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Centre number						Candidate number				
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**OXFORD CAMBRIDGE AND RSA EXAMINATIONS
ADVANCED SUBSIDIARY GCE**

F521/01

DESIGN AND TECHNOLOGY

Advanced Innovation Challenge

SESSION 1 AND 2 – PRACTICAL ASSIGNMENT

FRIDAY 6 MAY 2011: All day

DURATION: 6 hours

SUITABLE FOR VISUALLY IMPAIRED CANDIDATES

Candidates answer on the question paper.

OCR SUPPLIED MATERIALS:

None

OTHER MATERIALS REQUIRED:

Modelling materials and equipment

READ INSTRUCTIONS OVERLEAF

INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes on the first page. 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**.

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

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PUBLIC SPACES

Public spaces can help promote social interaction and a sense of community. A well-designed and managed public space can be an integral part of the character, economic attractiveness and uniqueness of a place.

You have been approached as a designer to address ONE of the Design Challenges. This will help to develop a range of INNOVATIVE products that will be suitable for use in a public space.

DESIGN CHALLENGE ONE

Indoor public spaces often need dividing temporarily for events and functions. There is a need for a product that will provide temporary partitioning.

- **The product should take up minimal storage space when not in use.**

DESIGN CHALLENGE TWO

In public spaces, drinks packages are often left as litter. There is a need for a product that will encourage people to recycle these items.

- **The product should raise awareness of sustainability.**

DESIGN CHALLENGE THREE

Children often get bored in public spaces. There is a need for a product that can provide a safe play area.

- **The product should encourage physically active play.**

DESIGN CHALLENGE FOUR

The local council is setting up a stall. There is a need for a product that can be sold on the stall.

- **The product should promote seasonal produce.**

DESIGN CHALLENGE FIVE

During the summer months a local café wants to provide extra eating areas outdoors in a recreational space. There is a need for a product that can provide a secure eating area.

- **The product should take up minimal storage space when not in use.**

DESIGN CHALLENGE SIX

Charity collections often take place in public spaces. There is a need for a product that will encourage people to make donations.

- **The product should appeal to more than one of the five senses.**

SESSION 1

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

Use sketches and notes to communicate your thinking.

2 Which of your initial thoughts offers greatest potential to be taken further? Why?

Additional space

**BOXES 3, 4 AND 5 ARE AT THE END OF THIS BOOKLET
ON THE FOLD-OUT PAGE**

6 Start designing. Use annotated sketches and/or models to show your ideas. You may wish to use annotated photographs to communicate 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? Justify your decision.

9 REFLECT AND RECORD

You will be asked to 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. Identify further modifications that you could make in response to this feedback.

11 DEVELOPING YOUR IDEA, IMPROVEMENTS AND MODIFICATIONS

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

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 come up against 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 the effectiveness of your developed design proposal and how it meets the needs of the original Design Challenge. 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 ...



Photograph 1

4 KEY POINTS:

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



Photograph 2

5 YOUR DESIGN SPECIFICATION

To be successful my product must ...



Photograph 3

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