A LEVEL PRODUCT DESIGN

CARDBOARD FLATPACK PROJECT

- Flat-pack furniture is a type of affordable furniture that people buy to build at home. IKEA is a company that is well known for making this kind of furniture. Imagine that you have been asked to work as a resident designer to come up with ideas for a flat pack chair. Based on the current climate where more and more people are spending time at home, there is an even greater need for highly functional furniture for the home.

- **Brief: You are asked to design a flat packed chair suitable for a target market of your choice.**

TASK 1: CREATE A MINDMAP.

- Create a visual mind map based on your design brief. You should create an 'arm' for each of the key words below. You can create one on paper OR on the computer.

- Keywords

- •Designer/design inspiration

- •Client/User needs

- •Furniture Ideas – products you could design

- •Existing Products

TASK 2:
CREATE A MOODBOARD

- What is a Target Market?

- What kind of person will you be designing for?

TASK: IDENTIFY YOUR TARGET MARKET

- Create a mood board that shows the style of your chosen user.

- Things to think about:

- Age

- Gender

- Job?

- Student?

- Wealth

- Personality

- Cultural Background

TASK 3:
EXPLORE CURRENT DESIGNERS

- Based on your mind map and target market, you should research different furniture designers and collect images of their work. Explain why you chose those designers and what you like about their work.

TASK 4:
FLAT PACK PRODUCTS

Use keywords to find images of FLAT PACK furniture that inspires you

USE KEYWORDS TO FIND IMAGES OF FLAT PACK FURNITURE THAT INSPIRES YOU

- Use the help sheet on the next slide. You need to write a clear set of design targets. Specific things your design must do against each of the headings. Don't forget these specification points must reflect your research.

TASK 6:
DESIGNING

- Draw three designs of each one with at least three different views of the design.

TASK 7:
MODELLING

- Use paper or card and create a model of each of your ideas. Take photos and upload them to your document. What went well with each design? What can be improved? Which design have you chosen to develop and why? Be creative with your modelling materials – what can you find at home? (e.g. Cereal packets, cardboard boxes and corrugated card from online deliveries, used packaging)
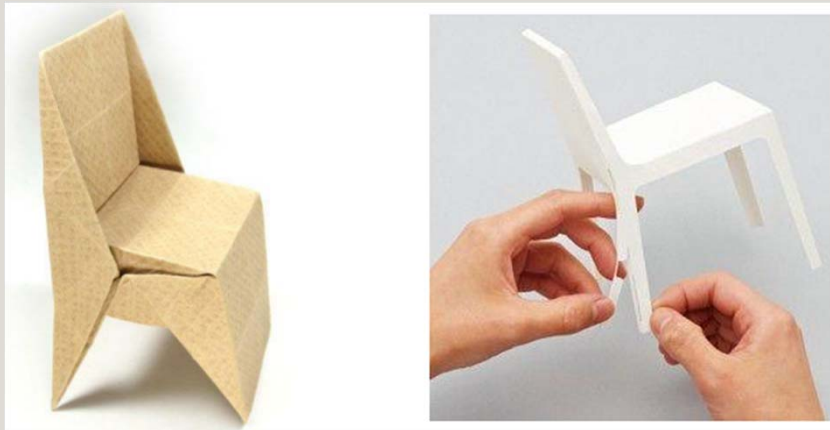
TASK 9:
FINAL DESIGN IDEA (3D)

Create a drawing that shows your assembled piece of furniture in two different viewpoints. You should render (colour) your design and explain any key features. Photograph your drawing to your document.
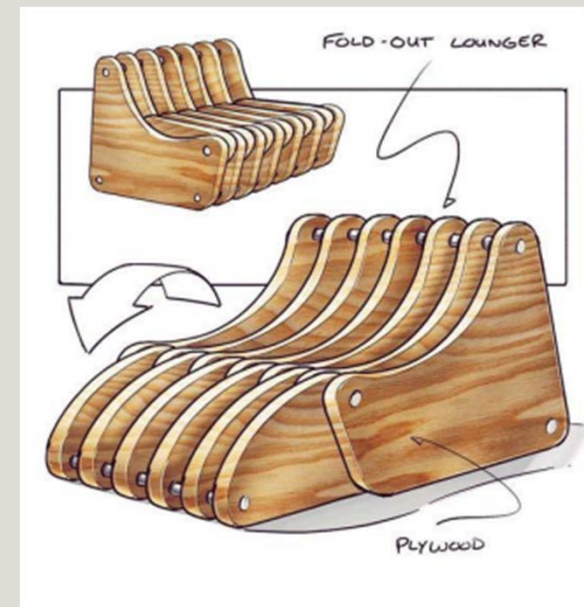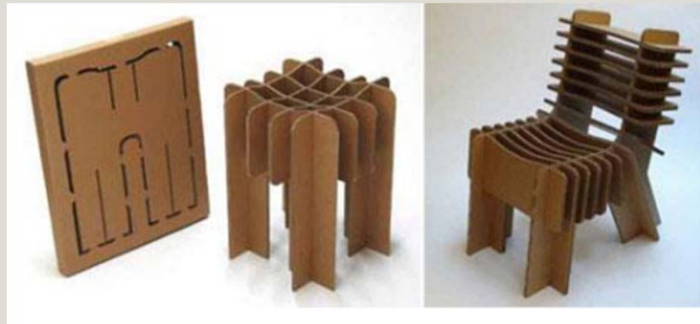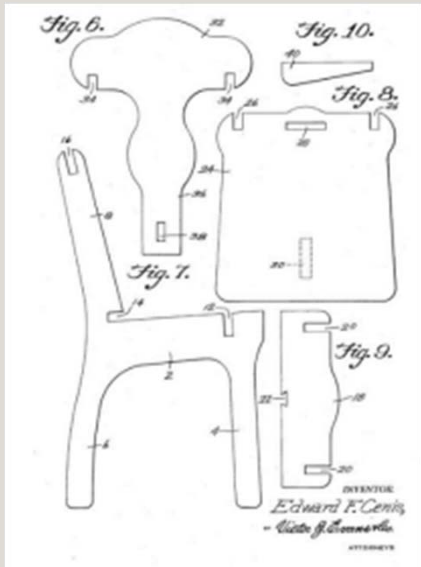
TASK 10:
FINAL DESIGN CAD DRAWING

- Using a CAD program to create a 3D model of your final design idea.

- You need to try this section so try these:

- Fusion 360

- ONSHAPE

- TinkerCAD

- SketchUp

All of the above are free to use, some are web based and need no program downloads. All have tutorials on the internet to get started with. Even if you cannot draw your design in full, screenshot the attempts or tutorials you do try.

Product Design

Exam board: Pearson (Edexcel)
Course title: A Level Design and Technology (Product Design)
Course Code: 9DT0

Year 12

	Topic	Further details about the topic	Skills
		Autumn Term	
1	Product Design theory; timbers, metals, polymers, processes, specialist tools, composites, papers and boards	Materials and components	Understanding interaction with our environments
2	Influencing factors of design, design movements and focused practical tasks	Ergonomics and design influences	Working with technology. Trialling and testing materials and processes including CAD and CAM
		Spring Term	
1	Digital Technology, design tasks, smart modern materials	Design and Market influences	Working directly with materials, tools and equipment to model and create
2	Digital Technology, design tasks, smart modern materials	Design and Market influences	Working directly with materials, tools and equipment to model and create
		Summer Term	
1	Non-Examined Assessment – establishing a problem to study	Investigating needs, wants and values of the client/user	Analysis skills
2	Non-Examined Assessment	Research and specification	Defining the problem that needs to be solved

Year 13

	Topic	Further details about the topic	Skills
		Autumn Term	
1	Non-Examined Assessment Product Design theory and Design and Manufacture	Ideas, development and planning for manufacture Materials and Components	Working with technology. Trialling and testing materials and processes including CAD and CAM (laser cutting and/or 3D printing)
2	Non-Examined Assessment Product Design theory	Making the product. Workshop based machinery and CAD CAM incorporation	Working directly with materials, tools and equipment

		Processes and manufacture	
Spring Term			
1	Non-Examined Assessment Product Design theory	Making the product Workshop based machinery and CAD CAM incorporation Processes and manufacture.	Working directly with materials, tools and equipment
2	Non-Examined Assessment	Testing and evaluating the manufactured product Consumer research/testing.	Working directly with materials, tools and equipment
Summer Term			
1	Revision	Exam technique Past papers	Recap exam topics Exam technique

Edexcel - The specification and assessment structure can be found at the link: https://qualifications.pearson.com/en/qualifications/edexcel-a-levels/design-technology-product-design-2017.html

Recommended reading:
Eco Design
Concept Design
Ergonomic Design

At Sixth Form it is expected that students take a more pro-active approach to their studies and develop independent learning skills. In Product Design it is important to foster a mature and professional working environment that gives students an opportunity to learn.

The following is expected:

- **Conduct and behaviour** in lessons should reflect that of a professional working environment. If your behaviour does not allow learning to occur, you will be reminded and then asked to leave the lesson and sent to Mr Brooke to explain your conduct.
- **Folders and any textbooks** are to be brought to every lesson. Failure to do so on 3 occasions will again result in an invitation to a Product Design detention. Your work and folders should be kept organised for folder checks.
- Students must turn up on time to every lesson. It is very disruptive to have students walking in late and is not fair on the rest of the group. If a pattern emerges of continued **poor punctuality** a meeting will be set up with your parents/guardisns to discuss this issue.
- If you are **absent from a lesson** it is your responsibility to catch up on the missed work, it may well be the topic that comes up in a future assessment, PPE, or final exam. You are expected to email

the class teacher to identify work missed and the deadline to complete this. Do not rely on your peers, as they are not the subject specialists.

- If your **absence is unauthorised** or you do not contact the teacher on your return you will be required to catch up during a Product Design detention or extra study sessions booked into your free time in the study centre.

You must set up:

- A lever arch folder to bring with you to each lesson. Your signed copy of the Product Design expectations must go at the front of your folder.
- Bring stationery, pen, pencil, ruler minimum.
- Accept any regularly check Google classrooms set up by your teachers

Deadlines and Submitting Work

For every taught hour you must be carrying out at least one extra hour of work. This could be finishing class work/activities, creating revision resources, practicing exam questions and/or completing effective revision on previously learnt content. **This means 12 hours a fortnight on top of taught lessons.** This work can either be completed in your timetabled study time or at home.

- **When completing coursework assignments, all assessment criteria must be attempted**.
- **Deadlines must be met.** If you do not meet a deadline expect a letter home and an invitation to a Product Design detention.
- All homework will be posted on 'Google Classroom' (including content and deadlines). **Any issues with homework set should be addressed through contacting the class teacher either in person or via email.**
- **Your teacher will not accept work that is:**
  - Left on the teacher's desk
  - Incomplete
- All work must **be submitted in the format with which you will be externally assessed**. This will be explained by your class teacher when the work is set.
- If an extension is required for class-based assessments or homework this should be requested in person to the class teacher **at least 24 hours prior to submission**. These will be granted on a case by case basis.

Failure to meet any of these expectations to a satisfactory standard will result in consequences including a formal meeting with the Head of Design and Technology and your parents/guardians.

Signed: **Date:**