

Unit R108 – 3D design realisation

Planning and resources

Instructions and answers for teachers

These instructions should accompany the OCR resource ‘Planning and resources’ activity which supports OCR Cambridge Nationals in Engineering.

The screenshot shows a document titled 'Unit R108 – 3D design realisation' with a sub-heading 'Planning and resources'. It includes 'Task 1' which defines planning and introduces Gantt charts. A photograph of a hand-drawn Gantt chart is shown, with a list of tasks: 'Wash dishes' (1.5 days), 'Cook' (1 day), 'Wash car' (2 days), 'Wash car' (2 days). The Gantt chart uses horizontal bars to represent the duration of each task, with some bars overlapping to show parallel activities. Text explains that Gantt charts can be used to identify and represent the time taken for each step of an activity and can include other information such as resources required. It also notes that activities can follow one another in a sequence and some might also be undertaken in parallel. At the bottom, it provides information on how Gantt charts can be produced (hand-drawn or using software) and gives a URL for online Gantt chart software: <http://www.ganttproject.com/>.

The Activity:

This resource comprises of 1 task.



This activity offers an opportunity for English skills development.

Associated materials:

‘Planning and resources’ activity sheet

Suggested timings:

Tasks 1: 1 hour

Learning Outcome 1: Know how to plan the making of a prototype

Task 1:

For this activity learners are tasked to explore Gantt charts and to produce a Gantt chart detailing the activities they did since waking up and arriving at their first lesson. Learners may need a teacher introduction to Gantt charts.

Activities might include: getting out of bed, going up and down stairs, having a shower, getting dressed, having breakfast, reading the newspaper or watching TV and waiting for the bus. Learners should be able to identify approximate timings and resources required, and if activities are sequential or undertaken in parallel.

An example Gantt chart produced using the following website (<http://www.tomsplanner.com/>) is shown on the following page. Note that the functionality of some free online Gantt chart software may be limited without subscription.

Learners will need to consider the level of detail required from their Gantt chart and how the overall activity is split into sub activities.

The teacher might get learners to produce their Gantt chart by hand, or by using suitable software (which could be online).

The teacher might use this activity as the basis for producing a detailed plan and Gantt chart for the making of a prototype. In this case, the plan and Gantt chart might include further details such as health and safety requirements.

An extension of the activity that the teacher might introduce is that of a critical path (or critical path analysis) where the Gantt chart is used for planning operations when activities are dependent on others in the sequence (eg in the example getting dressed is dependent on having had a shower).

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