

Year 11 into 12 Bridging activities

Welcome Year 11 students to this 'Bridging the Gap' booklet which will support you in getting ready and prepared for A Level Product Design. Mr Bausor and I have put together a series of topics and task which will would like you to work through.

This booklet contains information on the following:

- **Specification information about the course**
- **Textbooks and revision books needed in support of the course**
- **Bridging activities ready for September start:**
 - ISOTECH
 - Drawing challenges
 - Contextual challenges
 - Read, Revise and rag it Designing and Making principles
 - Iconic Designers
 - Tinkercad

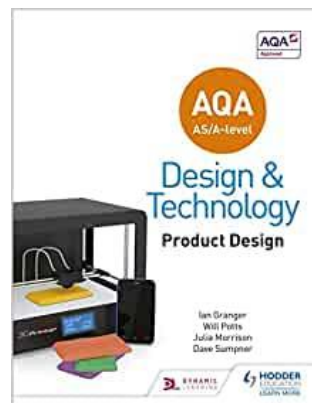
A Level Product Design Specification details

<https://www.aqa.org.uk/subjects/design-and-technology/as-and-a-level/design-and-technology-product-design-7552>

Textbooks and revision books



This revision book is compulsory for the course and can be brought easily from Amazon



This book is not compulsory but it would be helpful to have. It is more expensive compared to the revision guide

Isotech2020 Challenge

The **ISOTECH2020** challenge is a **national design challenge** that has been organised by the **Design & Technology Association**. We have been partnered with a school in Warwick in the West Midlands as part of the challenge. This is a fantastic bridging activity in preparation for A-Level Product Design studies and is open to all year 9, 10, 11 and year 12 A-level students.

You will need to have a flick over the PDF guide and follow the links attached or via the 'accessing sketchdrive' sheet. More information will be shared in the coming days and weeks. The deadline for entries is the 05th of June (with the official deadline the 12th June) and it would be fantastic if as many of you as possible could enter. Our theme is **ADAPTING** with two areas of focus - **Germs** and **Normality**. They can be interpreted as you wish but must fall into the category of **ADAPTING**.

Germs - <https://tinyurl.com/y9pv7b46>

Normality - <https://tinyurl.com/y8n9qpmc>

Develop your sketching and drawing skills

YouTube channels worth watching and following the tasks:

Draw with Donnelly

https://youtu.be/OWjLItY_4Mw

Product designer maker

<https://www.youtube.com/user/camtopher>

Use the YouTube channels to practice your drawing skills. Show your drawn examples of the the following techniques:

- 2D and 3D drawings
- Isometric drawing
- Orthographic drawing
- 1 point perspective
- 2 point perspective
- Exploded drawing
- Cross section drawings
- Use of thick and thin lines

Contextual Challenges

Design Technology and Product Design focuses on the iterative design process and designing for the needs of many different people. To develop your skills in designing for different contexts we would like you to research/analysis the context below and produce a range of hazy ideas as possible solutions. Remember to show off your drawing techniques

What to do:

- 1: Select one context or UN Global goal.
- 2: Research / investigate it.
Use the following prompts
who, what, why, when, where
- 3: Identify genuine problems, issues, needs or difficulties based on your research.
- 4: Produce some hazy ideas.
Quick sketches are great for this.
- 5: Pick a final design solution.
Draw it, label it, explain it, describe it

Advice & guidance:

- Make sure you submit the research, the hazy ideas and the final solution together.
- It is up to you how you present the work.
- If you are unsure please have a chat with your D&T teacher.



Contexts

- Isolation.
- Protection.
- Medical.
- Needs of the disabled.
- Needs of the elderly.
- Healthy Lifestyles.
- Developing countries.
- A sustainable future.
- Future technology.
- Relax and reflect.
- Display.
- Space saving.
- Shelter.
- On the move.
- Sport.
- Educational needs.
- Learning through play.
- Wearables.
- Travel and tourism.
- Modern living.
- Illumination.
- Time.
- Recycle-Reuse-Rethink.
- Flat pack
- Packaging



Global Goals

- No poverty.
- Zero Hunger.
- Good health and well being.
- Quality education.
- Gender Equality.
- Clean water and sanitation.
- Affordable and clean energy.
- Decent work and economic growth.
- Industry, innovation and infrastructure.
- Reduced inequalities.
- Sustainable cities and communities.
- Responsible consumption and production.
- Climate action.
- Life below water.
- Life on land.
- Peace, justice and strong institutions.
- Partnerships for the goals.

THE GLOBAL GOALS
For Sustainable Development



Read, Revise and rag it Designing and Making principles

Below are the topics we will be covering in Product Design. It would be worth starting to research into these now. Create a revision guide for each topic.

A-LEVEL D&T (PRODUCT DESIGN): REVISION GUIDE RECORD				
PART 2: DESIGNING & MAKING PRINCIPLES				
READ IT The page in your revision guide	RECORD IT Use simplified notes, diagrams, images	RAG IT High / Medium / Low Understanding		
Topic	Page	R	A	G
1-Design methods and processes o Iterative design process o User-centred design (UCD)	111-114			
2-Design influences, styles and movements	115-117			
3-Designers and their work	118-121			
4-Socio-economic influences o Post-First World War o The second world war o Contemporary times	122-123			
5-Major developments in technology o Microelectronics o New materials o New methods of manufacture o Advancements in CAD/CAM	124-127			
6-Social, moral and ethical issues o Sustainable materials and ethical production o Cultural acceptability o Inclusive design o Social problems o Fairtrade o The six Rs of sustainability	128-131			
7-Product life cycle o The stages of the product life cycle (PLC) o Redefining and redeveloping products	132-133			
8-Design processes	134-138			
9-Critical analysis and evaluation o How to critically analyse and evaluate o Testing and evaluating products in industrial or commercial contexts o Use of third-party feedback in the testing and evaluation process	139-141			
10-Selecting appropriate tools, equipment and processes o Using the correct tools and equipment for specific tasks o Ensuring your own safety and that of others o Development of designs o The manufacturing process o Selecting the most appropriate manufacturing process o The importance of health and safety	142-144			
11-Accuracy in design and manufacture o Measuring and marking out o The importance of accuracy o How testing can eliminate errors o Measuring aids	145-146			
12-Responsible design o Environmental issues o Conservation of energy and resources	147-149			
13-Design for manufacture and project management o Planning for accuracy and efficiency o Making recommendations for accuracy o Quality assurance (QA) o Quality control (QC)	150-155			
14-National and international standards in product design o British Standards (BSI) o International Organization for Standardization (ISO) o Directives and labelling initiatives	156-159			
NEXT STEPS				
REVISIT IT Add more detail or find out more about it	REVISE IT Test yourself, be tested, practise answers	RE-RAG IT Any gaps? Target them		
Access the PG ONLINE units on the school network. Use your revision APPS and E-Book of the revision guide. Carry out web based research Search the topics on YouTube, watch videos and make notes.		Attend subject theory surgery sessions at lunchtime or after school. Make use of the other subject textbooks in the classroom Check your exam feedback forms (question level analysis) Green pen previous exams		

Iconic Designers

An iconic designer is usually someone who creates a design that is 'ground breaking' and one that sets new standards and styles in its field. As part of the A Level Product Design course we will expect you to know a range iconic designers and the designs/products they are famous for. There are many

iconic designers. We have suggested a few below which we would like you to research into but the list is endless. Find out about their lives, interests, styles and the product/design they are famous for.

- Phillipe Starck
- James Dyson
- Margaret Calvert
- Dieter Rams
- Charles and Ray Eames
- Marianne Brandt.

Tinkercad

At Ely College we are very fortunate to have a range of CAD and CAM facilities for students to use. For 3D printing we use Tinkercad as an entry level piece of software before moving onto using Fusion 360. To ensure you are competent at using a range of different CAD software we would like you to register an account with Tinkercad (www.tinkercad.com) and work through the task in the 'Learn' section of the program. We would be really interested to see your Tinkercad portfolio in September. If you are already familiar with Tinkercad then progress onto working through the tutorials for Fusion 360.

For more information or any questions about the course please either contact:

Mr Bausor (A Level Product Design teacher) – dbausor@elycollege.co.uk

Miss Collin (Head of Department and A Level Product Design teacher) – vcollin@elycollege.co.uk