

# LINCOLN UTC NEWSLETTER

APRIL 2020

## Principals Foreword

Bored yet? Find a project!

The most common reason for school closure is heavy snow. When this happens the response from students is invariably one of great excitement ... an extra couple of days holiday and the chance to go sledging!

When Lincoln UTC's students were told that we were going to close, the response this time was very different. Students and staff, without exception, were disappointed and concerned. We like coming to work and we don't like the prospect of being away from the UTC for an extended (and open ended) period of time.

For however long we are closed we will continue to set work, receive work and provide feedback electronically. It is heartening that so many of our students are engaging with this new way of working and are doing so conscientiously. Inevitably though, we will probably all be finding that we have more free time than we are used to (even after we have completed the set work).

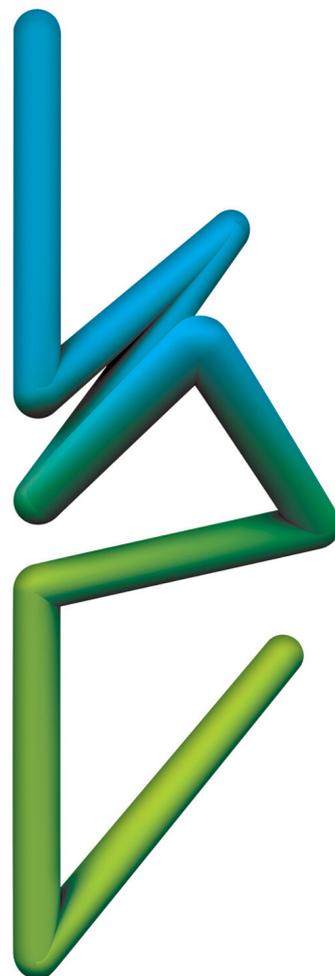
I have decided to use my free time to make a few short films. I want to improve my camerawork and master the video editing software. This has been something I've been keen to learn for a while but just haven't found the time to do it. I no longer have that excuse. Hopefully, when things return to normal, I'll be able to put my new skills to use and contribute to the UTC's collection of website video footage.

I guess my advice to all our students is to take the opportunity that this situation presents us with and find a project. What would you like to design or make? What new skill or software package would you like to master? Don't fritter away your free time. Keep busy. Do something that will be of some benefit to you in the future.

Stay safe. Stay well.

John Morrison

Principal of Lincoln UTC



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# JONTY ENGINEERS PROTECTIVE EQUIPMENT FOR NHS

16-year-old UTC student, Jonty Horn, has responded to requests for Personal Protection Equipment (PPE) for frontline NHS staff by utilising 3D printing to manufacture face shields in his own home.

Jonty has studied at Lincoln UTC for the past two years. The current nationwide shortage of PPE prompted him put his engineering skills into practise by finding a solution to the problem.

Initially Jonty accessed files to create the shields using Creality 3D printing technology and produced his first prototypes, a lightweight and heavy-duty version of the clear protective face shield. He then approached Lincoln County Hospital, St Barnabas Hospice and his local doctor's surgery to offer the shields to their staff free of charge.

“Having experience with 3D printing and seeing the current challenges faced by the NHS I decided now would be an ideal time to help them by aiding in the production of face masks for COVID-19 PPE.

Once I explained that there was absolutely no cost to them, the nurses were overjoyed! They asked me to continue production of the heavy-duty version and I started straight away” said Jonty.

Jonty's father, Chris Horn, said: “3D printing the holder for the plastic face shield takes around two hours on Jonty's Creality printer so we can only make so many.

However, the beauty of 3D printing is that the files can be shared so easily, and if more people with access to 3D printing get involved we can really make a difference for our key workers in the NHS in the fight against Coronavirus.”

John Morrison, Principal of Lincoln UTC said: “It's fantastic to see one our students taking the initiative and using his experience in engineering to help others in a time of crisis. Lincoln UTC fosters innovation and I'm so proud to see Jonty using his technical skills and enterprising spirit for such a worthwhile cause.”



# UTC STUDY FROM HOME GUIDE

Studying from home is very different to studying at school and for many students (and parents) this may be their first experience of organising their own learning. At the UTC we encourage our students to develop the skills of the ideal learner; which include resilience, organisation, motivation and independence. Studying from home is an ideal opportunity to put these skills into practise.

Accepting that there will be more distractions at home in comparison to school is important as students can then factor this into their approach and effectively manage these distractions. Students should prioritise creating a workspace that is quiet and comfortable to ensure that they can separate studying from their ordinary home life.

Creating an organised timetable that covers a variety of subjects will provide a similar structure to the school day and allow students to follow a normal routine. Setting achievable goals every morning and ticking them off throughout the day will ensure that students can demonstrate their progress and feel proud about what they have accomplished.

Our Y11 and Y13 students should be focusing particularly on continuing to work on and improve their engineering coursework portfolios, as exam boards are likely to award grades based on this.

Using social media is an easy way to procrastinate therefore students should try and limit time spent using their phone during study hours and use it as a reward. It is still important to schedule regular breaks to take time away from learning and relax as students would during an ordinary school day.

Regular exercise can help you sleep better, concentrate for longer periods of time and improve your mental health. Researchers have found that a minimum of at least 20 minutes a day of any physical activity can help to create a positive attitude and boost productivity. Students should schedule this into their working day.

Studying alone for long periods of time can be a difficult learning curve. Students should give themselves time to get used to their new routine and keep in touch with their peers in the same situation. Remember that teachers are still available to provide help and advice as and when it is needed.

## DANIEL SHAVES HIS HEAD FOR CHARITY

On February 13th our Y12 student Daniel shaved his head to raise money for Papyrus UK, the national charity dedicated to the prevention of young suicide.

Daniel chose to raise awareness of this cause as suicide is the biggest killer of young people - male and female - under 35 in the UK. Papyrus' vision is to work towards a society that speaks openly about suicide and has the resources to help young people who may have suicidal thoughts.

They exist to reduce the number of young people who take their own lives by shattering the stigma around suicide and equipping young people and their communities with the skills to recognise and respond to suicidal behaviour.

Daniel raised a huge £250!



# STUDENT SUPPORT & WELL-BEING

Being out of school and away from friends and a normal routine is likely to be difficult for many students. School work provides challenges and in the current climate it may feel even more stressful as many students will be working in a different way.

Students should remember that stress and anxiety in such an unusual and unpredictable time is normal. Everyone reacts differently to stress and that's okay - we are here to help with managing that stress. Here are a few of our top tips:

- You might not be able to see your friends face-to-face, but you can still speak to them. The same applies to your teachers too, keep in touch with them and carry on learning.
- Break up your day by keeping active. Something as simple as a short walk can clear your head, but if you would rather stay home look online for exercise videos. Joe Wicks is running live 30 minute 'PE lessons' every day at 9am on his YouTube channel @TheBodyCoach.
- Try to follow a healthy diet with some fruit and vegetables and drink plenty of water.
- Despite not having to wake up so early to get to school, a regular sleep pattern is still important. Wind down before bed by avoiding using your phone, tablet, computer or TV for an hour before bedtime.
- Mindfulness, meditation or yoga may help you to feel calm. Your app store will have lots of apps for you to download that can help with this. Try the "smiling mind" or "calm" app as a start.
- There is extensive news coverage about the Coronavirus outbreak. If you find that the news is causing you stress, it's important to find a balance. It's best that you don't avoid all news and that you keep informing and educating yourself - but limit your news intake if it is bothering you.

Our Head of SEN & Safeguarding has compiled a comprehensive list of the digital support available for students should they need it, during the period of school closures.

Shout Crisis Textline / If you need immediate support, you can text SHOUT to 85258 and chat by text. The service is free on most networks and available 24/7, and trained volunteers will listen to you, and work with to help you take the next steps towards feeling better.

Blueice is an evidenced-based app to help young people manage their emotions and reduce urges to self-harm. It includes a mood diary, a toolbox of evidence-based techniques to reduce distress and automatic routing to emergency numbers if urges to harm continue.

Calm Harm is an app designed to help people resist or manage the urge to self-harm. It's private and password protected.

Cove. Instead of using words, this app allows you to create music to reflect emotions like joy, sadness, calm and anger. You can store your music in a personal journal, or send them to someone and let the music do the talking.

Silvercloud provides a wide range of supportive and interactive programmes, tools and tactics for mental and behavioural health issues. These programmes address wellbeing, life balance, time management, communication skills, goal setting, communication and relationship management, anger management, stress management, relaxation and sleep management, among many others.

MindShift is an app designed to help teens and young adults cope with anxiety. It can help you change how you think about anxiety. Rather than trying to avoid anxiety, you can make an important shift and face it.

# THE GREEN POWER PROJECT

Every week students spend two triple lessons a week completing project work that is not linked to examined subjects, but designed to develop skills that prepare them for the real world and employment.

Students are expected to plan and organise their own approaches, and are not spoon-fed or told how to solve the problems they encounter. There is an expectation that students will make mistakes and fail, which will lead to them reflecting, learning, and becoming more resilient.

In sixth form our students have the freedom to choose their own projects, and over the past couple of months a team of Y12 students have been working on the principles around constructing a Go-kart during these sessions.

Initially from scratch they focused on manufacturing certain parts i.e. transmission and steering mechanisms using practises learnt in their engineering lessons. Over time their focus evolved into the Green Power Project, where they have constructed a pre-manufactured kart that is being prepared for use in competitions. These are endurance races, where careful consideration of aerodynamics, weight and efficiency are crucial. The next step is to begin studying the best ways to extract performance in these areas.

Through this programme we place an unparalleled emphasis on providing students with opportunities to develop skills, behaviours and traits that set them apart from other young people, and help them to succeed in future.



# ST FAITH'S SCIENCE FAIR

On Tuesday 10th March we were invited to exhibit at the St Faith & St Martin Junior School Science Fair, to encourage engagement and interest in science among the children at the primary school.

Our Y10 First Tech Challenge group have been completing community outreach as part of their project, and jumped at the opportunity to take their robot and demonstrate the process of designing, building, programming and operating.

They were blown away by the interest in their project, and are looking forward to attending again next year.



# CAREERS

## COOL DATA CENTRE VISIT

The team from Cool Date Centres Ltd. delivered an inspiring seminar to our girls as part of their celebrations for International Women's Day.

On the theme of 'our diverse planet', they talked to students in all year groups about the diversity of the workforce within STEM careers in general.

Recognising the lack of diversity within the digital infrastructure industry, they have committed to creating a team that is diverse and inclusive regardless of gender. They now work hard to raise awareness of this within the local area.

Our connections with local industry partners are hugely beneficial in encouraging our students to pursue careers in STEM. We are proud to be working together to break barriers!



## OXFORD UNIQ PROGRAMME

We are delighted to announce that two of our Y12 students have successfully applied and gained a place on the 2020 UNIQ programme run by the University of Oxford.

The UNIQ course is designed to give students a taste of the Oxford undergraduate student experience. Ben and Mark will live in an Oxford college for a week, attend lectures and seminars in their chosen subject areas of mathematics and physics, and receive expert advice on the Oxford application and interview process.

Some of this advice will be from Oxford admissions tutors and will specifically aim to support preparation for admission to Oxford. Last year, 40% of UNIQ participants who applied to study at Oxford were offered a place, compared to an average success rate for UK applicants of 20%.



Both boys are currently studying A Levels in mathematics, further mathematics and physics at the UTC. Mark is also studying an additional A Level in chemistry. They both hope to apply to study a degree at the University of Oxford, therefore the experience of the UNIQ programme will be an invaluable opportunity to gain an insight into the application process and life at the university.

# SKI TRIP

Lincoln UTC is a very small college, but there is nothing small about the ambition or scope of our programme of international trips. We are committed to giving our students huge and life changing chances to see the world and experience different cultures.

It looks like the staff and students on our 2020 ski trip to Austria had a fantastic time!



