



NetLEARN
E-LEARNING THE WAY FORWARD

... changing your ambitions into realities!

Science Remedial Tutor

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Used for FET College – NC (V) Level 2 & Remedial

This quality course engages learner interest with its informative and rich presentation and demonstration of the English Language making concepts easy to understand.

This course will give the learner simple explanations that can be viewed and reviewed to increase understanding. Exercise Sheets follow the lesson to give the learner an opportunity to test their knowledge and understanding.

Specific Benefits to e-Learning

- Let you move at your own pace.
- Provide you with additional review (if necessary).
- Let you know how well you are doing.

For the Lecturer

- Enjoy unique tutoring while exploring with your learners.
- Excite and motivate bored or fearful learners.
- . (Paper)
- Expand your teaching comfort zone.
- Simplify the educator's task.
- **Exercise sheets** included

For the Learner

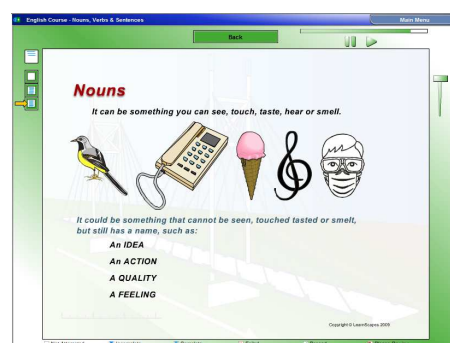
- This course will help learners who may be performing two or more years below grade level with Science.
- Support learners in delivering content to meet the Science standards.
- Improved understanding of Science in general
- Increased confidence to undergo tuition in Science.

Powerful Reporting

The Learner Management System (LMS) provides a comprehensive set of powerful real-time reports so that you can measure your investment and view learner usage and progress.

Course Usage Report: This report allows you to extract basic usage data on courses that have been accessed in the system.

User Usage Report: This report shows a single Learner's tracking data inside a course.



Topics Covered

Motion in one dimension

- Position, displacement, distance
- Frame of reference
- Position
- Displacement and distance
- Differences between distance and displacement
- Speed, average velocity, instantaneous velocity
- Challenge Me!
- Acceleration
- Description of motion in words, diagrams, graphs and equations
- Stationary object
- Motion at constant velocity
- Motion at constant acceleration
- Velocity from acceleration vs. time graphs
- Equations of motion
- Differences between speed and velocity

Gravity and mechanical energy

- Weight
- Differences between mass and weight
- Acceleration due to gravity
- Potential energy
- Kinetic energy
- Checking units
- Mechanical energy
- Conservation of mechanical energy
- Using the law of conservation of energy
- Challenge Me!

Transverse pulses on a string or spring

- Transverse pulses on a string or spring
- Transmission and reflection of a pulse at a boundary
- Pulse length, amplitude, speed
- Motion of a particle of the medium
- Motion of the pulse
- What is a medium?
- Challenge Me!
- Superposition of pulses
- Reflection of a pulse from fixed and free ends

Transverse waves

- Introduction
- What is a transverse wave?
- Challenge Me!
- Points in phase
- Period and frequency
- Speed of a transverse wave
- Particle position, displacement, velocity, acceleration
- Reflection of a transverse wave from a fixed end
- Standing waves
- Nodes and anti-nodes
- Wavelength of standing waves with fixed and free ends
- Superposition and interference
- Wavelength, frequency, amplitude, period, wave speed

Geometric optics

- Introduction
- Light rays and shadows
- Terminology
- Law of reflection
- Types of reflection
- Refraction
- Refractive index
- Snell's law
- Apparent depth
- Mirrors
- Image formation
- Plane mirrors
- Ray diagrams
- Spherical mirrors
- Challenge Me!
- Convex mirrors
- Magnification
- Total internal reflection
- Fibre optics
- Fibre optics in telecommunications
- Fibre optics in medicine
- Concave mirrors

Magnetism

- Magnetism
- Magnetic fields
- The poles of permanent magnets
- Magnetic attraction and repulsion
- Challenge Me!
- The compass and the earth's magnetic field
- The earth's magnetic field
- Representing magnetic fields

Electrostatics

- Electrostatics
- Two kinds of charge
- Challenge Me!
- Conservation of charge
- Force between charges
- Attraction between charged and uncharged objects
- Conductors and insulators
- The electroscope
- Unit of charge

Electric circuits

- Electric circuits
- Closed circuits
- Representing electric circuits
- Potential difference
- Potential difference and parallel resistors
- Potential difference and series resistors
- Ohm's law
- EMF
- Current
- Series circuits

- Parallel circuits
- Challenge Me!
- Resistors in electric circuits
- Instruments to measure voltage, current and resistance
- Voltmeter
- Ammeter
- Ohmmeter
- Meters impact on circuit
- Resistance

Powerful Reporting

The LMS provides a comprehensive set of powerful real-time reports so that you can measure your investment and view learner usage.

- **Course Usage Report:** This report allows you to extract basic usage data on courses that have been accessed in the system.
- **User Usage Report:** This report shows a single user's tracking data inside a course.
- **Certificates:** Certificates of completion can be printed and customized from within the LMS. **Learner Collaboration**

A built in Forum allows learners, instructors, facilitators and educators to collaborate and discuss various issues.

- The Forum is real-time which allows users to communicate instantly.

- All topics are logged in the database for later review.
- Administrators can delete unwanted threads.

LMS Features

Flexible

The LMS is a flexible system that allows you to:

- Fully customise the look and feel of the user interface to suit your organisation's branding.
- Multilingual (English, French and Arabic currently available). Other languages are easily added.

Fast

- **LMS** is easy to install: Server installation is a breeze and can be performed by almost any level of user.
- **LMS** is small in terms of disk space and bandwidth requirements minimising the impact on the network.
- **LMS** does not require a high end server to perform its tasks.

System Requirements

Minimum System Requirements:

Server Hardware: (Multi user - Intranet environment)

- 1) 1 GHz Intel or AMD equivalent for +-20 active user connections. Consider a more powerful server for more user connections.
- 2) 512Mb RAM.
- 3) 100 Mbps TCP/IP network connection (Ethernet) or +256Kbps per client connection.
- 4) 150Mb + 70Mb per course free Hard Disk space.

Server Software: (Multi user - Intranet environment)

- 1) Windows 2000 server, XP professional, 2003 Server.
- 2) Open TCP/IP port 2501 and 8080
- 3) Internet Explorer 6 or later.

Client Hardware:

- 1) 500 MHz Intel Pentium 3 or AMD equivalent.
- 2) 256Mb RAM.
- 3) TCP/IP network connection +256Kbps minimum.
- 4) 100Mb Free Hard Disk space (Temporary Internet Files).

Client Software:

- 1) Windows 2000 professional, 2000 server, XP Home, XP Professional, 2003 server
- 2) Internet Explorer 6 or later
- 3) Macromedia Flash Player 8 or later (included on CD)
- 4) Windows Media Player 7 or later (included on CD) Windows XP has version 8 pre-installed.

Considerations

Firewall:

InfoServer uses Windows Sockets for client - server communication.
The server needs an open port (default 2501) to accept (listen) for client connections.
The client needs to be able to open a port (default 2501) to the server. Please configure firewalls appropriately.

Installation:

You need to logon as an administrator to run the installation file.

Macromedia Flash Player 8:

A player auto detection script runs when accessing the content. After installing or updating the Flash Player it is important to CLOSE all open Internet Explorer windows.

Windows Media Player 7:

A player auto detection script runs when accessing the content. After installing or updating the Window Media Player it is important to RESTART the computer.

SCORM 1.2

The LMS supports SCORM version 1.2.
API conforms to RTE level 3. All Mandatory and optional data elements supported.

Contact NetLearn Update cc

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