



FamilyPD
familypd.org

CYBER INVESTIGATOR FIELD GUIDE

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OF 4

Mission 001: Who Has Access?



You are a cyber investigator collecting clues about how data, devices, and people connect in cybersecurity. Observe carefully. Ask questions. Protect information.



1 MISSION: EVERYDAY CYBER RISKS

Activity: Look at the situations below.
Check the ones that are risky.



Clicking a link in an email from someone you don't know

☐


Using a strong, unique password for your accounts

☐


Connecting to public Wi-Fi without a VPN

☐


Sharing personal info on social media

☐


Turning on two-factor authentication (2FA)

☐


HINT

Think before you click, share, or connect.



CHALLENGE

List one risky habit you will work to change.

2 MISSION: DATA & PRIVACY (PII)

PII = Personally Identifiable Information.
Information that can identify you.

A. Sort the examples below.

Write each item in the correct column.



Full name



Email address



Phone number



School name



Favorite color



Device model

DIRECT PII

Identifies you directly

INDIRECT PII

Does not identify you directly

B. Data Flow: Number the steps in the correct order (1–4).

Start with where data begins.



Your Device

☐


Network

☐


Online Account

☐


Data Storage

☐


HINT

Data travels from your device, across a network, to an account, and is stored in a database.

3 MISSION: HUMAN FIREWALL

Directions: Read the message below.
Use the clues to decide if it is safe.

✉

From: IT Support Team <it.support@schoolsecure-update.com>

To: student@myschool.edu

Subject: ACTION REQUIRED: Verify Your Account Today

Time: Today at 7:42 AM

Hi Student,

We noticed unusual activity on your account.

If you do not confirm your details within 24 hours, your account will be suspended.

[Verify Your Account Now](#)

See attached for your \$50 gift card reward!

Thank you,

IT Support Team

Reward-info.pdf
(142 KB)

What tactic is being used?

(Check all that apply)

☐

Urgency

☐

Authority

☐

Fear

☐

Curiosity

☐

Reward

Circle the two clues
you would investigate first.

1

2



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Cyber safe. Cyber smart.
We've got this.

4

DIGITAL FOOTPRINT & OSINT

Directions: Based on this post, what clues could an attacker combine?
(Check all that apply)



Jamie R.

2h • 🌐

Can't wait for summer break!
Beach trip to Hawaii! 🌴☀️
Wearing my Westview High hoodie!
Go Panthers! 🐾❤️
My dog, Kona, is coming too!



Location

☐


Security-question hints

☐


Identity clues

☐


Social engineering details

☐

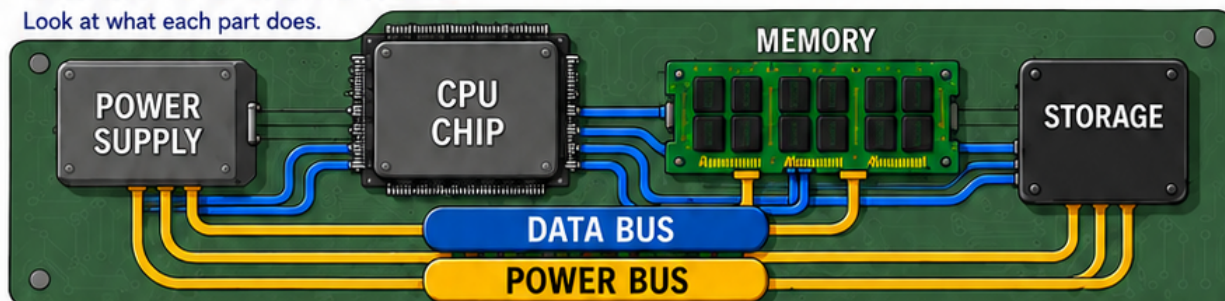

HINT

OSINT (Open-Source Intelligence) uses public information to build a picture of a person or system.

5

INSIDE THE COMPUTER

Look at what each part does.



HINT: Think about what each part does—power, processing, memory, storage, and data movement.

6

BITS, BYTES & NUMBER SYSTEMS

Directions: Learn how data is represented.

8 bits = 1 byte

Place Value Guide

1 0 1 0 1 1 0 1

128 64 32 16 8 4 2 1

Conversion Example

Binary 1010 =

Decimal ____ = Hex ____

This Byte in Decimal

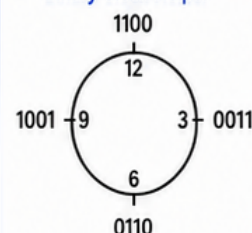
$10101101_2 = \text{____}_{10}$

How it works:

Add the place values where there is a 1.

$$128 + 32 + 8 + 4 + 1 = 173$$

Binary Clock Helper



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7 MISSION: OPERATING SYSTEMS

Look at the two operating systems below and compare them.

WINDOWS (EXAMPLE)



- User-friendly graphical interface
- Widely used on desktops and laptops
- Great for everyday tasks and business software
- Popular target for attackers because it is widespread

LINUX (PREFERRED IN CYBERSECURITY)



- More control and customization
- Powerful command-line tools
- Commonly used in servers and cloud systems
- Preferred by ethical hackers, forensics experts, and security researchers
- Open-source: transparent and community-driven
- More secure by design and less targeted



LINUX COMMAND PRACTICE

Match each task with the correct Linux command.

1. Print working directory
2. List files and folders
3. Change directory
4. Make a new directory

COMMAND BANK

pwd

ls

cd

mkdir



HINT: Knowing both is valuable, but Linux is widely used in cybersecurity.

8 MISSION: PROTECT THE NETWORK

A. Authentication Check

Directions: Circle the strongest password.

password123

Kayden2026

Blue!River??Cloud

qwerty

Why is it stronger? _____

B. Access Control

Directions: Number these from the order you should secure them first for a new account. (1 = first)



Password



MFA



Account Access



Permissions

9 MISSION: COMMON PORTS

Directions: Write the port number for each service or use.



SSH



DNS



HTTP



HTTPS



SMB



RDP



CHALLENGE

Circle one service defenders should watch closely and explain why.



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MISSION: THE HACKING LIFECYCLE

Put the steps in the correct order (1-5).



Ethical cybersecurity requires authorization, scope, and permission.



HINT

Think like an attacker so you can build stronger defenses.



CHALLENGE

Why do each of these steps matter?

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MISSION: DEBRIEF

Directions: Reflect on what you learned.

- What information would be most valuable to protect? _____
- Which cyber skill seemed most interesting today? _____
- What is one security habit you want to improve? _____

CONTINUE THE MISSION

Directions: Talk with your family about staying safe online.

What online account would you most want to keep hacked/safe? _____

What device or home network is the threat? _____

What security habit should our family improve? _____

What are signs of a phishing message? _____



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