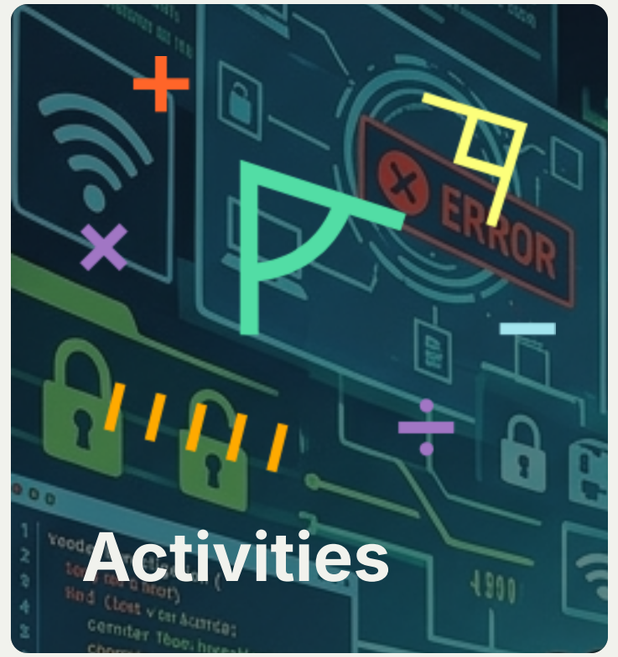
The Cyber Sleuths save the school

Play



Activities

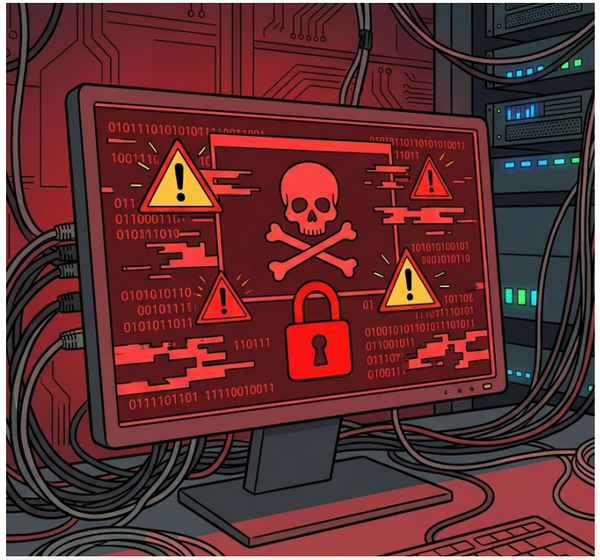
Glossary

Bonus

ENIGMATHICO

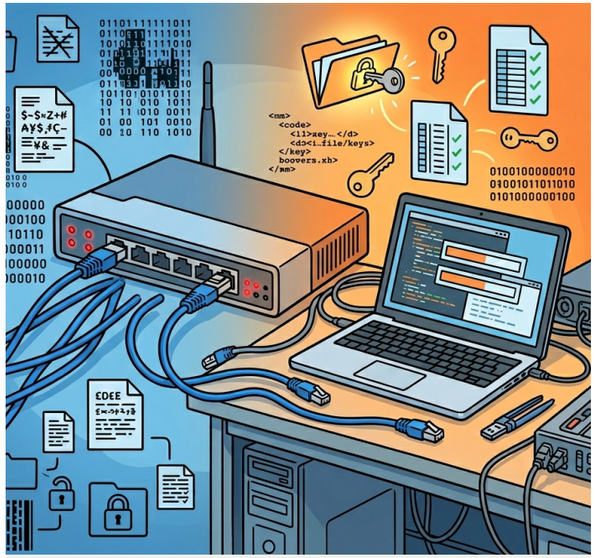
Co-funded by the European Union

Summary



Chapter 1

Save the school from the cyberattack



Chapter 2

Help needed



Chapter 3

Data is the key

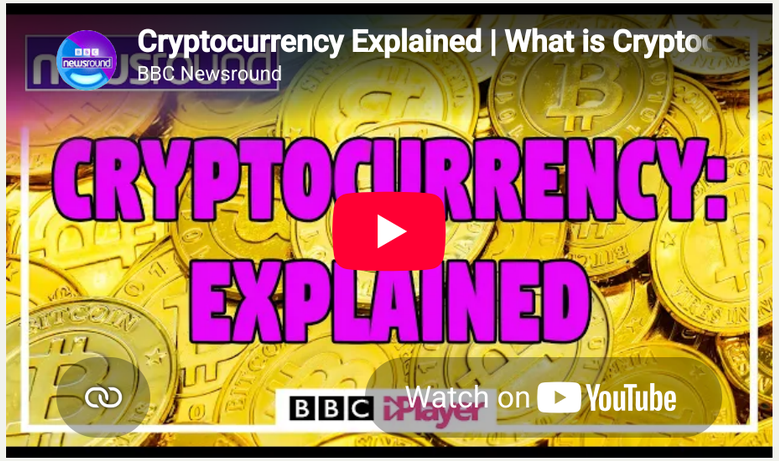


Chapter 4

Files unlocked

Bonus

Cryptocurrency Explained



Digital footprint: what is it and why should you care?



An article from BBC Teach explaining that a digital footprint is a permanent record of online activity. The resource includes a video, glossary, discussion points, and classroom activities to help children understand and protect their online reputation.

Whats a Scam?



Activities - Level 1



Activity 1

Mission sheet: Anatomy of a Computer



Activity 2

Mission sheet: Chasing the rogue router



Activity 3

Mission sheet: Data rescue



Activity 4

Mission sheet: Break the code!

Activities - Level 2



Activity 1

Mission sheet: Anatomy of a Computer



Activity 2

Mission sheet: Chasing the rogue router



Activity 3

Mission sheet: Data rescue



Activity 4

Mission sheet: Break the code!

Glossary



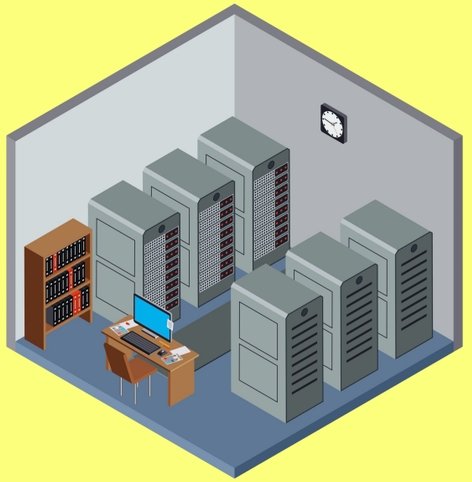
Dashboard



Cyberattack



Ransomware

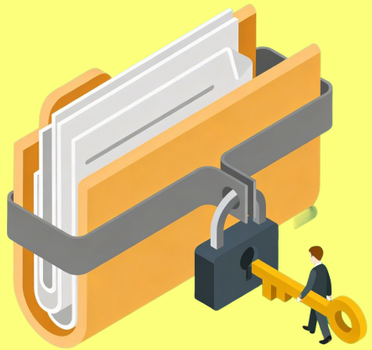


Server room

Glossary



Router



What does it mean "to decrypt files" and how do we do it?



Digital shadows



What are "decryption softwares" and how do they work?

Glossary



What are firewalls and how do they work?

Dashboard



Dashboard means a screen where you can **see and control important information in one place**, unlike other pages, it brings everything together in a clear and simple view.

It can **include**:

- Your **messages** or **notifications,**
- Your **progress** or **activity,**
- **Settings** and **controls**
- Important **information** or **updates**

This information is **used to:**

- Help you quickly **understand what is happening**
- Let you **manage** or **control your account or work**

A dashboard helps you see **everything you need at a glance** and makes things easier to use.

Cyberattack



A cyberattack is when someone uses computers or the internet to **harm, trick, steal information,** or **make systems stop working.**

For example, they might:

- **send texts that look reals to trick you into giving away your password**: this is called phishing,
- use **viruses** to damage a computer,
- crash a website by overloading it.

Cyberattacks are dangerous because they can steal data or stop services from working.

To stay safe, don’t share passwords, be careful with links, and ask an adult if something looks suspicious.

Ransomware



A **ransomware** attack is when someone **uses a computer virus to lock files or systems and demand money to unlock them.**

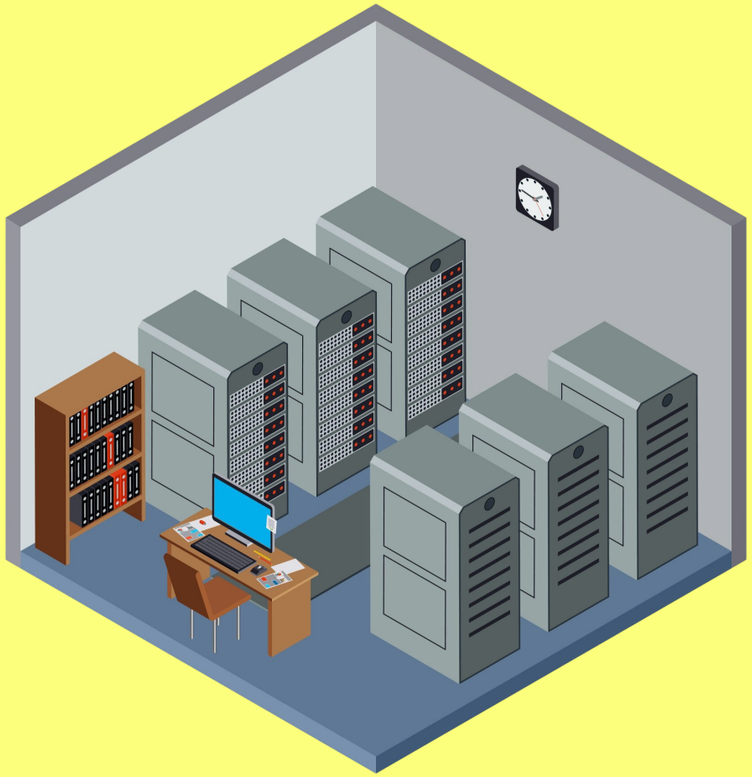
For example, they might:

- **lock a school** computer and show a **message asking for payment**
- **block access** to photos, documents, or games on a device
- encrypt files so they cannot be opened without a special key

Ransomware is dangerous because it can **stop people from using their files** and cause **loss of important data.**

To stay safe, **don’t click on suspicious links or downloads,** keep devices updated, and ask an adult if something seems strange.

Server room



A **server room** is a secure room where **computers called servers are stored**. These servers help run the school's **digital services,** such as the **internet**, **online learning platforms**, and **file storage.**

For examples:

- It can host servers that **manage the school Wi-Fi network.**
- It stores **student files and teacher documents** safely.
- It runs systems like the **school portal** or **learning platforms** (for example, homework websites or grading systems).

It **helps connect computers in classrooms so they can access shared resources.**

Router



A **router** is a device that connects different devices (like computers, tablets, and phones) to the **internet and helps them communicate.**

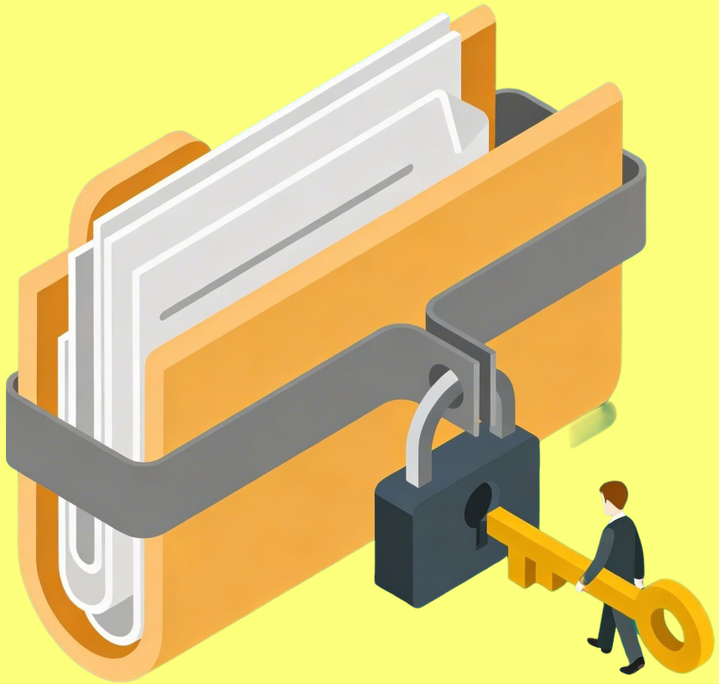
It works like a **traffic controller** for **data**, meaning information such as **messages, pictures, and websites,** sending it to the right place so everything works correctly.

Examples:

- At home, a router lets people **use the internet on different devices at the same time.**
- At school, it **connects classroom computers to the Wi-Fi network.**

When you open a website or send a message, the router sends the data to the right device quickly.

What does it mean "to decrypt files" and how do we do it?



Decrypt files means **unlocking files** that have been turned into a **secret code** so they can be read again.

Computers protect important files by **encrypting them**, which means:

- The information is **changed into a secret code**
- It looks like **random** or **unreadable data**
- Only someone with the right key can open it

When you **decrypt** files, you:

- Use a **special key** or **password**
- Turn the **secret code back into normal information**
- Make the **file readable again** (text, images, or data)

Digital shadows



Digital shadow means the **information about you that is collected automatically when you use the internet**, even if you don’t share anything yourself, unlike your **digital footprint**, which is what you **choose to share online**.

It can **include**:

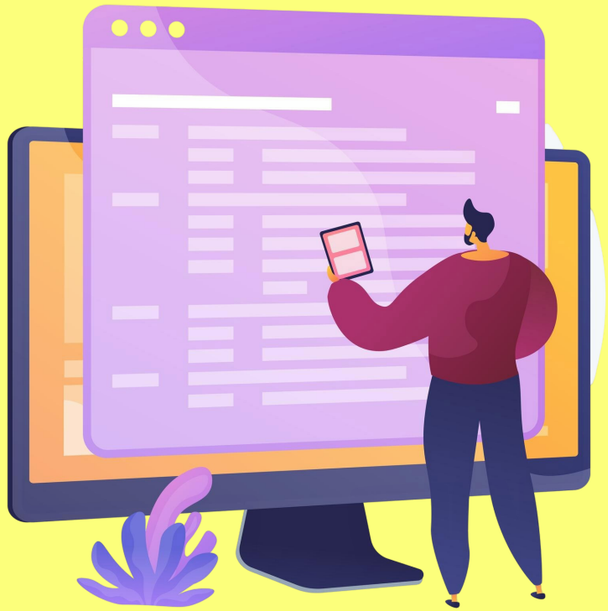
- **Websites you visit**
- **Things you click on**
- **Videos you watch**
- **Apps you use**

This information is **used to:**

- **Show you ads** or **content** you might like
- Understand your **online habits**

Your digital shadow grows every time you go online, often without you noticing it.

What are "decryption softwares" and how do they work?



Decryption software means a program used to unlock **encrypted** (coded) files or data **so they can be read again.** Unlike encryption tools, it turns secret code back into normal information).

It works by:

- Using a **special key** or **password**
- Changing **coded data back into readable files**
- Opening **information** like **texts**, **images**, or **documents**

This is **used to:**

- Access **protected** or **locked information**
- **Recover** and **read secure files safely**

Decryption software helps turn hidden data back into a form you can understand.

What are firewalls and how do they work?



Firewall means a security system that protects a computer or network by controlling what can enter or leave (unlike regular programs, it acts like a barrier between your device and the internet).

It **can**:

- **Block dangerous** or **unknown connections**
- **Allow safe** and **trusted data to pass through**
- **Monitor incoming** and **outgoing traffic**

This is **used to:**

- **Protect devices** from hackers or viruses
- Keep personal and **important data safe**

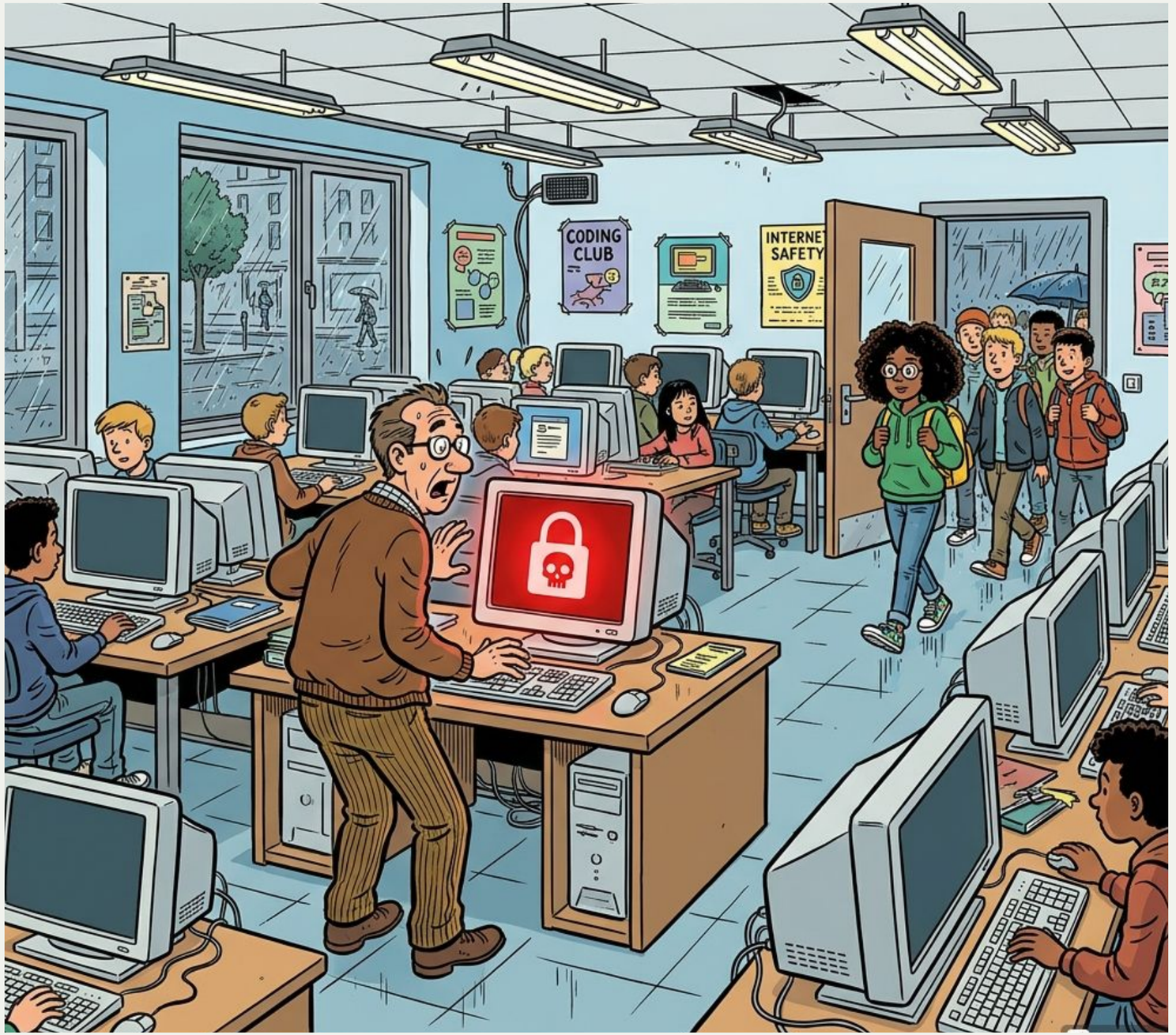
A firewall helps **stop harmful data before it reaches your device**.

Chapter 1

Save the school
from the cyberattack



It all started on a rainy Monday at Maple Grove Middle School. As the pupils are walking into the computer lab, the lights flicker.
Mr. Parker, the technology teacher, is turning on his computer...
Suddenly, the screen turns red!



SYSTEM LOCKED
PAY 500 BITCOINS TO UNLOCK

Mr. Parker gasps, "What on earth? This looks like a **cyberattack**!"



Mr. Parker rushes out of the classroom and calls the principal.

Soon, the whole school's computers stop working. No internet. No learning app. Not even the bells work!

Everything is going crazy in the hallways.



In the back of the lab, fourth graders looked at each other.

Zara, who loves coding, frowned.
“Someone just hit our school with a **ransomware**.”

“Ransom-what?” Toby asks, who likes video games but not tech stuff.
“It’s a bad virus,” explains Zara.



“Ransomware is a virus that locks your files until you pay money to get them back,” adds Lin, the group's security expert. “It’s a huge deal.”

David, the quiet one with a knack for puzzles, stands up. “We have to fix this before the school totally shuts down.”



Activity 1

Mission sheet: Anatomy of a Computer



Level 1:

Material

Mission sheet
The Computer cards

Download

Activity 1

Mission sheet: Anatomy of a Computer



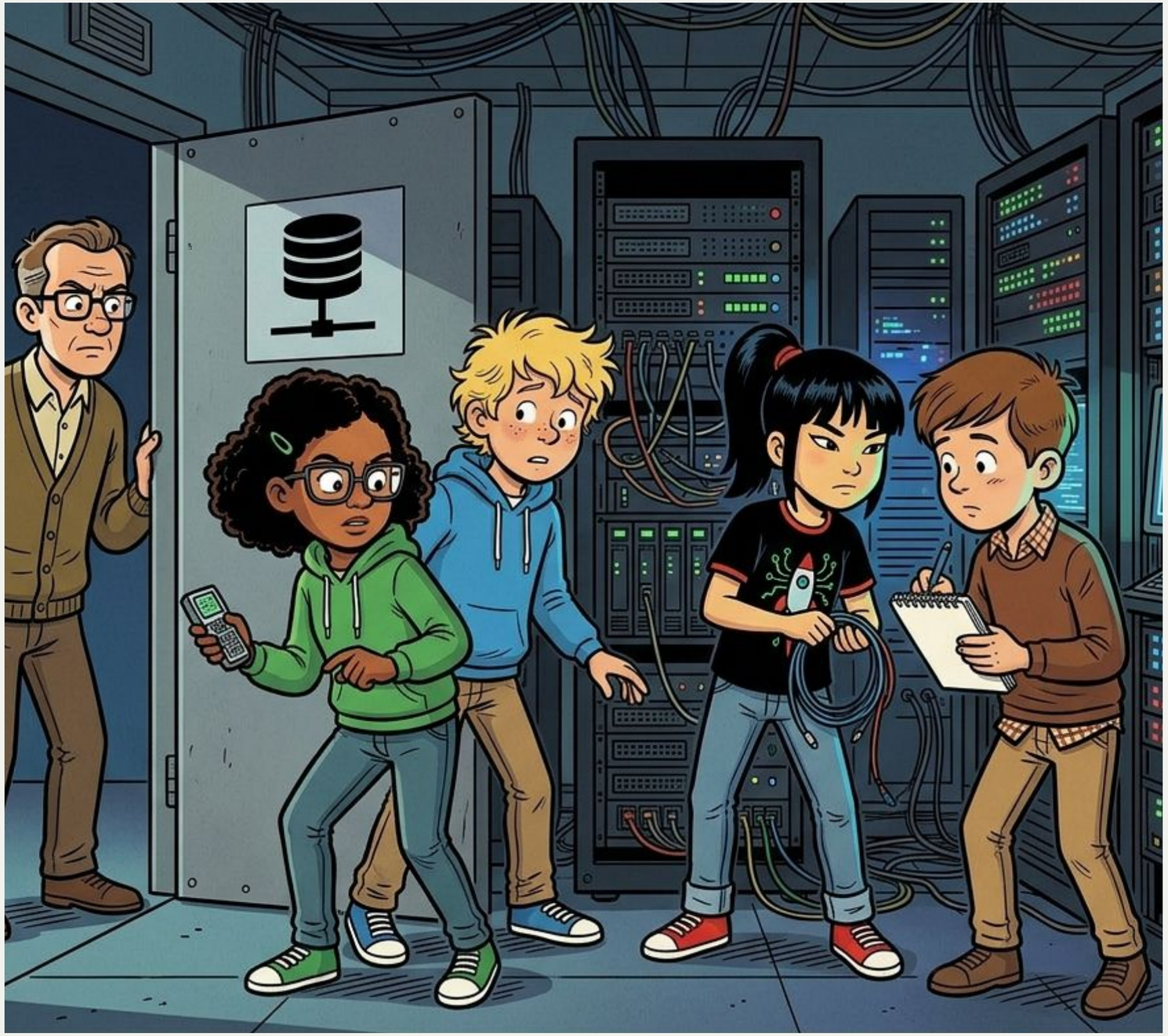
Level 2:

Material

Mission sheet
The Computer cards

Download

The Cyber Sleuth decide to investigate. They sneak into the **server room** with Mr. Parker permission (and a promise not to touch anything without gloves).



Lin runs a network scan on her laptop.
"There's a strange device connected
to the school Wi-Fi."
It's labelled... 'Guest Printer'?
That's not one of ours."



They are following the Wi-Fi signal to the janitor's closet.



There!

Hidden behind cleaning supplies is a small laptop with wires running to a fake **router**.

"Someone planted this here." Zara whispered.

The team must shut down the fake router without losing more data.



Activity 2

Mission sheet: Chasing the rogue router



Level 1:

Material

Mission sheet

Download

Activity 2

Mission sheet: Chasing the rogue router



Level 2:

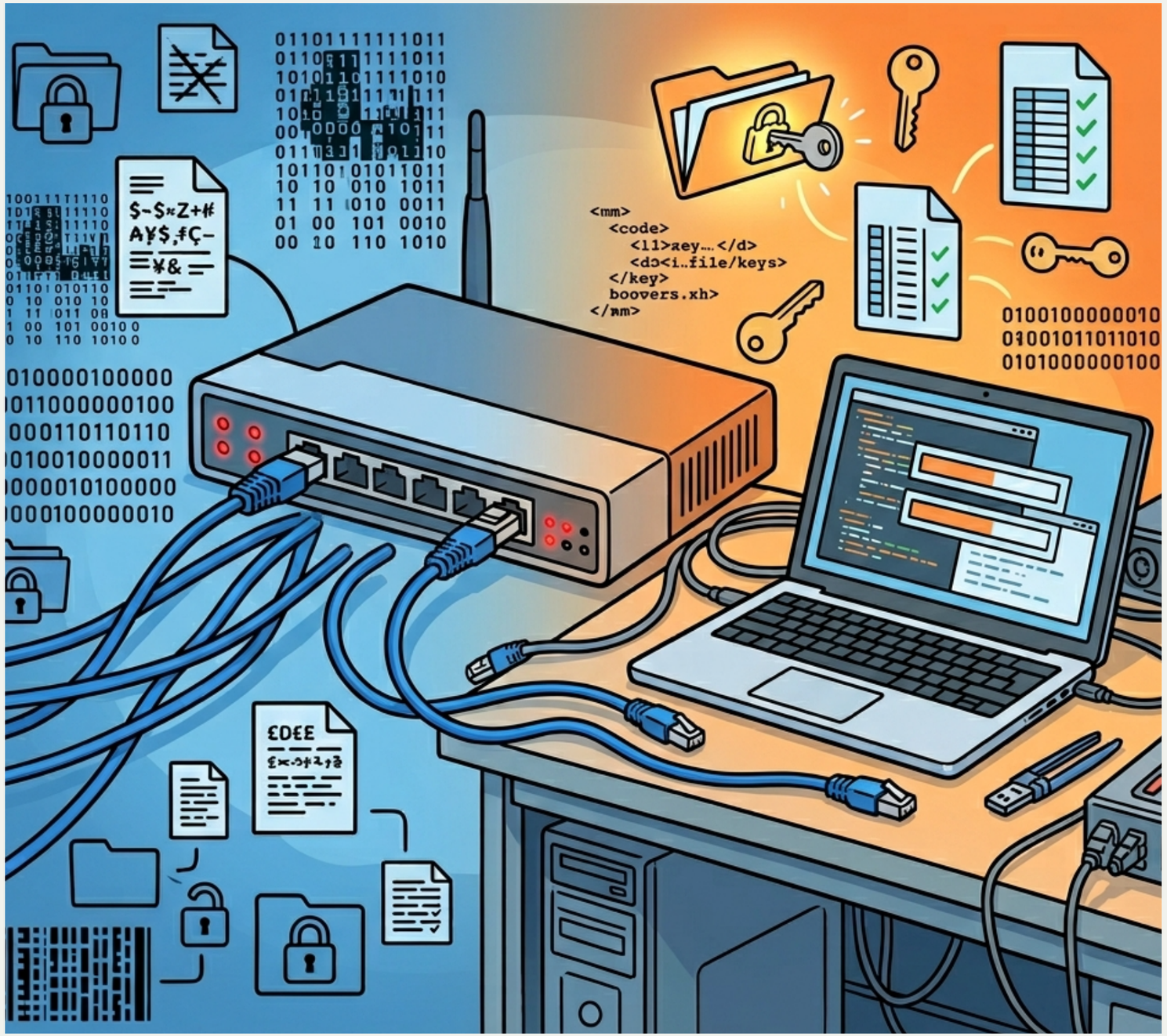
Material

Mission sheet

Download

Chapter 2

Help needed



Now that the router is off, David carefully unplugs it while Zara blocks it from the school's main network using her laptop

"We stopped the attacker from stealing more info," she says. "But the damage is already done. We need to **decrypt the files**"



"Wow! You two are amazing!
The login screen is back!" says Lin.

"We need to analyse the school's database on internet and social media use. He is trying to steal our data from the school server."



Chapter 3

Data is the key



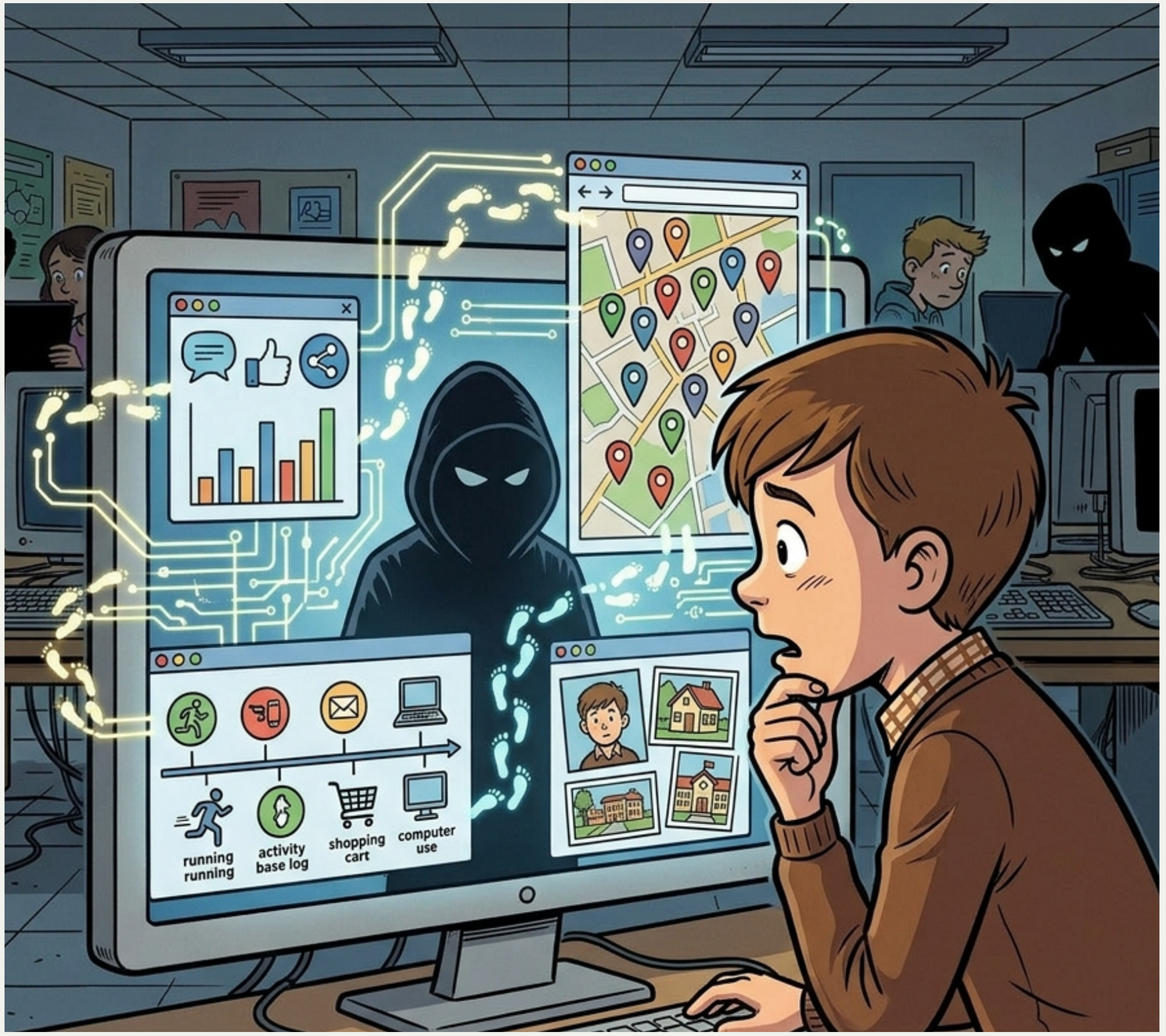
In the **digital shadows**, personal data is a valuable currency.

For the security analyst, Zara, a single leaked password wasn't just a line of text; it was the first domino, a key that could unlock a vault of personal information.



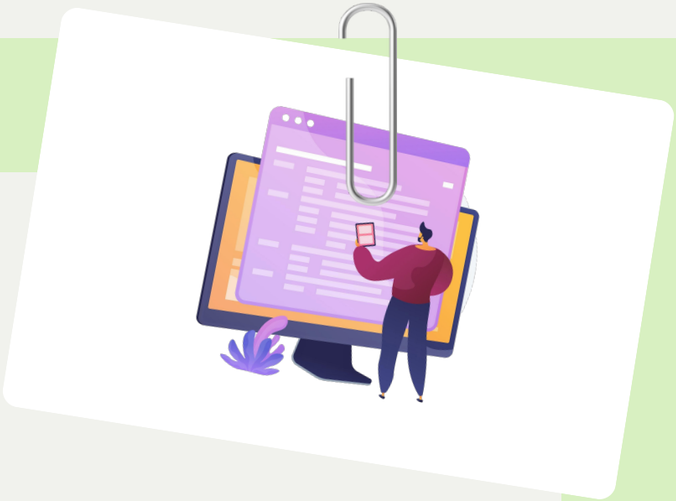
To the school's administration, Zara's data was just a record: test scores, attendance, and a health form.
But in hands of a hacker, it becomes a threat.

Looking at the screen, David exclaimed,
“I never imagined I was leaving so much information about myself on the internet!”



Activity 3

Mission sheet: Data rescue



Level 1:

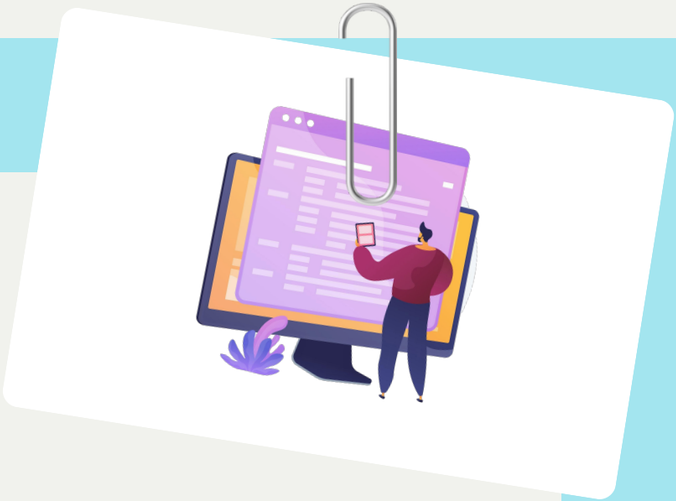
Material

Mission sheet

Download

Activity 3

Mission sheet: Data rescue



Level 2:

Material

Mission sheet

Download

Now our data is saved! But we still can't access the school **dashboard**...

“Phew! I was so scared we'd lost all the school's records for good,” David said with relief.



Chapter 4

Files unlocked



The attacker has locked the school files with a long, confusing code. Zara uploads a sample into her **decryption software**.

“This is super advanced,” she observes with worry. “But look, there's a pattern here.”

David leans in. “It's using a repeating sequence! That's a classic cipher!”



Activity 4

Mission sheet: Break the code!



Level 1:

Material

Mission sheet

Download

Activity 4

Mission sheet: Break the code!



Level 2:

Material

Mission sheet

Download

Together, they crack the code.

It took them over an hour and one bag of emergency snacks, but finally, the files were unlocked.

“Ha! Take that, you digital vandal! We shut down your little attack!” Zara cheered.

“Alright! Now let's boost the **firewall** before they even think of trying that again. This is actually kind of fun,” Toby added playfully.



The next day, the police discovered that the perpetrator was a former student who had been expelled and was seeking revenge.



A few days later, the school holds an assembly to thank the Cyber Sleuths. Mr. Parker hands them a shiny “Cyber Hero” badge.

“Thanks to your brains and bravery, we stopped a serious threat,” he says. “And now, we’ll upgrade all our cybersecurity.”

The Cyber Sleuths high-five.
“Can we get extra credit for saving the entire school?” Toby jokes.

Everyone laughs, but Zara is already thinking about their next mystery.





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