

GENERAL CERTIFICATE OF SECONDARY EDUCATION
DESIGN AND TECHNOLOGY
PRODUCT DESIGN

A552

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 10 January and 25 January 2011.

JANUARY 2011

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



Candidate forename		Candidate surname	
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Centre number						Candidate number				
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	Date of challenge	Date of reflection
Session 1	<input type="text"/>	<input type="text"/>
Session 2	<input type="text"/>	

INSTRUCTIONS TO CANDIDATES

Please clearly write below

Title of the selected Innovation Challenge

- The insert will be found in the centre of 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 IT/A552 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

<p>7 Reflect and Record Use the space below to plan what you will say.</p>	<p>8 Feedback Record any suggestions made by others in your group.</p> <p>Modifications you could make.</p>
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9 Developing your final idea (Photograph 1)

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

<p>10 (a) What does your design do?</p> <hr/> <hr/>	<p>(b) What would you like your design to do?</p> <hr/> <hr/>
<p>(c) How could your design become environmentally friendly?</p> <hr/> <hr/>	<p>(d) How does your design appeal to the user group?</p> <hr/> <hr/>

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