

Unit R110 – Preparing and planning for manufacture

Producing pre-production plans

Instructions and answers for teachers

These instructions should accompany the OCR resource 'Producing pre-production plans' activity which supports OCR Cambridge Nationals in Engineering.



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:

'Producing pre-production plans' activity sheet

Suggested timings:

Task 1: 1 hour

Learning Outcome 1: Be able to plan for the making of a pre-production product

Task 1:

For this activity learners (working in pairs) are required to produce a plan for a making a cup of tea. The teacher might substitute another activity for the planning process.

Learners should consider the sequence of operations, equipment required, a time estimate for each step, health and safety issues and quality control checks. An example solution for making a cup of tea is shown below however learners may come up with a range of correct solutions.

The teacher might also enhance the activity by getting learners to think about how the sequence of operations might be changed, which steps are critical or cause time blocks in the sequence (critical path) and the level of complexity of the plan (ie increasing or reducing the number of steps required).

Step	Operation	Equipment required	Time Estimate	Health and Safety	Quality Control Checks
1	Remove cup and saucer from the cupboard	cup, saucer	5 secs	Make sure not to drop cup/saucer Make sure not to trap hand in cupboard door	Make sure cup and saucer are clean Make sure cup rim is not chipped
2	Fill kettle with water	kettle, water	15 secs	Do not drop kettle Take care with electricity	Make sure kettle not over full

Step	Operation	Equipment required	Time Estimate	Health and Safety	Quality Control Checks
3	Put teabag in cup	teabag	5 secs	Make sure it is a teabag	-
4	Boil kettle	kettle, water, electricity	75 secs	Take care with electricity Take care with steam	Make sure water is boiling hot
5	Pour boiling water into cup	cup, teabag, kettle, water	8 secs	Take care with boiling water	Fill to correct level
6	Remove teabag (once tea correct colour) and place in bin	cup, spoon, bin	20 secs	Take care – hot!	Make sure tea is correct colour
7	Add milk to cup	cup, milk	5 secs	Make sure not to spill on floor – slip hazard	Make sure to add correct quantity else strong/weak tea – check colour

Step	Operation	Equipment required	Time Estimate	Health and Safety	Quality Control Checks
8	Place sugar into cup (2 spoons)	cup, sugar, spoon	8 secs	Take care with hot tea	Ensure quantity is correct – 2 spoons
9	Stir tea	cup, spoon	5 secs	Take care as tea is hot Make sure not to spill tea on worktop or floor – slip hazard	Ensure stir time long enough to blend in milk and sugar (sugar dissolved)
10	Drink tea	cup	120 secs	Take care with hot tea	Check colour, heat and sweetness are correct

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