Stretch and Challenge Activities for IT or Computer Science

KS3

Immersive Labs have helped to create Cyber4Summer initiative It has now gone live and is available for free for all 13-18 year olds in the UK. Cyber4Summer's aim is to provide a safe, fun and legal environment where young people can learn and develop cybersecurity skills. Cyber4Summer consists of over 100 labs of various skill levels, where you can learn some of the core skills for a range of jobs including Cyber Investigator, Digital Forensics Expert and Network Security Analyst. Get started by registering/signing up here - https://cyber4summer.immersivelabs.online/signin

IDEA Badges – The Inspiring Digital Enterprise Award is a programme that helps you develop digital, enterprise and employability skills for free. Sign up for free using your school e-mail address and attempt to complete your Bronze IDEA Certificate or if you really want a challenge attempt the Silver IDEA Certificate.

CodeCombat – If you would like to learn how to code in Python whilst playing a game, then why not create an account on https://codecombat.com/ and play away.

KS3 Bitesize Computer Science – if you are looking to increase your Computer Science knowledge then BBC Bitesize has everything from hardware to programming. Have a look at each of the revision sessions, watch the available videos and complete the end of unit tests. https://www.bbc.co.uk/bitesize/subjects/zvc9q6f

Web Design – if you love IT and you are also creative then perhaps designing a website on www.wix.com might be the perfect thing to do. You can choose a template, select the content and learn a few things about how to design the perfect website of your own.

Video and Camera Shots/Movements – if you are in to things like Tik Tok and YouTube then why not research and practice a range of camera shot types and angles. You could even put a short video together of your own and practice your editing skills.

Image Editing – There are lots of skills which can be developed when it comes to Image Editing. Try using free online image editing sites such as www.photopea.com to edit your own images. Try using the brush tool, clone tool and spot healing tools. There are tutorials to follow here: https://sites.google.com/view/suefarrimondtutorials/image-editing-and-creation/photopea-basics

KS4

The CyberFirst Online Course – take part in courses designed to bring out your potential. Learn about how everyday technology works, how everything is connected to each other, how information flows through networks and how we can take sensible steps to protect our digital world. The courses are fun, free and interactive – visit https://www.smallpeicetrust.org.uk/cyberfirst and sign up to the correct year group.

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Video and Camera Movements – in preparation for you upcoming assessments – practice setting up, framing and filming your perfect camera angles and movements. There are a wide range of

camera angles (close-up, long shot, two shot, high/low angle) and movements (tilt, pan, zoom) – all which can be used for different purposes. Research about how they are used, select sections of movies or adverts to analyse and familiarise yourself with the different shot types and effects they have on the audience. https://www.studiobinder.com/blog/ultimate-guide-to-camera-shots/

Choose a film or program you have watched and explain how they have used one of these camera techniques to good effects and why you noticed it.