

Candidate forename		Candidate surname	
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Centre number						Candidate number				
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**OXFORD CAMBRIDGE AND RSA EXAMINATIONS
GENERAL CERTIFICATE OF SECONDARY EDUCATION**

A552

DESIGN AND TECHNOLOGY

PRODUCT DESIGN

Designing and Making Innovation Challenge

6 hours in TWO 3 hour sessions plus 30 minutes to reflect on design ideas between 24 and 72 hours of the completion of the challenge.

The 6 hour examination and 30 min reflection time can be conducted at the discretion of the centre between 1 May and 23 June 2011.

JUNE 2011

SUITABLE FOR VISUALLY IMPAIRED CANDIDATES

Candidates answer on the question paper.

OCR SUPPLIED MATERIALS:

Task Sheet A552/TS (inserted)

OTHER MATERIALS REQUIRED:

Modelling materials and equipment

A calculator may be used

READ INSTRUCTIONS OVERLEAF

Date of Challenge

Date of Reflection

Session 1

Session 2

INSTRUCTIONS TO CANDIDATES

Please clearly write below

Title of the selected Innovation Challenge

- **Write your name, centre number and candidate number in the boxes on the first page.**
- **Read each question carefully. Make sure you know what you have to do before starting your answer.**
- **Answer ALL the questions.**

INFORMATION FOR CANDIDATES

- **The total number of marks for this paper is 60.**

INSTRUCTIONS TO CENTRES

- **It is essential that centres follow the instructions printed in the Instructions for Teachers (A552 IT/A552 TN) for the conduct for running this Innovation Challenge.**
- **Boxes 3 and 4 are printed on page 22 of this workbook. This page should only be folded out once boxes 1 and 2 have been completed.**
- **The activity (with the exception of Time to Reflect) is designed to take place in a design room, studio or workshop (not the centre's examination room/hall).**

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TIME TO REFLECT

Use this page to review your ideas and put forward any further suggestions you may have to improve your product further.

This can only be completed during the period 24 hours after and within 72 hours of the completion of the challenge. No other pages of this workbook can be added to, or amended during the 30 minute reflection time.

Session 1

- 1 What could you design? What are your initial thoughts?
Use sketches and notes to communicate your thinking.

2 Which three ideas are worth developing?

1

2

3

Three possible design briefs

1

2

3

Additional Space

5 Start designing. Use sketches, notes and/or models to show your ideas.

6

**(a) What do you think
of your ideas so far?**

**(b) Which is your best
idea?**

**(c) Which is your most
unusual idea?**

**(d) What problems can
you see?**

Additional Space

7

Reflect and Record

Use the space below to plan what you will say.

8

Feedback

Record any suggestions made by others in your group.

Modifications you could make.

9 Developing your final idea (Photograph 1)

13 Complete this box **ONLY** in Session 2

Additional Space

10 (a) What does your design do?

(b) What would you like your design to do?

(c) How could your design become environmentally friendly?

(d) How does your design appeal to the user group?

Additional Space

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

Component description	Material/Ingredient

How could these components be joined or combined together?

How could CAM or other electronic devices help you make your prototype?

12 Action plan for Session 2

Session 2

Complete Box 13 on page 12.

14 'GO MAKE'

PROGRESS REPORT 1

Problems I have come up against so far.

Possible Solutions.

15 'GO MAKE'

PROGRESS REPORT 2

Which areas have been most successful so far?

16 Plan what you will be doing/making for the final 40 minutes of construction time.

Finish making your prototype

Additional Space

EVALUATION

17 What did you want to achieve but have not been able to?

What are the most successful things about your product?

Why do you think your INTENDED USER/S would be interested in your product?



If you had more time, what would you do to develop your design further?

18 Check your prototype meets your original specification. Use the space below to communicate your final thoughts.



Describe what your product will look like if manufactured.

3 DECISION TIME!

YOUR DESIGN BRIEF

I am going to design and make a ...

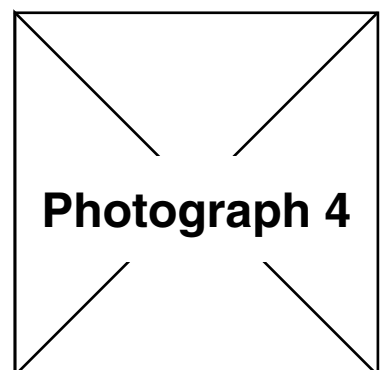
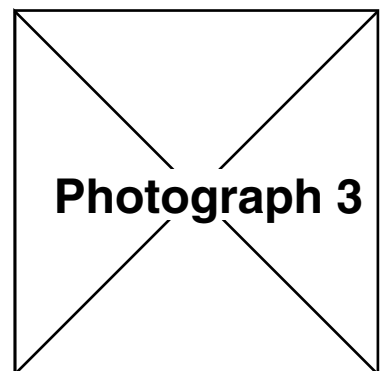
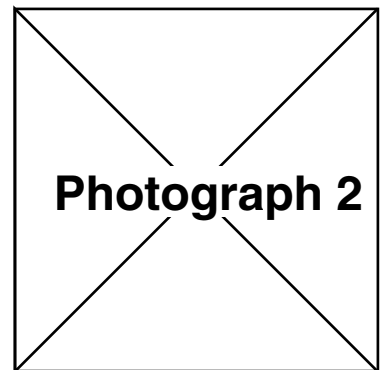
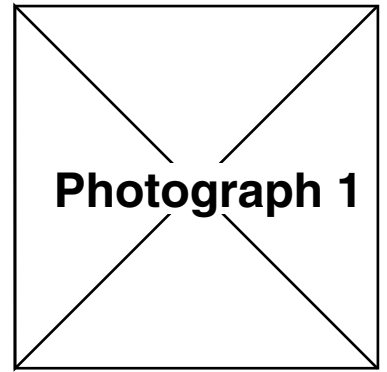
My intended clients/users are ...

My intended design will be used in ...

4

YOUR DESIGN SPECIFICATION

To be successful my product must ...



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PLEASE DO NOT WRITE ON THIS PAGE

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