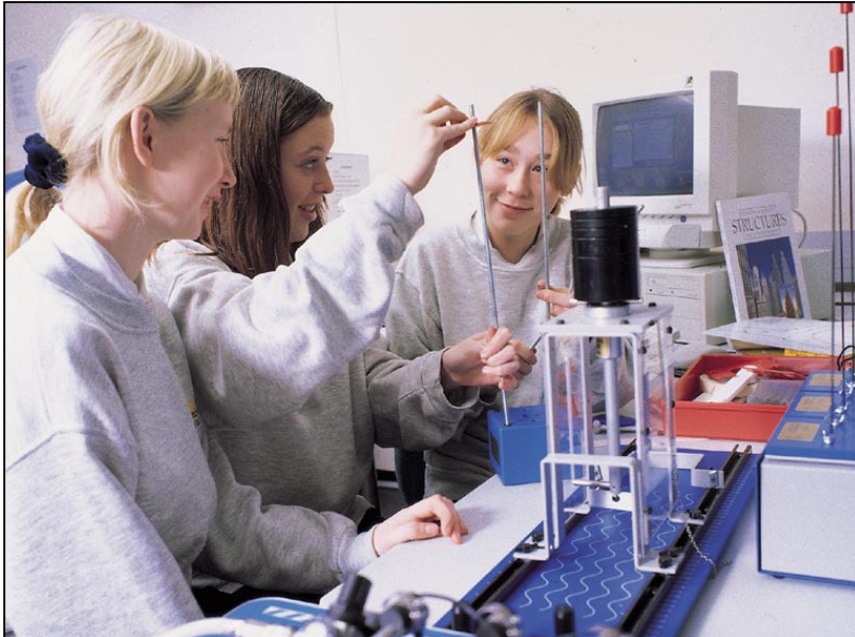


Construction Technology (10-assignment)



This is an integrated instructional module designed specifically to operate within a Modular Program environment. It is ideal for use with our Scantek Technology program. The module includes a 10-assignment exploratory curriculum that is split into two parts. Each part includes a pre-test and post test. The module includes hardware, software and curriculum materials sufficient to provide a complete learning experience.

The curriculum incorporates continuous assessment through questions. When used in conjunction with a ClassAct networked management system, this provides instant feedback of student performance. The assessments begin with a comprehensive pre-test. This quiz includes questions for each subsequent assignment, together with questions that will specifically test math and reading ability.

Every assignment starts with a series of questions designed to track inventory. These ensure that any missing items are located before they are needed.

Each assignment is divided into a series of tasks. Hands-on tasks form the core of the student work. Where appropriate, these are accompanied by research tasks based upon illustrated Fact files and software applications. Assessment questions are incorporated into each task.

Typical 10-assignment topic areas include:

- Materials
- Strength of simple 3D structures
- Force - Tension, torsion, compression, bending and shearing
- Strengths of different types of beams
- Thermal insulation
- Skyscraper design and testing
- Construction and testing model bridges
- Earthquake simulation to test skyscraper models

Typical 10-assignment activities include:

- Explore the meaning of technology, particularly in relation to construction.
- Investigate simple structures.
- Construct different pillars to investigate how shape affects strength.
- Learn about different structural units.
- Learn how forces affect structures.
- Research properties of different materials.
- Evaluate the strength of different types of beam.
- Test beam strength with a materials tester.
- Use a Thermal Chamber to investigate insulation properties of single and double glazing.
- Use an Earthquake Simulator to test different types of structures.
- Build model skyscrapers and test them on an Earthquake Simulator.
- Construct a model beam bridge.
- Apply a load to the beam bridge to measure its strength.
- Learn about different types of bridge structure.
- Build a model suspension bridge.
- Apply a load to the model suspension bridge and observe the results.
- Compare strength of the beam bridge with the strength of the suspension bridge.
- Design your own bridge, then build and test a simulation of your bridge design.

Each assignment is designed around a list of performance objectives. These lists include academic, technical and occupational objectives. The assignments are written in such a way as to enable a student to attain the performance objectives, with the assessment questions linked to these in order to provide a measure of true competency.

The performance objectives are used by the ClassAct management system to generate a comprehensive portfolio of student competency reports. Default reports supplied with this module include:

- Entry report
- Technical/Occupational Exit report
- Basic Skills report based upon the federal SCAN's report.

The items supplied with this instructional module include:

- 10-assignment On-Screen Student Assignment Guide CD
- 10-assignment Student Assignment Guide
- 10-assignment Student Workbook
- 10-assignment Instructor's Guide
- Computer Aided Instruction software
- Material Tester
- Earthquake Simulator
- Skyscraper Simulators
- Bridge Construction Base
- Balsa panels
- Fact files: Strength and Structures, Bridges, Forces
- Construction Card Pack
- Accessory kit

Additional items required:

- Computer

Module Facts

For Technology Program, order as: ST120/10 Construction Technology

	No.	Average time
Assignments	10	45 minutes
Extension Activities	2	45 minutes
Total		9 hours



LJ Technical Systems
 Web site: www.ljgroup.com