

Open Awards Qualification Unit



1 Unit Details

Unit Title:	The Science of Making Things: Alloys and Metals, Polymers and Plastics
Unit Reference Number:	L/650/3658
Level:	Entry Level 3
Credit Value:	6
Minimum GLH:	50

2 Learning Outcomes and Criteria

Learning Outcome (The Learner will):	Assessment Criterion (The Learner can):
1. Know about processes for making items with plastics and polymers	1.1 State the processes for making household objects from new plastics and polymers
	1.2 State the processes involved in making household objects by recycling plastics and polymers
	1.3 Identify a range of items made using plastics and polymers
2. Know the processes for making things from metals and alloys	2.1 State the processes involved in forging and smelting metals and alloys
	2.2 State the processes involved in die-cutting and casting metals and alloys
	2.3 Identify a range of household objects made using: <ul style="list-style-type: none"> • Forging and smelting techniques • Die cutting and casting techniques
3. Know how to make serviceable items and products with a range of alloys, metals, polymers and plastics	3.1 State how items and products can be made from a range of alloys, metals, polymers and plastics

<p>4. Be able to participate in making simple items and products using a range of materials</p>	<p>4.1 Work with others to choose items and products to make with a range of alloys, metals, polymers and plastics</p> <hr/> <p>4.2 Work with others to gather and prepare ingredients and materials required to make chosen items and products</p> <hr/> <p>4.3 Participate in appropriate processes to prepare materials and ingredients</p> <hr/> <p>4.4 Work safely with others to make serviceable products and items from materials including</p> <ul style="list-style-type: none"> • Alloys and metals • Polymers and plastics <hr/> <p>4.5 Showcase items and products made from materials including:</p> <ul style="list-style-type: none"> • Alloys and metals • Plastics and polymers
<p>5. Be able to review own participation in projects to make things with natural materials</p>	<p>5.1 Identify own contributions to:</p> <ul style="list-style-type: none"> • Choice of products and items to be made • Gathering and preparing natural materials to be made • Participation in processes to make items and products • Final product showcase <hr/> <p>5.2 Identify ways:</p> <ul style="list-style-type: none"> • Own contributions • Show case • End product <p>could be improved</p>

Learning Outcome 1 - Indicative Content

Plants and Trees: items and products made from timber, reed and thatch, including: timber used in construction, furniture, homewares, dyes and colourings, flavourings, medicines, herbal remedies

Flowers, seeds and grains: items and products made from flowers, seeds and grains including: human and animal foodstuffs, dyes and colourings, soft furnishings, medicines and herbal remedies, fabrics and textiles

Animal Products: items and products made from animal bones and skin, including furniture, homewares, lathes and textiles, human foodstuffs, animal feed products

Minerals and Ores: products and items made from metals and metal alloys, clay, rock, stone including: china wear, clay, bricks, steels used in construction, blades, knives and cutlery, furniture and homewares, kitchen appliances, vehicles and transport

Learning Outcome 2 - Indicative Content

Processes for converting natural materials: cleaning, compressing, cooling, drying, extraction, grinding, heating, maturing, milling, mining, moulding, pounding, smelting, spinning, stripping, weaving, whittling