

Department Enrichment

Activities to Support Learning

Watch it



Follow the links to documentaries/ programmes/online tutorials that will support learning.

R109 - LO1: Properties and uses of engineering materials

Properties of materials

<https://www.youtube.com/watch?v=K6VW4U7ZYtg>

Metals – Properties and uses

<https://www.youtube.com/watch?v=47KFjX2cUw0>

Plastic and shaping plastics

<https://www.youtube.com/watch?v=QVj5HC0k4O8&t=34s>

Composites and smart materials

<https://www.youtube.com/watch?v=OVctAbRembk>

R109 – LO2: Understanding engineering processes

Joining metals

https://www.youtube.com/watch?v=oWcPg_6EPho

Metal processes and finishes

<https://www.youtube.com/watch?v=UdowcJaiiPI>

Injection moulding

<https://www.youtube.com/watch?v=b1U9W4iNDiQ>

Extrusion

<https://www.youtube.com/watch?v=k7lb-w7o06s>

Vacuum forming

<https://www.youtube.com/watch?v=hukafUxglmE>

Lathe processes

<https://www.youtube.com/watch?v=HmP3Qy7n2eI>

R109 – LO3: Developments in engineering processes

Large selection of CNC and CAD/CAM resources

<http://www.technologystudent.com/cam/camex.htm>

R109 – LO4: Impact of modern technology

Automation

<https://www.youtube.com/watch?v=6f-uChX5CVc>

Scales of production

<https://www.youtube.com/watch?v=IAyhCXNMILY>

Wide range of manufacturing process

<https://www.youtube.com/watch?v=id3nSK2WjA4>

Explore it



Have a look at the following websites. There are lots of activities, quizzes and materials that may help to develop your knowledge and understanding of the subject.

Independent learning information and worksheets

Basic workshop equipment

http://www.technologystudent.com/despro_flsh/mats_basiceq1.html

Moulding and shaping plastics

http://www.technologystudent.com/despro_flsh/mats_plast1.html

Heat treating brazing and welding

http://www.technologystudent.com/despro_flsh/mats_heat1.html

General Engineering

http://www.technologystudent.com/despro_flsh/mats_eng1.html

CNC

<http://www.technologystudent.com/cam/camex.htm>

Try it



Why not challenge yourself and complete one of these extension tasks?

Sorting cards to revise with

Create individual materials cards for types of metals and plastics. You then need to create cards you can pair the materials cards up with.

- These pairing cards might include:
- Ferrous and non-ferrous metals
- Uses of materials
- Properties of materials
- Thermoplastic and Thermosetting plastics

Smart and modern materials leaflet

Produce a leaflet on the advantages and uses of Smart materials as well as New and Emerging Materials. Design it with the idea of convincing an engineering company to adapt new technologies.