OCR
Oxford Cambridge and RSA

June 2016

GCSE DESIGN AND TECHNOLOGY Product Design

A552/01 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 minute reflection time can be conducted at the discretion of the centre between 1 April and 21 June 2016.

Candidates answer on the Question Paper.

OCR supplied materials:
- Task sheet A552/01/TS (inserted)

Other materials required:
- Modelling materials and equipment
- A calculator may be used

* A 5 5 2 0 1 *

* 5 8 3 6 4 7 9 7 5 2 *

Candidate forename		Candidate surname	

Centre number						Candidate number				

	Date of challenge	Date of reflection
Session 1		
Session 2		

INSTRUCTIONS TO CANDIDATES

Please clearly write below

Title of the selected Innovation Challenge

- The insert will be found inside this document.
- 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.
- Answer **all** the questions.

INFORMATION FOR CANDIDATES
- The total number of marks for this paper is **60**.
- This document consists of **14** pages. Any blank pages are indicated.

INSTRUCTIONS TO CENTRES
- It is essential that centres follow the instructions printed in the Instructions for Teachers (A552/01/IT and A552/01/TN) for the conduct for running this Innovation Challenge.
- Boxes 3 and 4 are printed on page 12 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).

For Examiner's Use Only		
Design	22	
Communication	8	
Use of Materials	14	
Analysis	12	
Reflection	4	
TOTAL	60	

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

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 7

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 Session 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.

PLEASE DO NOT WRITE ON THIS PAGE

3 Decision Time!

Your Design Brief

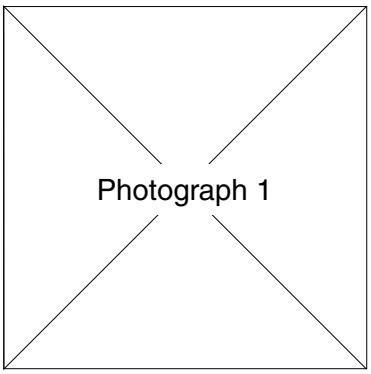
I am going to design and make a …

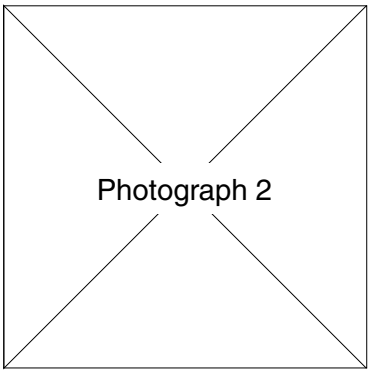
My intended clients/users are …

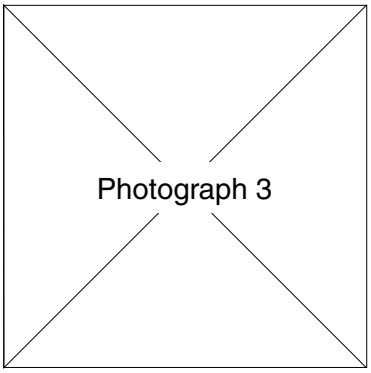
My intended design will be used in …

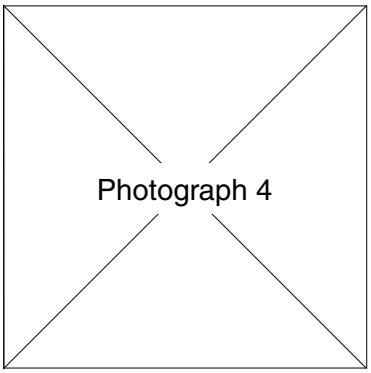
4 Your Design Specification

To be successful my product must …









BLANK PAGE

FOLD OUT THIS PAGE

PLEASE DO NOT WRITE ON THIS PAGE