BCS (Bedford Branch) Cyber Challenge 2020

A competition to support STEM in schools

Since 2013, the BCS Bedford Branch has been running a competition to cultivate young computing leaders. Participating in the Cyber Challenge is a positive way to fulfil STEM Gatsby benchmarks like linking curriculum learning to careers, encounters with employers and employees, encounters with further and higher education.

The competition is open to all schools in the areas of Bedford Borough, Central Bedfordshire, Luton Borough, Milton Keynes and Buckinghamshire.

BCS, The Chartered Institute for IT, champions the global IT profession and the interests of individuals engaged in that profession for the benefit of all.

Schools are invited to introduce
the competition to students from Year 5 to Year 10

This is an excellent activity for at code clubs and Computing projects, suitable for students in Maths and Computing classes. They could be projects for students at home.

6 Competition Groups

Year 5 Online Safety
Create an educational resource that promotes the positive aspects of online talking and messaging but also helps people to understand when online behaviour could become inappropriate and risky. The resource must send out a safe online message so that people feel empowered to deal with uncomfortable situations online.

Year 6 Dealing with Cyberbullying
Create an educational resource that shows young people how to deal with Cyberbullying and what could be done to prevent it in the first place. The resource must send out a safe online message so that people feel empowered to deal with Cyberbullying in a safe and sensible way.

Year 7 Fake News
Create an educational resource that promotes the positive aspects of using online resources to learn, for school work and social interactions, but also be careful to check if the information is true or false. The resource must encourage a behaviour of critical evaluation to get the best from online information and discard the fake.

Year 8 Identity Theft
Produce a game that helps people to understand what identity theft is and why it is important to guard against it. The game could help the players recognise strategies used to access private information. The game must suggest ways to guard against phishing and identify theft.

Year 9 Mobile Phone Security
A mobile Phone is a ubiquitous addition to personal life. It may also holds a lot of information about the owner. Criminals are increasingly targeting mobile phones as a way to compromise personal and organisation security in one way or another, often with data being stolen. Produce a game that is fun to play, but informs the public about mobile phone security and how to protect themselves or their businesses.

Year 10 Dark Web
The Dark Web is perceived as a mysterious place by many and could attract computing savvy young people to go and find out more. Produce a game that helps people to understand what the Dark Web is and the positive ways people should approach it. The game could help the players to balance curiosity with responsibility. The game must suggest ways to guard against unintentionally becoming criminals.

Competition Rules:

- Students may work individually, in pairs or teams of no more than 4.
- Participants are students from year 5 to 10 and they enter the competition according to their year group.
- Students can use Scratch, Kodu, Alice, or ANY suitable programming language.
- Please register your interest by email to: Jackie.samosa@mrus.co.uk. This will greatly help our preparation logistics.
- The deadline for submission is 17th June 2020.
- Students are reminded to be e-aware and avoid music or images that are subject to copyright restrictions.
- All work must be original and done with minimal help of teachers or parents. Help given must be notified on the entry form.
- During the production students should follow the normal rules of safety and not reveal any personal details online (e.g. Scratch) and all work should be polite and respectful.
- The judges' decision is final.
- This competition is open to all local education authorities funded and independent schools in Bedford Borough, Central Bedfordshire, Luton Borough, Milton Keynes and Buckinghamshire.

Prizes to include: Trophies, medals and other goodies which will be awarded at Cranfield University on 2nd July 2020, or a suitable alternative arrangement.

Judges will be looking for:

- Creativity
- Selection use, combination and presentation of images and text
- The appropriate choice and use of programming instructions and should include: Custom blocks, Loops and Variables

- The clarity of the finished presentation in demonstrating improved learning outcomes

For further information please contact: Jackie.samosa@mrus.co.uk

Useful Resources

Scratch
https://scratch.mit.edu/

Kodu
https://www.kodugamelab.com/

Alice – Tell Stories. Build Games. Learn to Program.
www.alice.org

Python Tutorial
https://www.w3schools.com/python/

EduBlocks - Making the transition from Blocks to Python easier
https://edublocks.org/

Java Tutorial
https://www.w3schools.com/java/