

## Resource Pack

**WE LIVE IN A MODERN WORLD, WHERE OUR PHONES ARE RARELY OUT OF OUR HANDS AND COMPUTERS MAKE ALL SORTS OF TASKS EASIER. IT'S THIS RELIANCE ON TECHNOLOGY THAT MAKES CYBER SECURITY SO IMPORTANT.**

*In association with:*



You might not realise it, but it touches all our lives – and it's not limited to your email password either. Whether it's registering your heart rate on your smart watch; shopping online through a secure connection; or even handing over your details at the doctor or the dentist, all that data has to be protected.

That's where cyber security comes in. With an ever-changing digital society that's showing no signs of slowing down, cyber security needs to adapt with it.

People who work in cyber security (called 'cyberists' by GCHQ/National Cyber Security Centre) have to be versatile, moving at a pace that can keep up with the rapid technological advances in our society. That's what makes them so valuable – and so increasingly needed. They've got an important job to do, but an exhilarating one too. Because without even thinking about it, people, businesses and institutions all over the UK are relying on the work of the 'cyberists'.

Cyber security is open to people with a wide range of skills and plays an important role in the work of organisations as diverse as the NHS, network providers, schools, retail companies, banks and local authorities.

Anyone who is tech-savvy can get a career in cyber security, all you need to be is passionate, intrigued by technology and love computing. You could be a social media whizz, a gaming guru or straight up writing code: it's simply about being in touch with the modern world.

A cyberist is dedicated to protecting friends, families and communities. They're keen to improve and explore the digital world. They're our new generation of computer experts. They're from all kinds of backgrounds, all over the UK. But they have one thing in common. They're here to safeguard our digital future.

**THAT COULD BE YOU!**



## Resource Pack

### WHAT WORK DO 'CYBERISTS' DO?

Cyberists build security during the development stages of software systems, networks and data storage centres and deal with new developments to make sure these systems and networks remain safe for companies and individual users.



- ➡ Find the best ways to secure companies IT systems;
- ➡ Discover issues and risks in software and hardware;
- ➡ Monitor for cyber attacks and intrusions from hackers and viruses;
- ➡ Closing off systems to new attacks;
- ➡ Liaising with the police and other authorities if crimes are committed.



[www.gchq-careers.co.uk](http://www.gchq-careers.co.uk)

## Resource Pack

### YOUR ROUTE INTO CYBER SECURITY

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#### A-LEVELS AND EQUIVALENT

Taking subjects like science and maths will be very useful, and if you decide to go to university some institutions require them for more technical and specific degrees.

In general any STEM subjects (Science, Technology, Engineering and Maths) are of specific interest to employers in cyber security. There are specific A-levels and equivalent qualifications such as BTECS in related subjects such as ICT and Computing which are obviously a good basis to move into more advanced areas of technology such as cyber security.

#### APPRENTICESHIPS

If you already know you want to work in the cyber security sector and want to start work right away, but still need to learn more – apprenticeships are for you.

With an apprenticeship you can earn while you learn, working in the field directly while learning the skills you need to succeed.

Like other industries more and more companies are taking on apprentices, with vacancies up by over a quarter in the last year. You can take an apprenticeship after GCSEs or A-levels.

The average salary for apprentices is £200 per week after tax and you'll also get a nationally recognised qualification with a local college, university or private training provider.

#### Apprenticeships are available at three levels:

- Intermediate or level 2 apprenticeships take a year to complete and are equivalent to 5 GCSEs.
- Advanced or level 3 apprenticeships take at least a year to complete and are equivalent to 2 A levels. You'll typically need five good GCSEs to get on one.
- Higher or level 4 apprenticeships typically take 18 months to two years to complete. They can lead to qualifications such as HNDs, as well as foundation or even full degrees. This depends on who you work for. You'll typically need two good A levels and five good GCSEs to get on one.

## Resource Pack

### YOUR ROUTE INTO CYBER SECURITY



#### UNIVERSITY

Traditional degrees are still a great route into cyber security with a wider array of directly related degrees than ever before. Many employers offer specific schemes for graduates with fast track career progression in a number of roles. The application criteria and details of the scheme will depend on the individual employer.

For the cyber security industry you might want to look at the [CYBERFIRST SCHEME](#).

### WHAT IS CYBERFIRST?

Launched in May 2016, and inspired and led by the National Cyber Security Centre (NCSC), a part of GCHQ, CyberFirst is a programme of opportunities helping young people explore their passion for tech by introducing them to the world of cyber security. And these young people could be anyone, from anywhere.

CyberFirst isn't just for genius coders either; they're open to all sorts of students with tech and computing passions. Livestreamers with their own gaming vlogs. School-leavers with Twitter as their second language. You really don't have to be fluent in Javascript to be the kind of mind they need. But what do they have in common?

They want future cyberists want to make an impact – and with CyberFirst, that's guaranteed. They've opened options for more people than ever. So for those who'd rather get a degree first, or for the practical on-the-job learning types, the chance to become a cyberist of the future is now within reach.



BECOME A CYBERIST

[www.gchq-careers.co.uk](http://www.gchq-careers.co.uk)  
[www.ncsc.gov.uk/new-talent](http://www.ncsc.gov.uk/new-talent)

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### CYBERFIRST CAREER ROUTE

#### DEGREE APPRENTICESHIP

With this accessible programme, school leavers can dive straight into the world of work, getting a full degree in the process.

You'll undertake a level 6 degree apprenticeship, learning about everything from code to emerging technologies, with a potential full-time role at the end. And work alongside other cyberists and industry experts at GCHQ and NCSC, gaining the kind of knowledge that will change their career for the better. It's a quality straight-out-of-school opportunity.



To find out more about this CyberFirst  
Apprenticeship

[WWW.NCSC.GOV.UK/NEW-TALENT](http://WWW.NCSC.GOV.UK/NEW-TALENT)

## Resource Pack

### UNIVERSITY BURSARY

With the CyberFirst University Bursary, students can enjoy the full university experience, safe in the knowledge that they've got a cyber career ready and waiting for them afterwards.

The programme is split into three chunks:

1. University: You'll receive an annual £4,000 bursary throughout your degree.
2. Each summer: You'll carry out work experience with cyber security teams in government or industry, for which you'll be paid £250 per week.
3. After graduation: At the end of all that, we'll aim to place you in a graduate-level cyber security role.

It's an opportunity that will lead students into a future where they can influence vital cyber security decisions. It's a chance to play a pivotal role in digital society.

### SO WHAT SKILLS AND QUALIFICATIONS ARE NEEDED FOR CYBERFIRST?

**For the Degree Apprenticeship scheme, they are looking for school leavers who:**

- Have (or are predicted) 3 A levels at grade C or above in any subject
- Have 2 GCSEs at grade B or above in STEM subjects, one of which must be Maths
- Have a love of all things computing and digital
- Keen to learn, passionate and motivated to succeed in the world of cyber security

**For the University Bursary scheme, they're looking for students who:**

- Are looking to start university next year, or already in their first year studying a STEM subject
- Have (or are predicted) 3 A levels at grade B or above in any subject
- Have a good knowledge of how computers work and how to secure them
- Are hard-working, team-oriented, passionate and determined to secure the technology we use

To find out more about the CyberFirst Bursary



[WWW.NCSC.GOV.UK/NEW-TALENT](http://WWW.NCSC.GOV.UK/NEW-TALENT)

## Resource Pack

In association with:



## TIPS FOR GETTING A CYBER SECURITY JOB

### ➡ Follow developments in the industry

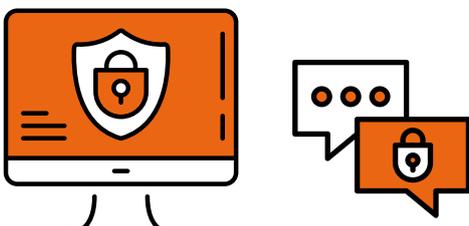
Cyber security is one of the fastest moving industries in the world with new developments, threats and issues arising every day. Being aware of the latest news and developments will help show you are serious about the position.

### ➡ Research the role and the company you are applying to

It will help you stand out as a candidate if you can show that you understand what you have applied for, and you can demonstrate your particular interest and motivations based on your research. This may seem time-consuming, but sending out a high number of generic applications is unlikely to prove successful. You need to take the time to consider why you want a particular role and include evidence that supports your reasoning.

### ➡ Make sure your application demonstrates your interest in IT

This is not limited to formal qualifications you are studying. Are you in a computer club at school? Have you taught yourself how to code in your spare time? Have you helped friends or family get up to speed with a new piece of Tech? All of these experiences are of interest to employers and demonstrate your motivation and capability to work in the IT sector.



## Resource Pack

### TIPS FOR GETTING A CYBER SECURITY JOB

#### ➡ Demonstrate transferable skills

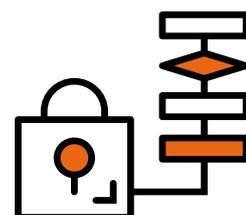
As well as any qualifications you are studying for, employers are interested in finding out what transferable skills you have - skills that can be useful in any role. For example, are you in a school sports team, showing long term commitment and teamwork? Have you worked in a shop, developing communications skills dealing with the public / trusted to handle cash transactions? Are you a prefect at school, or have you organised a charity event, showing leadership and responsibility? All of these skills are of interest to employers.

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#### ➡ Highlight all forms of work experience

As a school leaver you might think you haven't got a lot of relevant work experience, especially if you haven't yet worked in an IT related job. However, for an employer any form of work experience is of interest e.g. a week's work experience, a paper round, a weekend job in a shop, voluntary activities in your local community. These can all help to demonstrate some of the transferable skills mentioned above. Be sure to highlight what you have learned from each experience.

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## Case Study

In association with:



Lucy

CYBERIST @ CYBERFIRST

I can safely say that being a CyberFirst Bursary student is an amazing experience. At the end of my first year I attended the CyberFirst academy – an eight-week crash course in different aspects of cyber security. On the last day of the academy, we gave presentations to our fellow students and staff. It was then I realised how much I'd learnt and achieved over the eight weeks and how many close friendships I'd made along the way.

My ambition for after graduation is to be on the cutting edge of research and innovation, finding new ways to protect Critical National Infrastructure and helping organisations recover after cyber attacks. And there are numerous opportunities when it comes to how I can achieve that, from taking up a role with the NCSC to working with one of CyberFirst's industry partners.

The options are limitless. My advice for people coming on to this scheme would be to let yourself be open to trying new things and to be prepared to keep learning throughout your career. The world of cyber security is developing so quickly and you need to be able to adapt to all these new changes.

*More useful resources*

Need more help with your careers choices, you can find a wealth of help and opportunities at the following places:



## JOIN CYBERFIRST

Learn about the exciting career opportunities in cyber security and discover the broad range of educational courses and support available to secondary school students.

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## THEBIGCHOICE.COM

Find quality advice and opportunities in apprenticeships, part time jobs and training on this youth careers portal.

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## SCHOOL LEAVERS GUIDE

This interactive app guide brings together expert advice, guidance on career steps and positions from top employers on tablet and smartphone.

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## NATIONAL CAREERS SERVICE

The official place for careers advice and information in the UK.

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## NATIONAL APPRENTICESHIP SERVICE

Everything you need on apprenticeships and the best vacancies on offer.