

# Computer Crime & Cyber Security

Year 9 Legal & Ethical Computing • Building on Digital Citizenship (7.1) and AI Ethics (8.2)

9.2 • Knowledge Organiser

## Computer Crime Laws

- **Computer Misuse Act (1990):** UK law governing computer crime
- **Section 1:** Unauthorised access (6 months prison)
- **Section 2:** Access with intent (5 years prison)
- **Section 3:** Unauthorised modification (10 years prison)
- **Motivations:** Money, challenge, revenge, activism

Crime	Example	Penalty
Hacking	Accessing someone's email	6 months
Fraud	Stealing bank details	5 years
Damage	Deleting files/websites	10 years

**Key Point:** "Just curious" is not a legal defence - all unauthorised access is illegal.

## Malware Types & Threats

### Virus

Attaches to files, spreads when run

### Worm

Self-replicating through networks

### Trojan

Disguised as legitimate software

### Ransomware

Encrypts files, demands payment

- **Infection:** Email attachments, downloads, USB drives
- **Signs:** Slow performance, pop-ups, missing files
- **Protection:** Antivirus, updates, avoid suspicious links

**WannaCry (2017):** Ransomware hit 300,000 computers worldwide, including NHS systems.

## Password Security

- **Strong Passwords:** 12+ chars, letters/numbers/symbols
- **Dictionary Attack:** Trying common passwords
- **Brute Force:** Trying every combination
- **Two-Factor:** Password + phone/app code
- **Biometric:** Fingerprint, face, voice recognition

Password Strength:  
password123  
Purple-Elephant-27!

**Best Practice:** Unique password for each account, use password manager.

## Data Protection & GDPR

- **Data Protection Act (2018):** UK GDPR implementation
- **Personal Data:** Info about identifiable person
- **Data Controller:** Decides how data is used
- **Lawful Basis:** Legal reason for processing
- **Penalties:** Up to 4% turnover or €20 million

### Your Rights:

- ✓ Right to be informed
- ✓ Right of access
- ✓ Right to rectification
- ✓ Right to erasure
- ✓ Right to data portability

**Example:** You can request all data Facebook holds about you.

## Identity Theft & Privacy

- **Identity Theft:** Stealing personal info to impersonate
- **Targets:** NI number, bank details, passport info
- **Methods:** Phishing, shoulder surfing, bin diving
- **Prevention:** Shred documents, privacy settings
- **Signs:** Unexpected bills, credit denials

**Bin Diving:** Criminals search rubbish for personal documents.

**Protection:** Cross-cut shredder, regular credit checks.

## Copyright & IP

- **Copyright:** Legal protection for creative works
- **Duration:** Life of author + 70 years
- **Automatic:** No registration needed in UK
- **Covers:** Books, music, films, software, art
- **Infringement:** Using without permission
- **Plagiarism:** Presenting others' work as your own

**Fair Dealing:** Limited use for criticism, review, education with attribution.

**Good Practice:** Cite sources, use Creative Commons, seek permission.

## Email Scams & Social Engineering

- **Phishing:** Fake emails requesting personal info
- **Spear Phishing:** Targeted attacks on individuals
- **Advance Fee:** Promise money for upfront payment
- **Warning Signs:** Urgent language, poor grammar
- **Verification:** Check sender independently

**Common Tricks:**  
"Your account will be closed!"  
"You've won £1 million!"  
"Urgent action required!"

**Always:** Verify through official channels, don't click suspicious links.

## Digital Health & Safety

- **RSI:** Repetitive Strain Injury from poor posture
- **Eye Strain:** Tired eyes from screens
- **20-20-20 Rule:** Every 20 mins, look 20 feet away for 20 secs
- **Blue Light:** Can disrupt sleep, use filters
- **Ergonomics:** Proper chair, monitor height
- **Fire Safety:** CO<sub>2</sub> extinguisher for electrical fires

**Workstation:** Feet flat, screen arm's length, top at eye level.

**Breaks:** Regular breaks prevent RSI and eye strain.