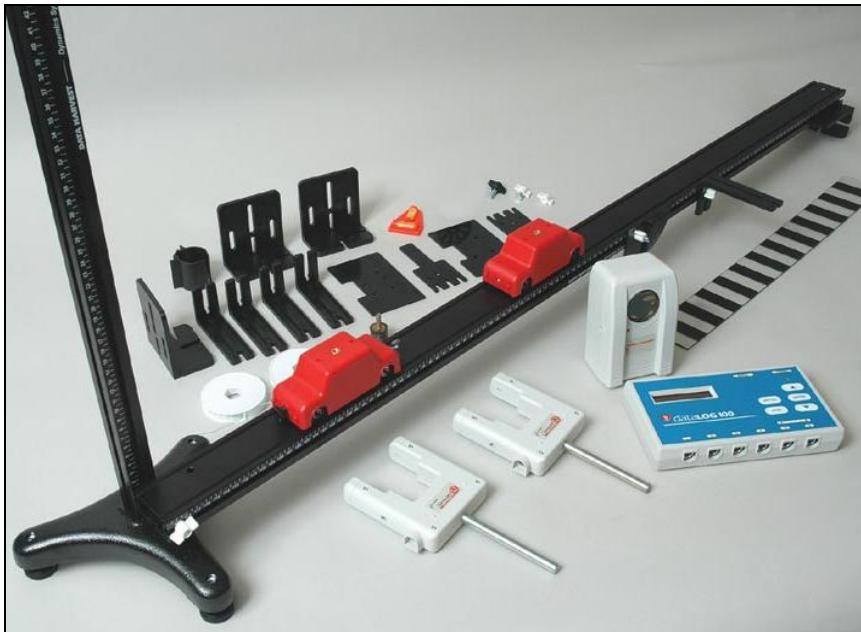




Investigating Physics



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.



Dynamics equipment for studying Newton's Second Law of Motion

Investigating Physics 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 Physics comprises 25 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 Physics:

- Effects of Force
- Springs and Elasticity
- Friction
- Speed and Velocity
- Newton's Second Law of Motion
- Pendulum
- Acceleration
- Moments and Levers
- Work and Energy
- Magnetism
- Electrical Conductivity
- Electrical Components
- Series and Parallel Circuits
- Static Electricity
- Electromagnetism
- Sound Waves
- Propagation of Sound
- Alternative Energy
- Resonance
- Light Levels
- Light Rays
- Fluid Properties
- Density
- Measurement
- Experimental Design

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.



Students carrying out a light rays experiment



Investigating Physics

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 Physics:

- ST85 PH01/SL Effects of Force
- ST85 PH02/SL Springs and Elasticity
- ST85 PH03/SL Friction
- ST85 PH04/SL Speed and Velocity
- ST85 PH05/SL Newton's Laws of Motion
- ST85 PH06/SL Pendulum
- ST85 PH07/SL Acceleration
- ST85 PH08/SL Moments and Levers
- ST85 PH09/SL Work and Energy
- ST85 PH10/SL Magnetism
- ST85 PH11/SL Electrical Conductivity
- ST85 PH12/SL Electrical Components
- ST85 PH13/SL Series and Parallel Circuits
- ST85 PH14/SL Static Electricity
- ST85 PH15/SL Electromagnetism
- ST85 PH16/SL Sound Waves
- ST85 PH17/SL Propagation of Sound
- ST85 PH18/SL Alternative Energy
- ST85 PH19/SL Resonance
- ST85 PH20/SL Light Levels
- ST85 PH21/SL Light Rays
- ST85 PH22/SL Fluid Properties
- ST85 PH23/SL Density
- ST85 PH24/SL Measurement
- ST85 PH25/SL Experimental Design

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 PH01/AL is the online version of the Effects of Force 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 the equipment required for the Investigating Physics lessons:

- ST85 PH01 Effects of Force Study Kit
- ST85 PH02 Springs and Elasticity Study Kit
- ST85 PH03 Friction Study Kit
- ST85 PH04 Speed and Velocity Study Kit
- ST85 PH05 Newton's Laws of Motion Study Kit
- ST85 PH06 Pendulum Study Kit
- ST85 PH07 Acceleration Study Kit
- ST85 PH08 Moments and Levers Study Kit
- ST85 PH09 Work and Energy Study Kit
- ST85 PH10 Magnetism Study Kit
- ST85 PH11 Electrical Conductivity Study Kit
- ST85 PH12 Electrical Components Study Kit
- ST85 PH13 Series and Parallel Circuits Study Kit
- ST85 PH14 Static Electricity Study Kit
- ST85 PH15 Electromagnetism Study Kit
- ST85 PH16 Sound Waves Study Kit
- ST85 PH17 Propagation of Sound Study Kit
- ST85 PH18 Alternative Energy Study Kit
- ST85 PH19 Resonance Study Kit
- ST85 PH20 Light Levels Study Kit
- ST85 PH21 Light Rays Study Kit
- ST85 PH22 Fluid Properties Study Kit
- ST85 PH23 Density Study Kit
- ST85 PH24 Measurement Study Kit
- ST85 PH25 Experimental Design Study Kit

Ordering Information (continued):

Datalogging Equipment

The following datalogging equipment is required for selected lessons:

- **SCI DL DataLog 120 - Data Logger** (required for use with the following sensors)
- **SCI MF Magnetic Field Sensor** (required for Magnetism lesson and Electromagnetism lesson)
- **SCI MO Motion Sensor** (required for Speed and Velocity lesson and Newton's Second Law of Motion lesson)
- **SCI SO Sound Sensor** (one required for Sound Waves lesson, two required for Propagation of Sound lesson)
- **SCI LG2 Light Gates (set of 2)** (required for Newton's Second Law of Motion lesson and Acceleration Lesson)
- **SCI LT Light Sensor** (required for Light Levels 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 Physics lessons	25	100 minutes
Total		42 hours