

Manufacturing Processes - Plastics

Apply safety principles, practices, philosophy, and guidelines to the work environment. [STS.HS.22.1](#)

- a** Complete applicable safety assessment with 100% accuracy. [STS.HS.22.1.A](#)
- b** Employ appropriate Personal Protective Equipment (PPE) while in the lab setting. [STS.HS.22.1.B](#)
- c** Employ eye protection in compliance with Neb. Rev. Statute 79-715. [STS.HS.22.1.C](#)
- d** Employ the safe application of tools and machines. [STS.HS.22.1.D](#)
- e** Explain the main hazards that are possible in the lab setting. [STS.HS.22.1.E](#)
- f** Demonstrate proper handling and storing of materials and chemicals. [STS.HS.22.1.F](#)

Identify career opportunities in plastics areas. [STS.HS.22.2](#)

- a** Identify responsibilities and characteristics of professionals in a plastics industry. [STS.HS.22.2.A](#)
- b** Describe work behaviors needed to be employable in a plastics industry. [STS.HS.22.2.B](#)
- c** Identify the training, education, certification, and licensing requirements for various careers in a plastics industry. [STS.HS.22.2.C](#)
- d** Identify information concerning high wage, high demand, and high skill careers in plastics. [STS.HS.22.2.D](#)

Demonstrate accurate measurements using measurement tools used in plastics. [STS.HS.22.3](#)

- a** Identify types of plastics measurement tools. [STS.HS.22.3.A](#)
- b** Explain plastics measurement tools by use. [STS.HS.22.3.B](#)
- c** Demonstrate the accurate use of plastics measurement and layout tools to 1/16" precision. [STS.HS.22.3.C](#)

Solve math functions and formulas to complete plastics manufacturing tasks. [STS.HS.22.4](#)

- a** Identify whole numbers, decimals, fractions, and complex numbers. [STS.HS.22.4.A](#)
- b** Apply basic arithmetic operations used in plastics manufacturing. [STS.HS.22.4.B](#)

c Solve decimal/fraction conversions used in plastics manufacturing. STS.HS.22.4.C

Identify the use of plastics manufacturing communications. STS.HS.22.

a Define plastics manufacturing terminology. STS.HS.22.5.A

b Identify the language of plastics manufacturing. STS.HS.22.5.B

c Explain business and interpersonal communication appropriate to the work in the plastics manufacturing environment. STS.HS.22.5.C

Determine the materials, tools, machines, and processes required to manufacture a plastics product. STS.HS.22.6

a Identify the characteristics, properties, and origin of diverse plastics. STS.HS.22.6.A

b Differentiate additive and subtractive plastics manufacturing. STS.HS.22.6.B

c Identify plastics fasteners by their industry standard applications. STS.HS.22.6.C

d Determine feed rate and/or speed settings for a plastic material and process. STS.HS.22.6.D

e Explain the operation and application of common plastics industry chemicals. STS.HS.22.6.E

f Determine the correct tools, machines, and processes needed to produce a specific plastic product. STS.HS.22.6.F

g Estimate the amount of materials and supplies needed to manufacture a plastic product. STS.HS.22.6.G

Manufacture a product that uses plastic as its primary material. STS.HS.22.7

a Interpret plans, drawings, and specifications to process plastic materials. STS.HS.22.7.A

b Employ the standard operation and application of tools and machines along the plastic manufacturing process. STS.HS.22.7.B

c Apply the correct types of materials, fasteners, adhesives, and finishes required to manufacture a specific plastic product. STS.HS.22.7.C

d Critique a finished product. STS.HS.22.7.D

e Appraise the manufactured product. STS.HS.22.7.E