

Unit R110 – Preparing and planning for manufacture

Commercial production methods: One-off, batch or mass production?

Instructions and answers for teachers

These instructions should accompany the OCR resource ‘Commercial production methods: One-off, batch or mass production?’ activity which supports OCR Cambridge Nationals in Engineering.

OCR Engineering Level 1/2 Cambridge NATIONALS

Unit R110 – Preparing and planning for manufacture

Commercial production methods: One-off, batch or mass production?

Task 1:
Many everyday products are produced by one of three commercial production methods – one-off production, batch production and mass production.
Look at the photographs below and identify which method is commonly used to produce each of these products. Give reasons for your choice in each case.

Photo	Method	Reasons

The Activity:

This resource comprises of 1 task.



This activity offers an opportunity for English skills development.



This activity offers an opportunity for maths skills development.

Associated materials:

‘Commercial production methods: One-off, batch or mass production?’ activity sheet

Suggested timings:

Task 1: 1 hour

Learning Outcome 3: Be able to modify a production plan for different scales of production

Task 1:

For this activity learners are required to identify, with reasons, which commercial production method might commonly be used to produce a range items (identified from photographs).

The teacher might begin by giving learners an introduction to production methods: one-off production, batch production and mass production giving examples of where each is used and for what reasons.

The activity might be undertaken individually or in pairs, and internet research will most likely prove to be a useful source of information. The activity might also be undertaken as a whole-class activity.

Solutions to the activity are given below with the typical production methods for each, and reasons for this method. Learners may identify further reasons for the particular production method being used, and may even debate that some items shown could be produced using other methods (such as continuous or flow production).

Photo	Method	Reasons
	One-off	Specialist, custom and bespoke items such as satellites are produced as one-off. This would be made to order for a customer, is specialist and highly expensive.

Photo	Method	Reasons
	<p>Batch</p>	<p>Clothing, such as shoes, are usually batch produced. Batch production is used where items are produced in small quantity production runs (such as an order of shoes).</p>
	<p>Mass</p>	<p>Electrical items such as the iPod are produced in extremely large quantities and are all identical. Mass production techniques would be used for components, sub-assemblies and the finished item.</p>
	<p>Batch</p>	<p>Sports equipment for general use is usually batch produced to a customers order. Examples are tennis rackets and cricket bats. The exception is one-off production for bespoke items.</p>

Photo	Method	Reasons
	<p>Mass</p>	<p>As for the iPod products such as the washing machine are mass produced. These are produced in extremely large quantity with parts and sub-assemblies that are mass produced.</p>
	<p>One-off</p>	<p>The London Eye is an example of a bespoke (unique) product which is a one-off. Some parts and components could, however, be batch or mass produced.</p>
	<p>Mass</p>	<p>The Mini is a mass produced car. The Mini is produced in extremely large quantities and has many common components and assemblies.</p>

Photo	Method	Reasons
	One-off	The sports car shown would most likely be one-off made to customers requirements. It is likely to be bespoke, expensive and hand built.
	Batch	Foods, such as bread, are usually batch produced. Bread dough would be mixed as a quantity to make a number of loaves of bread (a batch).

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