

ECVET Earth Building	From raw material to earth mix	Unit M
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Learning outcomes		Level 2
KNOWLEDGE		SKILLS
<ul style="list-style-type: none"> • Main constituents of earth as a raw material • Basic properties of earth – texture, cohesion, plasticity, colour and behaviour in relation to water • Field Identification tests for earth • Composition of earth mixes • Differences between structure and surface finish mixes • Principal performance standards for earth building materials (at least one technique from cob, daub, rammed earth, blocks, mortars) • Use and effects of aggregates and fibre • Test method for determining the correct mixture for an earth building technique • The differences between mixes made from raw materials and bought products • Environmental and health benefits of earth materials • Preparation and mixing of earth mixes <ul style="list-style-type: none"> ○ Tools, machinery and equipment ○ The order of work in making mixes ○ Safe and healthy working practices 		<ul style="list-style-type: none"> • Conduct field identification tests • Prepare raw materials (soften in water) • Make samples in a logical sequence following instructions • Make the mix by hand and by machine • Make a sample section of the chosen building technique • Use the provided materials, tools and equipment • Organise the work place • Comply with workplace safety requirements at all times

COMPETENCE	
<p style="text-align: right;">Level 1</p> <ul style="list-style-type: none"> • Under direct supervision prepare samples of the chosen building technique • Describe the steps for producing mixes 	

Criteria and Indicators for the Assessment of Skills

Level 1

Criteria	Indicators
Quality of the mix	<ul style="list-style-type: none">• The proportions in the mix follow the instructions• The consistency conforms to the instructions• Test samples are the correct size• The mixes for the test samples are made according to instructions• Each mixing cycle follows the recipe• The mix is homogenous• The constituents are prepared according to the instructions• Field tests have been performed accurately• The sample section of building is well executed.
Workability	
Recipe	
The Mix	
Preparation	
Samples	

Ensure that standards of work and materials comply with relevant codes of practice and to current standards

Criteria and Indicators for the Method of Work

Level 1

Sub-Criteria	Indicators
Organisation	<ul style="list-style-type: none"> • Logical organization of both the work space and the order of work tasks
Economy of materials and time	<ul style="list-style-type: none"> • Optimum use of materials and time – no wastage
Use of tools and machines	<ul style="list-style-type: none"> • The use of machines conforms to the operating instructions. • The use of machines, tools and equipment and the handling of materials is conducted ergonomically • The handling and use of tools, machines, equipment and materials is done skillfully and carefully
Work place	<ul style="list-style-type: none"> • Tools and machines are cleaned and returned tidily to their correct place
Safety	<ul style="list-style-type: none"> • All protective safeguards are in place • The erection of ladders and scaffolding conforms to regulations
Wastage	<ul style="list-style-type: none"> • Waste is appropriately sorted, stored, recycled, removed and disposed of according to regulations
Communication	<ul style="list-style-type: none"> • Problems during the working process or any deviation from the specifications are reported • The finished work is reported/explained orally • Progress and the various stages of work are discussed with the work team • Instructions that are not understood are questioned.

Criteria and Indicators for ASSESSMENT OF KNOWLEDGE

Verbal interview and/or questions throughout the course to assess knowledge and establish gaps in understanding that can be addressed with further teaching.