



Wednesday 7 May 2014 – All day

AS GCE DESIGN AND TECHNOLOGY

F521/01 Advanced Innovation Challenge

SESSION 1 AND 2 – PRACTICAL ASSIGNMENT

Candidates answer on the Question Paper.

OCR supplied materials:

None

Other materials required:

- Modelling materials and equipment

Duration: 6 hours

MODIFIED LANGUAGE



Candidate forename		Candidate surname	
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Centre number						Candidate number				
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INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. All work should be completed on the workbook. **Additional paper will not be marked.**
- You will have a total of 6 hours to complete this part of the examination. There will normally be two 3 hour sessions.

INFORMATION FOR CANDIDATES

- At the end of the examination you must have:
 - selected **one** of the design challenges detailed with this workbook;
 - completed the answer booklet showing your creative thinking and how your idea works;
 - produced a model/prototype to show the important features of your design;
 - have at least three photographs fixed in your answer booklet showing your modelling activities.
- The total number of marks for this paper is **60**.
- This document consists of **24** pages. Any blank pages are indicated.

Your answer booklet will be collected at the end of session 1 and 2 and reissued when you sit session 3 the reflection test.

For Examiner's Use
Total

Trips and visits

People often go on trips or visits for leisure purposes. They may go by themselves, or as part of a group.

You have been asked as a designer to find a solution to **one** of the following Design Challenges. This will help to develop a range of **innovative** products that will be suitable for use on trips or visits.

Design Challenge One

There is a need for a product that can improve the security of personal belongings when out on a day trip.

- The product should allow the user easy access to their belongings when needed.

Design Challenge Two

On a long journey sitting still for long periods can cause health issues. There is a need for a product that can be used for exercise when seated.

- The product should be portable.

Design Challenge Three

There is a need for a complete food pack for children who want to eat when on a day trip.

- The food pack should provide lunch and snacks that can be eaten throughout the day.

Design Challenge Four

On days out in the countryside, litter can be a problem. There is a need for a product for people to store their litter until it can be disposed of responsibly.

- The product should be portable.

Design Challenge Five

There is often limited seating when out and about. There is a need for a portable product that can provide a seat.

- The product should provide seating and have more than one use.

Design Challenge Six

Young children often get bored on journeys. There is a need for an activity pack that will keep children busy when travelling.

- The product should be educational.

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Session 1

- 1 Explore the chosen Design Challenge. What are your first thoughts?

Use sketches and notes to show your thinking.

- 2 Which of your first thoughts offers greatest potential to be developed? Why?

Additional space

Boxes 3, 4 and 5 are on page 20 of this booklet.

- 6 Start designing. Use annotated sketches and/or models to show your ideas. You may wish to use annotated photographs to show modelling.

Ideas continued.

7 What do you think of your ideas so far? How has your job bag helped to inspire/direct your ideas? Use annotated sketches and/or annotated photographs to explain.

8 Which is your best idea? Give reasons for your decision.

9 Reflect and Record

You will present your ideas (no more than 5 minutes).

Use this space to plan what you will say. Think about your brief, specification and key factors of your design.

10 Feedback

Record any suggestions made by others. Use this feedback to identify further changes that you could make.

11 Developing your idea, improvements and modifications

Use annotated sketches and/or annotated photographs to show your thoughts.

In your answer, include

- details of materials, components or ingredients
- details of how you will make your product
- issues about sustainability.

12 Your Model

List the materials/ingredients you have chosen to make your prototype.

Component description	Material/Ingredient

Show how these components could be joined/combined together.

13 Action Plan for Session 2

Session 2

14 Review

Record any new thoughts about your design. Use annotated sketches and/or notes.

15 Modelling – Test, develop and refine your design proposal.

Progress Report 1

Problems you have found so far. What are the possible solutions?

16 Continue Modelling. You have 40 minutes' modelling time.

Progress Report 2

Did your solutions work? Why?

Which areas of modelling have been most successful so far?

17 Planning. Plan what you will be doing/making during the final modelling activity.

18 Evaluation of Developed Design Proposal

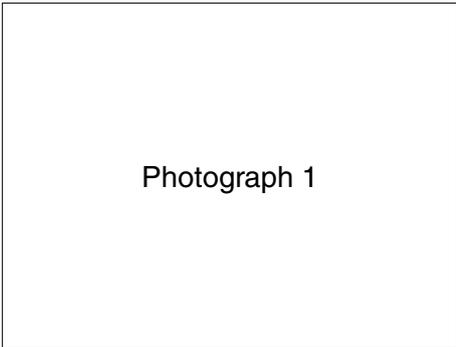
Describe how effective your developed design proposal is and how it meets the needs of the original Design Challenge. Use sketches and notes to show how your design could be improved. Evaluate your final proposal against your specification. You may use annotated sketches and/or annotated photographs.

Evaluation Continued

3 Decision Time

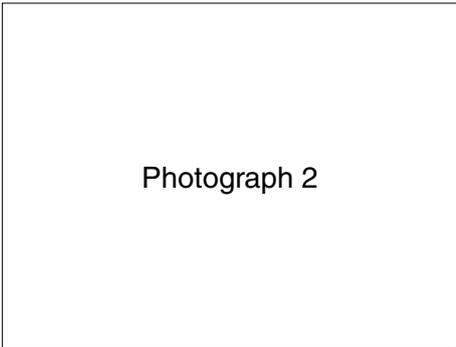
Your Design Brief

I am going to design and model a ...



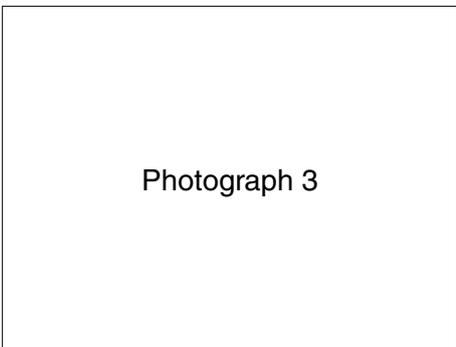
4 Key Points:

Examine the contents of your job bag, remembering your design brief. Identify key points which will help you write your specification.



5 Your Design Specification

To be successful my product must ...



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