

# KS4 REPORT INFORMATION:

## How to Succeed in Design Engineering (Cambridge Nationals Level 1/2)

The best chance of success in all subjects is:

- an excellent punctuality and attendance to lessons
- a positive attitude to learning
- high aspirations, resilience and a determination to achieve
- a commitment to independent study (homework and revision)

In Design Engineering we provide the following support to ensure that all students make the best possible progress:

### **Knowledge Organisers**

Please click on the link to each of our KS4 Year group Knowledge Organiser folders for Design Engineering::

[Year 10 Design Engineering Knowledge Organiser](#)

In Design Engineering we have detailed powerpoint presentations to support our students' learning as well as examples of high quality assessed work to support the work that the students have to produce. These are referred to on a regular basis in lessons as well as recommended for support with homework tasks.

### **PLCs (Personalised Learning Checklists)**

These can be used for students to track/identify where they are up to with their learning. In Design Engineering, we have integrated the PLCs into our feedback sheets/marking and assessment that can be located throughout the students Google Slides folder. Please see an example image below of a students marksheet slide. This makes it visibly clear for students to understand exactly where they are in the unit. 'Red' indicates missing work, 'Amber' indicates that there are corrections to be carried out to complete the coursework piece and 'Green' indicates that the work is completed to a good standard.

Name:

Exam Board	OCR	My target grade is	
Topic/Module	Pixel CamNat Engineering: Design Project	My predicted grade is	
Year Group	10	Group	10D

Use this checklist before your assessment to focus your work and after to check the effectiveness of your work.

G	I am confident about this topic and I know what I need to do.
A	I am not too sure about this topic. I may need to check with my teacher and spend more time working on this topic.
R	I am not confident I could answer a question on this topic. I need to check with my teacher and ensure I have what I need to do it.

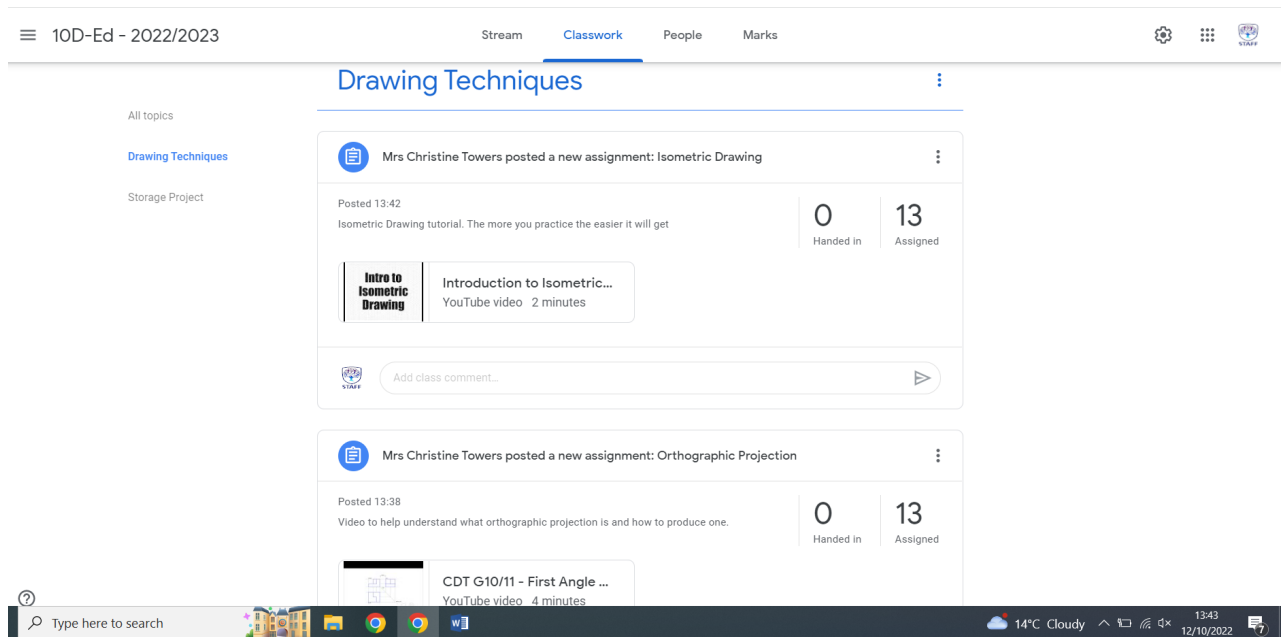
Topic/Unit Focus		Date	R	A	G
1	Mood Board and annotation				
2	Design Ideas and annotation				
3	Design Development				
4	Isometric Drawing				
5	Orthographic Projection				
6	CAD Final Design Proposal (Google Sketch Up)				
7	Final Prototype				
8	Manufacturing Diary				
9	Pugh Matrix and Evaluation				

### **Google Classroom**

In Design Engineering we use the Google Classroom to ensure that our students have access to all of the Knowledge Organisers as well as additional resources to support their learning and home learning.

On the Google Classroom homework is published, our recommended reads for students to read around the subject as well as our academic year calendar (in which it clearly states what work we will be competing each week).

Please see an example of a post in the Google Classroom for Design Engineering:



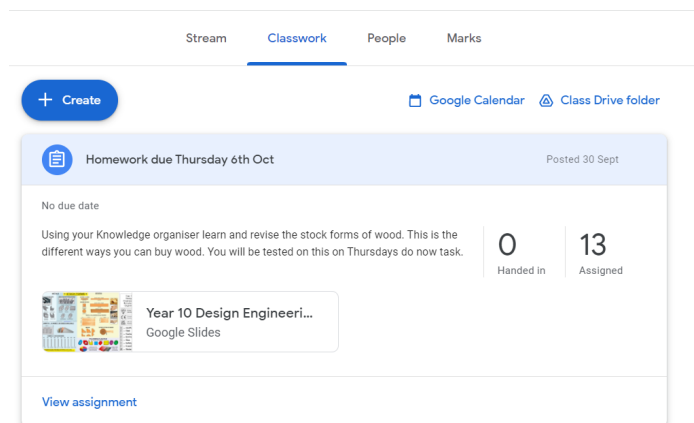
## The course

Design Engineering consists of two internally assessed projects worth 30% each.

**Unit R039: Communicating Designs, Unit R040: Design, evaluation and modelling** and an exam worth 40% **R038 -Principles of Design Engineering.**

## Homework

Subject teachers will set specific tasks for students to complete as part of their home learning. Students will be asked to submit this work in class and will be challenged by subject staff if it hasn't been completed. All work set in Design Engineering is used as part of their project work or theory work to support them in their exam.



We are grateful for parental/guardian support in this matter. Please see an example of a homework post for Design Engineering in the Google Classroom. If students are ever unsure of what is expected of their homework they can speak with class teachers in the lesson or even via email. We do ask if there is a legitimate reason that homework cannot be completed and that it is communicated to subject teachers by parents/guardians via letter, email or even a note in the students' planners.

## Extended Support

If students are struggling with any aspect of the course and need some further help, subject teachers will offer extended support in which they will work at lunches/after school. These sessions will be communicated to parents and students. These extra sessions that subject

teachers run are highly successful and it is advised that all students attend these when they can in order to complete work to a good standard.

## **Revision, Useful Apps & Websites**

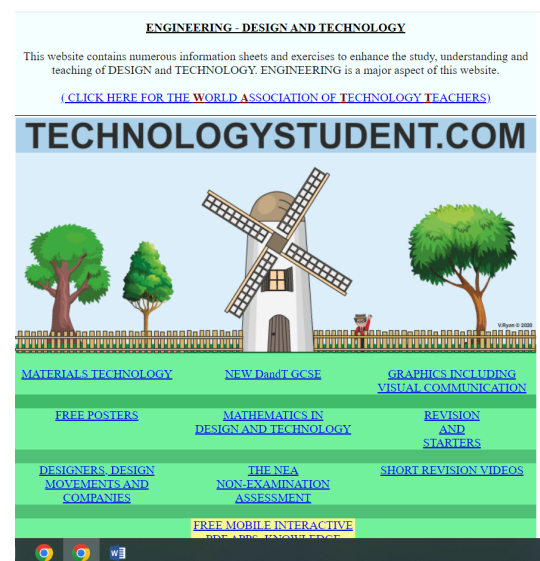
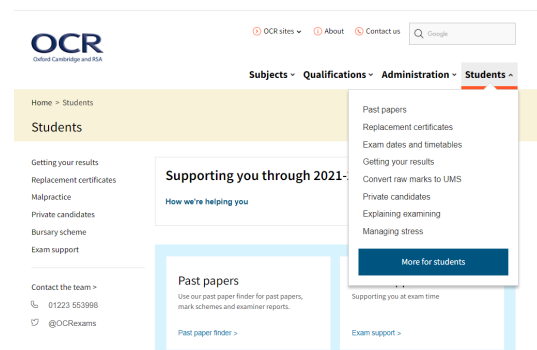
In Design Engineering students will learn skills and knowledge throughout project work and will need to revise key words, facts and topics for their external exam at the end of Year 11. Each term the students will have a new Knowledge Organiser and we will complete mini tests and quizzes in class throughout year 10 and 11 to check students have learnt this information.

We recommend the following APPS and websites to support our students in Design Engineering:

- **Google Drive** - when students are working at home, it is advised that they save their work onto the Google Drive so that they can access their work in school. If students download the Google Drive App for their computers at home and use their school logins, it creates a G drive on their computers for them to open up work and save it easily rather than manually uploading and downloading files. Students are taught this in the first lessons of Design Engineering and it is reiterated to them throughout the course.



- **OCR Cambridge Nationals Website** - the website offers a valuable resource for this qualification. Past exam papers and exam support.
- **www.technologystudent.com** - is a very useful educational website full of processes, techniques, tools, materials and equipment. If students use the search bar at the bottom of the website they will find most of the course content here.



## **Contact**

If there are any subject concerns please contact the class teacher early so that we can support. By working closely together we can make sure students make the best possible progress in Design Engineering.