

Cyber Professionals in the Classroom

Do you work in Digital Technologies? If so, you could help shape the nation's next generation of Digital Tech professionals. As a key sector in Scotland with thousands of estimated job openings over the next 10 years, getting involved in DYW gives you the opportunity to influence how young people are preparing for work in your sector.

Below you will find cyber security resources to support your school engagement across different age groups.

Activities are organised by age group to reflect different learning stages across the curriculum - [Primary School](#), [Broad General Education S1 – S3 High School](#), and [Senior Phase S4-S6 in High School](#). Use the links to quickly find content that is appropriate for the age and stage you are working with.

We have taken the time to collate in one place some great links to resources that support classroom learning, group sessions, and employer-led engagement activities. Most can be delivered in short sessions and use interactive or game-based approaches to build confidence and awareness.

Employers can explore a range of activities, tailored by age group, activity type, and time required, to make cyber security learning engaging and practical.

Download the resource to access the links and materials available.

Linked materials are not developed by DYW and remain the ownership of the original creators.

The Resources have been labelled as lesson starters, lesson plans and longer programmes of activity



Lesson starters – 5-15 minutes



Lesson Plans – 30 – 60 minutes



Longer Programmes of Activity that run over a longer period

This project is funded by

Primary School Resources and Links

Helping young learners understand how to stay safe online is an essential part of early digital learning. The activities are designed for primary school settings and introduce core cyber security and digital safety concepts in an engaging, age-appropriate way.

Cyber Games UK



Best for: P4–P7, S1–S3 and Senior Phase S4–S6

What it provides: Games-based platform helping learners test and develop cyber security skills through interactive activities.

Format: Online games library

Time: 5–10 minutes

Owner: The Cyber Trust

Link: [CSC Cybergames - Cyber Games UK](#)

National Cyber Security Centre — CyberSprinters



Best for: P4–P7

What it provides: Interactive cyber security game, classroom activities and lesson plans to help young people make safer online choices. Includes puzzles for use at home with parents and carers.

Format: Digital game and 3 lesson plans

Time: 3 × 40 minutes

Owner: National Cyber Security Centre

Link: [CyberSprinters | National Cyber Security Centre](#)

Barefoot Computing — Be Cyber Smart Resources



Best for: P3–P7

What it provides: Lesson plans and activities on online ownership, permissions, the law and password protection, developed with the National Crime Agency.

Format: 4 lesson plans and 1 digital game

Time: 4 × 40 minutes

Owner: Barefoot Computing

Link: [Cyber | EN | Barefoot Computing](#)

BBC Bitesize — Digital Literacy



Best for: P2–P5

What it provides: Simple KS1 digital literacy lessons and quizzes introducing core computing concepts.

Format: 2 lesson plans and quizzes

Time: 2 × 40 minutes

Owner: BBC

Link: [Digital literacy - KS1 Computing - BBC Bitesize](#)

South East Cyber Crime Unit — Cyber Choices



Best for: P6–P7 and S1–S3

What it provides: Lesson plan introducing the Computer Misuse Act, cyber choices and cyber security careers.

Format: Lesson plan and online games

Time: 1 hour

Owner: South East Cyber Crime Unit

Link: [SEROUC Cyber Choices Lesson Plan – South-East Cyber Crime Unit](#)

Daydream Believers — Living in a Digital World



Best for: P5–P7, S1–S3 and Senior Phase S4–S6

What it provides: Interactive cyber security resource on staying safe online and building cyber resilience, developed with Education Scotland.

Format: 3 lesson plans

Time: 8 hours

Owner: Daydream Believers and Education Scotland

Link: [Living In A Digital World - Daydream Believers](#)

Tech She Can — Tech for Safety & Security



Best for: Primary school

What it provides: Helps learners understand how technology is used for safety and security, while broadening their knowledge of careers available in cyber and the wider tech sector.

Format: Lesson plans

Time: 2 × 60 minutes

Owner: Tech She Can

Link: <https://techshecan.org/lesson-packs/safety-security>

Learn My Way — Safety and Security Online Modules



Best for: P6–P7, S1–S3 and Senior Phase S4–S6

What it provides: Free online modules helping learners build digital skills and stay safe online.

Format: 13 online learning modules; learner registration required

Time: 13 × 40 minutes

Owner: Good Things Foundation

Link: [Topics | Learn My Way](#)

Google — Be Internet Legends



Best for: P3–P7

What it provides: Interactive online safety game and activities helping children recognise hacking, phishing, oversharing and online bullying.

Format: Online games, lesson plans and activities

Time: 12 × 40 minutes

Owner: Google

Link: [Online Safety Resources for Teachers - Be Internet Legends](#)

S1 – S3 High School Resources and Links

The activities in this section are designed for S1-S3 for employers to introduce core cyber security and digital safety concepts in an engaging, age-appropriate way. These resources support classroom learning, group sessions, and employer-led engagement activities. Most can be delivered in short sessions and use interactive or game-based approaches to build confidence and awareness.

Classroom Clash — Cyber Attack



What it provides: A game where learners protect a computer system from cyber-attacks by selecting the correct antivirus software and deflecting viruses as they enter the network.

Format: Game

Time: 5–10 minutes

Owner: My World of Work

Link: <https://www.myworldofwork.co.uk/tools-and-quizzes/classroom-clash>

Cybergames UK

What it provides: A platform from The Cyber Trust designed to help learners test and develop cyber security skills through a variety of interactive games and activities.

Format: Games

Time: 5–10 minutes

Owner: The Cyber Trust

Link: <https://cybergamesuk.com/cybergames>

Digital Forensics — Photo Detective with the Command Line

What it provides: Learners investigate hidden photo metadata, including camera details and GPS location data. Using GPS coordinates from 10 images, they plot locations on a map to uncover where the cyber criminals are hiding.

Format: Game

Time: 15 minutes

Owner: Cyber Skills Live

Link: <https://cyberskillslive.com/activity/photo-detective/>

Network Security — Ring of Firewalls

What it provides: A game where learners adjust firewall settings to block unwanted access and protect a company computer system from a virus attack.

Format: Game

Time: 15 minutes

Owner: Cyber Skills Live

Link: <https://cyberskillslive.com/activity/ring-of-firewalls/>

Cryptography — Encrypting Files

What it provides: Introduces encryption as a way to protect files and explains how encryption keys are used to read protected information.

Format: Lesson plan

Time: 15 minutes

Owner: Cyber Skills Live, Digital Skills Education and Data Education in Schools

Link: <https://cyberskillslive.com/activity/encrypting-files/>

National Crime Agency — Exploring Cybercrime



What it provides: Lessons exploring why young people may become involved in cybercrime, the risks involved and the impact on individuals and communities. Resources for ASN pupils are also available.

Format: 2 lesson plans/activities

Time: 2 × 40 minutes

Owner: National Crime Agency

Link: [National Crime Agency: Exploring Cybercrime](#)

Link for ASN: [NCA: Exploring Cybercrime for pupils with SEND](#)

Digital Forensics — How to Solve a Murder



What it provides: Cyber Skills Live activity where pupils solve a fictional murder case by examining evidence and learning the basics of digital forensics.

Format: Lesson plan

Time: 45 minutes

Owner: Digital Skills Education / SDS

Link: [lesson-plan-how-to-solve-a-murder.pdf](#)

Ethical Hacking — How to Rob a Bank



What it provides: Pupils think like ethical hackers to identify security flaws in a fictional bank, introducing penetration testing and ethical hacking.

Format: Lesson plan

Time: 45 minutes

Owner: Digital Skills Education / SDS

Link: [lesson-plan-how-to-rob-a-bank.pdf](#)

Threat Intelligence — Making Better Decisions with Threat Intelligence



What it provides: Pupils act as cyber security decision makers protecting a pharmaceutical company, using threat intelligence to prioritise resources and respond to attack scenarios.

Format: Lesson plan

Time: 45 minutes

Owner: Digital Skills Education

Link: [Threat Intelligence Lesson Plan](#)

Code in Python — Cracking One Million Passwords



What it provides: Pupils use Python to investigate a fictional password breach and learn how cyber criminals exploit weak passwords.

Format: Lesson plan

Time: 45 minutes

Owner: Cyber Skills Live, Digital Skills Education and Data Education in Schools

Link: [Cracking one million passwords – Cyber Skills Live](#)

Security Operations — Defend Stirling Castle



What it provides: Learners use cyber security skills to help defend Stirling Castle, one of Scotland's most important historical sites.

Format: Lesson plan

Time: 30 minutes

Owner: Cyber Skills Live, Digital Skills Education, Data Education in Schools and Historic Environment Scotland

Link: [Defend Stirling Castle – Cyber Skills Live](#)

Cryptography — Hide Secret Messages with Steganography



What it provides: Pupils use digital skills and cryptography concepts to catch The Artful Hacker by uncovering hidden messages.

Format: Lesson plan

Time: 30 minutes

Owner: Cyber Skills Live, Digital Skills Education and Data Education in Schools

Link: [Hide secret messages with steganography – Cyber Skills Live](#)

Incident Response — Defend the Hospital



What it provides: A simulated Denial of Service attack activity where learners work together to defend Glenmargaret Hospital, keep computer systems running and respond to waves of cyber threats.

Format: Game

Time: 30 minutes

Owner: Cyber Skills Live

Link: <https://cyberskillslive.com/activity/defend-the-hospital/>

Open Source Intel — Investigate Broughty Ferries



What it provides: A game where learners investigate suspicious activity at a ferry company using open source intelligence techniques to gather publicly available information and determine whether Broughty Ferries is involved in illegal activity.

Format: Game

Time: 30 minutes

Owner: Cyber Skills Live

Link: <https://cyberskillslive.com/activity/investigate-broughty-ferries/>

Digital Forensics — Every Picture Tells a Story



What it provides: An interactive digital forensics game where learners become digital detectives, use Python code to extract hidden evidence from photographs and track down the hideout of a cyber criminal gang.

Format: Game

Time: 30 minutes

Owner: Cyber Skills Live

Link: <https://cyberskillslive.com/activity/every-picture-tells-a-story/>

Tech She Can — Tech for Safety & Security



What it provides: Helps learners understand how technology is used for safety and security, while broadening their knowledge of careers available in cyber and the wider tech sector.

Format: Lesson plans

Time: 2 × 60 minutes

Owner: Tech She Can

Link: <https://techshecan.org/lesson-packs/safety-security>

DigiLearn Scotland — SQA Level 4 Cyber Security Fundamentals and Internet Safety



What it provides: Education Scotland, in collaboration with Girvan Academy in South Ayrshire, provides resources combining SQA Level 4 units in Cyber Security Fundamentals and Internet Safety. The resources support learners to use the internet and online services safely, spot potential risks and recover from potential harm.

Format: Lesson plans and assessment booklet

Time: 3 × 40 minutes

Owner: DigiLearn Scotland / Education Scotland

Link: <https://blogs.glowscotland.org.uk/glowblogs/digilearn/2021/12/09/level-4-resources-for-cyber-fundamentals-and-internet-safety/>

Daydream Believers — Living in a Digital World



What it provides: An interactive journey into cyber security that explores key topics for staying safe in the digital world and offers practical suggestions to improve cyber resilience. Designed and developed in collaboration with Education Scotland.

Format: 3 lesson plans

Time: 8 hours

Owner: Daydream Believers / Education Scotland

Link: <https://daydreambelievers.co.uk/resources/digital-world/>

Note: The resources below are for CyberFirst schools only and are accessible when signed up as a CyberFirst school.

National Cyber Security Centre — CyberFirst Resources



What it provides: A suite of CyberFirst school resources from the National Cyber Security Centre, including age-stage activities and practitioner guidance.

CyberFirst Trailblazers: S1 — 3 activities and practitioner guide; 3 × 60 minutes.

CyberFirst Adventurers: S2 — 3 activities and practitioner guide; 3 × 60 minutes.

CyberFirst Investigators: S2/S3 — 4 activities and practitioner guide; 4 × 60 minutes.

CyberFirst Defenders: S3 — 5 school days.

Owner: National Cyber Security Centre

Link: <https://www.ncsc.gov.uk/cyberfirst/resources>

Senior Phase, S4 – S6

Young people aged 16–18 can now explore cyber security through a set of practical, industry informed learning resources designed for use in the classroom. These activities help educators and employers work together to build real-world skills, spark curiosity about cyber security careers, and support learners to understand how cyber threats and protections shape everyday life. The materials are flexible, easy to use, and aligned with Scotland’s growing need for future cyber talent.

Cyber Security Lesson Starters from CODE

What it provides: Short lesson starter videos exploring hacking, common scams, security best practice and practical ways to protect personal information from cyber threats.

Format: Lesson starters

Time: 5–10 minutes

Owner: CODE

Link: [How Not to Get Hacked - YouTube](#)

Cybergames UK

What it provides: A platform from The Cyber Trust designed to help test and develop cyber security skills through interactive games and activities.

Format: Online games

Time: 5–10 minutes

Owner: The Cyber Trust

Link: [CSC Cybergames - Cyber Games UK](#)

National Cyber Security Centre — Career Spotlight Videos

What it provides: Videos highlighting different routes into careers in cyber security.

Format: Video

Time: About 30 minutes per video

Owner: National Cyber Security Centre

Link: [Overview | Courses and Resources | National Cyber Security Centre](#)

Cyber 9/12 Strategy Challenge Preparation Workshops



What it provides: Workshops exploring the political, economic, social and legal dimensions of responding to a national cyber security incident, while developing public speaking and presentation skills.

Format: Lesson plans

Time: 4 × 50 minutes

Owner: DigiLearn Scotland

Link: [Cyber 9/12 Strategy Challenge – DigiLearn](#)

National Crime Agency — Exploring Cybercrime for ASN Pupils



What it provides: Fully accessible lessons for learners aged 12 to 16 with additional support needs and/or autism, raising awareness of online manipulation, exploitation and the risks linked to cybercrime.

Format: 2 lesson plans and 4 activities

Time: 2 × 40 minutes

Owner: National Crime Agency

Link: [NCA: Exploring Cybercrime for pupils with SEND](#)

Daydream Believers — Living in a Digital World



What it provides: An interactive journey into cyber security that explores key topics for staying safe in the digital world and offers practical suggestions to improve cyber resilience. Designed and developed in collaboration with Education Scotland.

Format: Lesson plans

Time: 8 hours

Owner: Daydream Believers / Education Scotland

Link: [Living In A Digital World - Daydream Believers](#)

National Centre for Computing Education / Raspberry Pi — Introduction to Cyber Security



What it provides: Resources exploring cyber crime techniques, data value, social engineering and threat prevention. Learners understand cyber security risks to organisations and individuals, protection measures, and career opportunities in cyber security.

Format: Lesson plans

Time: 13 × 40 minutes

Owner: National Centre for Computing Education / Raspberry Pi

Link: [Introduction of cybersecurity](#)

Learn My Way — Safety and Security Online Modules



What it provides: Free online learning to help learners gain digital skills, stay safe online and remain connected.

Format: Online e-learning

Time: 13 × 40 minutes

Owner: Good Things Foundation

Link: [Topics | Learn My Way](#)

Cybertrust Lesson Plans



What it provides: Step-by-step lesson plans for educators, students and self-learners to build and enhance cyber security skills.

Format: Lesson plans

Time: 17 × 40 minutes

Owner: The Cyber Trust

Link: [CSC Lesson Plans - Cyber Games UK](#)

Cyber Security NPA Resources



What it provides: National Progression Awards in Cyber Security at SCQF Levels 4, 5 and 6, providing foundation knowledge and skills in data security, digital forensics and ethical hacking, and supporting a skills pipeline into the cyber security industry.

Format: Qualification

Time: 120 hours per level

Owner: SQA / Qualifications Scotland

Link: [NPA Cyber Security SCQF levels 4, 5 and 6 - Qualifications Scotland](#)

TryHackMe



Note: Free access is available when signed up as a CyberFirst school.

What it provides: Free, interactive, browser-based cyber security learning where learners hack machines, investigate attacks and build real-world skills through guided, immersive learning.

Format: Online learning pathway with lessons, simulations and games

Time: 3 months

Owner: TryHackMe

Link: [Learn Cyber Security | TryHackMe Cyber Training](#)

Note: These resources are for CyberFirst schools only and are accessible when signed up as a CyberFirst school.

National Cyber Security Centre — CyberFirst Resources



What it provides: CyberFirst resources for Senior Phase learners, including intensive school-based programmes for S4 and S5.

CyberFirst Futures: S4 — 5 school days.

CyberFirst Advanced: S5 — 5 school days.

Owner: National Cyber Security Centre

Link: [Overview](#) | [Courses and Resources](#) | [National Cyber Security Centre](#)