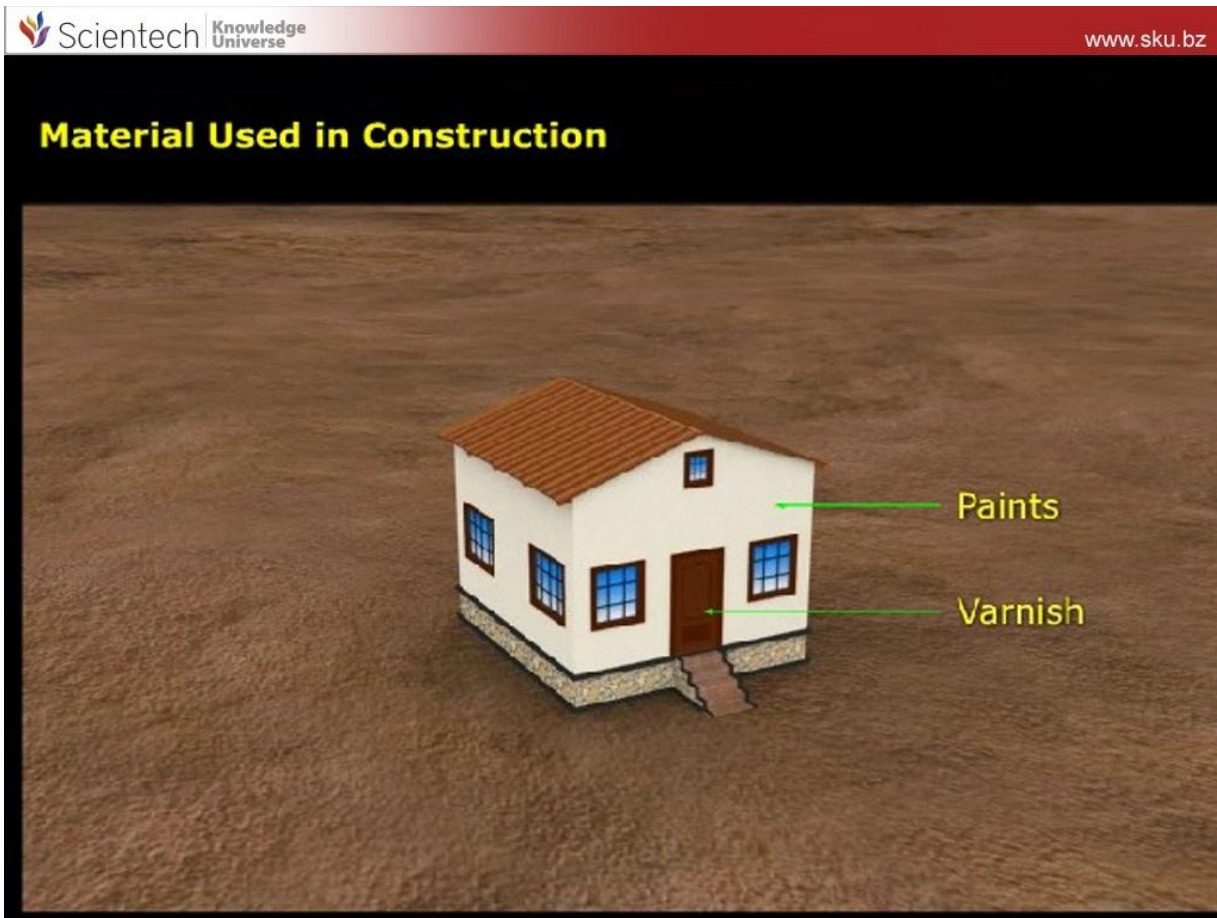


**Topics Covered in SKU- Basic Civil Engineering & Engineering Mechanics**



**Unit I - Building Materials & Construction**

**Topics Covered:**

Stones, bricks, cement, lime, timber-types, properties, test & uses, laboratory tests concrete and mortar Materials: Workability, Strength properties of Concrete, Nominal proportion of Concrete preparation of concrete, compaction, curing. Elements of Building Construction, Foundations conventional spread footings, RCC footings, brick masonry walls, plastering and pointing, floors, roofs, Doors, windows, lintels, staircases – types and their suitability.

**Unit II - Surveying & Positioning**

**Topics Covered:**

Introduction to surveying Instruments – levels, theodolites, plane tables and related devices. Electronic surveying instruments etc. Measurement of distances – conventional and EDM methods, measurement of directions by different methods, measurement of elevations by different methods. Reciprocal leveling.

**Unit III - Mapping & Sensing**

**Topics Covered:**

Mapping details and contouring, Profile Cross sectioning and measurement of areas, volumes, application of measurements in quantity computations, Survey stations, Introduction of remote sensing and its applications.

**Engineering Mechanics:**

**Unit IV - Forces and Equilibrium**

**Topics Covered:**

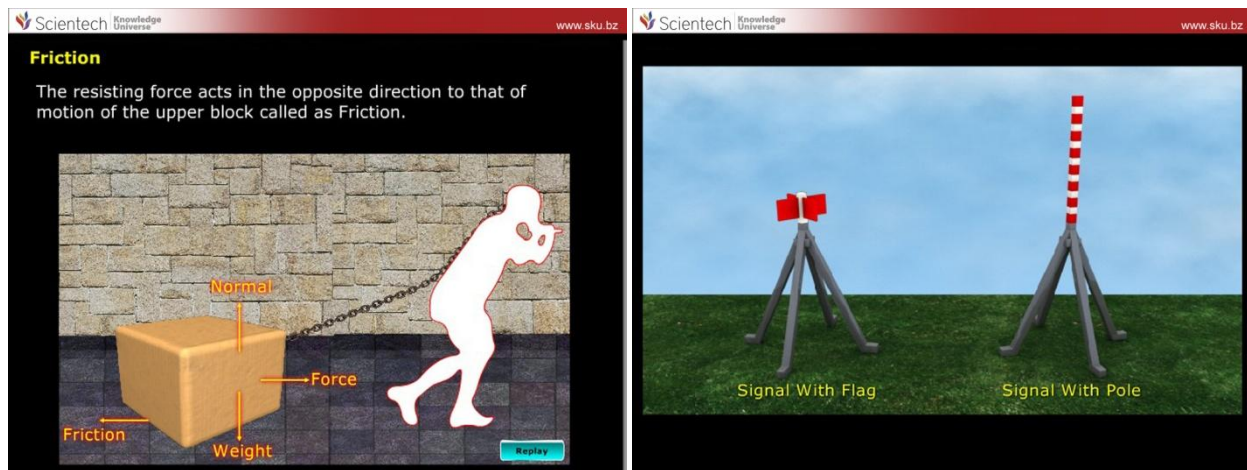
Graphical and Analytical Treatment of Concurrent and nonconcurrent Co- planner forces, free Diagram, Force Diagram and Bow's notations, Application of Equilibrium Concepts: Analysis of plane Trusses: Method of joints, Method of Sections. Frictional force in equilibrium problems.

**Unit V - Centre of Gravity and moment of Inertia**


**Topics Covered:**

Centroid and Centre of Gravity, Moment Inertia of Area and Mass, Radius of Gyration, Introduction to product of Inertia and Principle Axes. Support Reactions, Shear force and bending moment Diagram for Cantilever & simply supported beam with concentrated, distributed load and Couple.

**Print Shots of SKU- Basic Civil Engineering & Engineering Mechanics:**

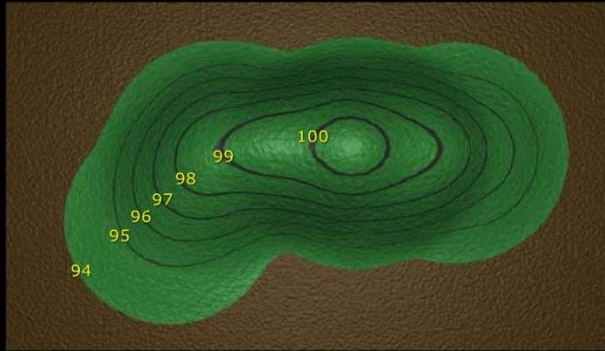


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Type	Representative Fraction (R.F.)	Scale
Geographical map		1 cm = 160 km
Topographical map		1 cm = 2.5 km
Location map		1 cm = 5-25 km
<b>Forest map</b>		<b>1 cm = 0.25 km</b>

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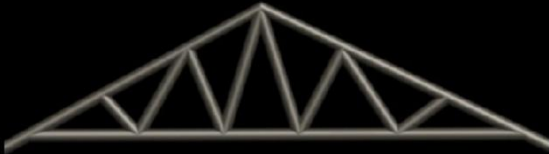
### Contour



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### Trusses

Trusses are used in making stable load bearing structures. The examples of the these of the bridges or tall TV towers.



Double W

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Some of the signals are shown here

Slow sweep with right hand

Move slowly to your left



Surveyer Assistant