

Edexcel GCSE

Design and Technology: Electronic Products

Unit 1: Creative Design and Make Activities

Controlled Assessment

**Valid for submission in May 2013 and May
2014 only**

Paper Reference

5EP01/01

These controlled assessment tasks are valid for submission in May 2013 and May 2014 only. Centres must submit their moderation sample(s) by 15 May of the assessment year.

Please note that these controlled assessment tasks will be subject to review every two years.

Further guidance can be found on the Edexcel website (www.edexcel.com).

Turn over ►

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Delivery of the controlled assessment

You will design and make an **electronic product**.

In order to complete this task you will undertake the following **design** activity:

Stages	Tasks	Suggested times
1. Investigate	1.1 Analysing the brief	1 hour
	1.2 Research	3 hours
	1.3 Specification	1 hour
2. Design	2.1 Initial ideas	5–6 hours
	2.2 Review	1 hour
	2.3 Communication	Evidenced throughout
3. Develop	3.1 Development	5–6 hours
	3.2 Final design	1–2 hours

In order to complete this task you will undertake the following **make** activity:

Stages	Tasks	Suggested times
4. Plan	4.1 Production plan	1–2 hours
5. Make	5.1 Quality of manufacture	16 hours
	5.2 Quality of outcome	
	5.3 Health and safety	Evidenced throughout
6. Test and evaluate	6.1 Testing and evaluation	1–2 hours

Controlled conditions

Development of the students' controlled assessment tasks must take place under controlled conditions. Students will be supervised by a teacher for the majority of the time taken to produce a design folder and manufacture their products.

Students can use ICT to produce their work, some of which may be done outside the classroom, as long as it is drafted under controlled conditions and the final version matches the original draft.

Teachers are allowed to provide regular, formative feedback throughout the Controlled Assessment activity and student progression should be supported by the centre's own Assessment For Learning strategies.

Collaboration control

Where group work is carried out, individual contributions must be clearly identified and recorded and students must produce evidence to match the assessment criteria individually. There must be no shared evidence.

Resources

Access to resources is determined by those available in the centre.

Quality of written communication

Quality of written communication (QWC) will be assessed throughout the students' design folders. This will assess students on their ability to organise information clearly and coherently, using specialist vocabulary where appropriate.

Tasks

Suggested electronic products are:

1. **Security**, e.g.
 - An electronic device to warn when a bicycle is being moved without permission.
 - An alarm system to protect a garden shed from being broken into.
2. **Recording**, e.g.
 - An electronic score counter to record scores between teams in a five-a-side football or netball match.
 - An electronic die for use when playing board games.
3. **Environmental control**, e.g.
 - A sensing system to warn when soil in a greenhouse becomes too dry.
 - A sensing system that turns on a fan automatically when it is too hot.
4. **Indicators**, e.g.
 - A safety warning lighting system for use by pedestrians on roads in dark conditions.
 - Flashing/chasing bike lighting system for use in dark conditions.
5. **Entertainment**, e.g.
 - A board game timer that will record times between a few seconds and a few minutes.
 - An electronic moneybox that rewards the user for saving.

Centres can contextualise the task(s) to best suit their specific circumstances, which includes the availability of and access to resources.

Task taking

The majority of controlled assessment work must be carried out under medium levels of control i.e. informal teacher supervision. The exceptions to this are research and preparation, which can be done without supervision.

Initial research

Students can undertake research to locate sources of information outside the classroom without supervision, but they must 'write up' their research under informal teacher supervision.

Design and make tasks

Students must complete the following under informal supervision:

- writing up of their design folder
- making their product.

Students can use the following to help in completing their task:

- initial research undertaken outside the classroom
- sources provided by the centre.

Additional research may be undertaken and added at any time, provided this is done under the same supervised conditions as the initial research.

Task marking

Marking of the controlled assessment task will be carried out by teachers and moderated by Edexcel.