

# Engineering

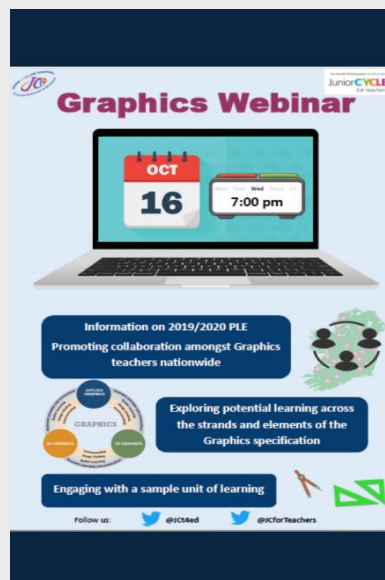
## JCt4 Newsletter

### Junior Cycle for Teachers

Junior Cycle for Teachers exists to **inspire**, **support** and **empower** teachers in the transformation of Junior Cycle education in Ireland.

### Graphics Webinar

The Graphics team are delighted to be hosting a webinar on October 16<sup>th</sup> at 7 p.m. Teachers can sign up via [https://attendee.gotowebinar.com/register/561613348782867213 ...](https://attendee.gotowebinar.com/register/561613348782867213...) It will explore potential learning across the strands and elements of the Graphics specification and will engage with a sample unit of learning.



The graphic features a laptop displaying a calendar for October 16th at 7:00 pm. Below the laptop, there are three key points: 'Information on 2019/2020 PLE Promoting collaboration amongst Graphics teachers nationwide', 'Exploring potential learning across the strands and elements of the Graphics specification', and 'Engaging with a sample unit of learning'. Social media handles @JCt4 and @JCforTeachers are listed at the bottom.

### JCt4 Partners

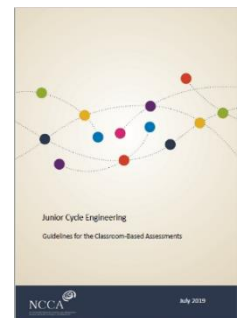
**COMBiLiFT**  
LiFTING INNOVATION

## Welcome

Welcome to the third issue of the JCt4 Engineering Newsletter. The 4<sup>th</sup> of November 2019 marks the start of the JCT subject cluster model of CPD. The Engineering Professional Learning Experience (PLE) 2019/2020 will form part of these clusters. Teachers should check with their school management to ensure that they are registered for their Engineering PLE.

### Update

The NCCA recently published; Junior Cycle Engineering – Guidelines for the Classroom-Based Assessments. This provides general information on the Classroom-Based Assessments (CBA), Features of Quality and guidelines on completing the CBAs. The Engineering team look forward to engaging teachers in this document during their upcoming PLE 2019/2020. In order to gain maximum benefit from the PLE day, it is advisable that attendees familiarise themselves with the Guidelines for Classroom-Based Assessments. The document is available at: [curriculumonline.ie](http://curriculumonline.ie).



### Planning resources

A Digital Planning Tool was developed to support teachers in the process of planning units of learning. It has interactive drop down menus for the selection of learning outcomes and associated action verbs. Teachers can access the Digital Planning Tool and associated screencast [here](#). Teachers can download and duplicate this file on their own device. This could be used with the 'Exploring Learning Outcomes' document. It may be useful for teachers to bring a laptop to PLE 2019/2020 with the Digital Planning Tool already downloaded as the Engineering team will be referring to it throughout the PLE day. The Digital Planning Tool is available for download on the Technologies section of the JCT website.

### STE(A)M



The Engineering team continue to be involved in the JCT STE(A)M initiative. These workshops will investigate how real-life problems could be solved by taking an interdisciplinary approach. These elective workshops are a good opportunity to explore cross curricular links with

## Ploughing Championships

JCt4 were delighted to be present at the 2019 National Ploughing Championships in Co. Carlow. Attendees over the three days were welcome to participate in a Tangram duel with the Dobot Robotic Arm. The tangram was an activity used in the Graphics PLE 2019. Participants attempted the same Tangram as the Dobot. The aim was to complete the tangram before the Dobot. This proved to be very popular.



Jane Doherty from the Engineering team guides the Minister for Education and Skills, Joe McHugh, TD, as he races the Dobot to complete the Tangram challenge.



An tSraith Shóisearach do Mhúinteoirí  
**JuniorCYCLE**  
 for teachers

[www.jct.ie](http://www.jct.ie)

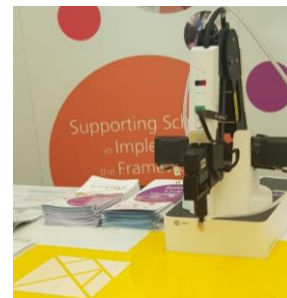


[Mailing List](#)

other teachers. STE(A)M Elective workshops are currently being developed with Industry partners for 2019 – 2020. For further details contact: [steam@jct.ie](mailto:steam@jct.ie)

## Mechatronics

By now 1<sup>st</sup> year students have begun their journey in Junior Cycle Engineering and are developing their Engineering knowledge, understanding skills and values. Robotics are an ever-increasing presence in the modern world. Using practical examples of robotic applications may increase a student's appreciation for associated mechanisms, electronics, control software and manufacturing. The Jct4 team are currently exploring the Dobot Robotic Arm. The 'DOBOT Magician is a multifunctional desktop robotic arm' (Dobot.cc 2019). Different attachments may be fitted to the robotic arm which allow the DOBOT Magician 'realise interesting functions such as 3D printing, laser engraving, writing and drawing.' (Dobot.cc 2019). An example such as this could provide a context for a learning outcome such as 1.5. Students may recognise a robots ability to execute a task precisely, relies on its own individual components to be manufactured with precision, and also requires mechatronics to move and control its motion. A learning outcome such as 3.2 may also be used to form a general understanding of how robotics move and function. Learning outcome 3.10 may be engaged to create avenues for students to communicate their learning and build skills as they move towards Classroom-Based Assessments.



The summer 2019 edition of this [newsletter](#) provides an article which suggests possible links to learning outcomes 3.3, 3.4 and 3.5.

## News and Events

The News and Events [tab](#) within the Technologies section of the JCT website holds all previously published newsletters and also displays the Jct4 twitter feed. You may find it useful to follow @Jct4ed on twitter to receive additional regular updates. Please encourage your colleagues to join the technologies mailing list also. This can be done by selecting the link on the left of the [www.jct.ie](http://www.jct.ie) homepage, alternatively, by selecting the mailing link at the bottom left of this page.

The Engineering team look forward to meeting you in the coming months and supporting you with the implementation of the Engineering specification in 2019 / 2020.

Kind regards,  
**The Jct4 Engineering Team**

