I Fired One Bullet in Fortnite. Here's What the Internet Did.

Worksheet #006

A practical networking worksheet for gamers, beginners, IT students and anyone curious about what happens behind the scenes when playing online.

Section 1

Before You Fire

Before reading the article or watching the video...

Imagine you're playing Fortnite.

You spot another player, aim your weapon and press the fire button.

What do you think happens between pressing that button and seeing the result on your screen?

Write down your explanation.

Quick Question

Does your bullet travel through the internet?

☐ Yes

☐ No

☐ I'm not sure

We'll revisit this question at the end.

Section 2

Follow the Packet

When you perform an action in an online game, your device communicates with a game server.

But how does that information get there?

Activity: Put the following events in the correct order.

Write numbers 1–7 beside the events.

☐ Your router forwards traffic towards your ISP.

☐ You press the fire button.

☐ The game server receives and processes information about the action.

☐ Your device sends network packets containing game data.

☐ Traffic travels across networks towards the game server.

☐ Your game processes your input.

☐ Updated game information travels back to your device.

Think About It

Why do you think the game needs to communicate with a server instead of handling everything on your own computer?

Section 3

Know Your Network

Every online gaming session depends on multiple devices and networking technologies working together.

Activity: Match the networking term to its description.

Term	Answer
1. IP Address	_____
2. Router	_____
3. Latency	_____
4. Packet	_____
5. ISP	_____
6. Game Server	_____

Descriptions

A. A small unit of data transmitted across a network.

B. A device that forwards traffic between networks.

C. A network address used to identify and communicate with a device.

D. The delay involved in communication across a network.

E. The company providing your internet connection.

F. A system that processes and coordinates gameplay information.

Bonus Question

What is the difference between your local network and the internet?

Section 4

Where Did My Bullet Go?

You're playing Fortnite, but something feels wrong.

You fire at another player, yet the result doesn't match what you expected.

Your network conditions might be affecting your experience.

Activity: Consider these three gaming connections.

Player	Latency	Packet Loss
Player A	10 ms	0%
Player B	80 ms	0%
Player C	150 ms	5%

Questions

1. Which player would generally have the most responsive connection?

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2. Which player is most likely to experience significant network-related problems?

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3. What does packet loss mean?

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4. Can a player have fast download speeds but still experience lag?

☐ Yes

☐ No

Explain your answer.

Remember: Low latency and stable packet delivery are important for responsive online gameplay. Download speed alone does not determine gaming performance.

Section 5

Think Like an IT Technician

A gamer contacts you with the following complaint:

"My internet is terrible! Fortnite keeps lagging, and my shots aren't registering!"

The gamer has a 100 Mbps internet connection.

Your job is to investigate before blaming the ISP.

Activity: Which checks would you perform?

☐ Check whether the device uses Wi-Fi or Ethernet.

☐ Test latency to the local router.

☐ Check for packet loss.

☐ Check whether other devices are using the connection heavily.

☐ Check whether the problem occurs in other games.

☐ Investigate possible game-server problems.

☐ Immediately replace the router without testing.

☐ Restart every device without documenting the problem.

Your Diagnosis

What would you investigate first, and why?

Challenge Question

If the gamer experiences lag only in Fortnite, but other online games work normally, what could this tell you?

Section 6

Test Your Own Network

Now it's time to investigate your own connection.

You don't need expensive equipment or specialist networking software.

A Windows computer and an internet connection are enough to get started.

Step 1 — Identify Your Connection

Are you connected using:

☐ Ethernet cable

☐ Wi-Fi

☐ Mobile hotspot

☐ Other: _____

Step 2 — Find Your Network Information

On Windows, open Command Prompt.

Type:

ipconfig

Press Enter.

Find your active network adapter.

Record the following information:

IPv4 Address: _____

Default Gateway: _____

Connection Type: _____

Step 3 — Test Your Router

In Command Prompt, type:

ping YOUR_GATEWAY_IP -n 10

Replace YOUR_GATEWAY_IP with the default gateway address you found.

Record your results.

Average Latency: _____ ms

Packet Loss: _____ %

Step 4 — Test an Internet Destination

Type:

ping 1.1.1.1 -n 10

Record your results.

Average Latency: _____ ms

Packet Loss: _____ %

Compare Your Results

Was your latency to the internet destination higher than your latency to the router?

☐ Yes

☐ No

What do you think explains the difference?

Important: These tests measure connectivity to your gateway and a public internet destination, not directly to Fortnite's game servers. Some devices may also block or limit ping responses.

Section 7

Networking Skills Assessment

Rate your understanding after completing the worksheet.

1 = Still Learning | 5 = Confident

IP Addresses

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Routers and Gateways

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

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Network Packets

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Latency and Packet Loss

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Basic Network Troubleshooting

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Understanding Online Game Communication

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Which networking concept would you like to understand better?

Section 8

The Bigger Picture

Think about how many systems are involved in one small action.

Your keyboard or controller.

Your computer or console.

Your network adapter.

Your router.

Your internet provider.

Multiple interconnected networks.

The game server.

And finally, your screen.

All of these systems contribute to your online gaming experience.

Reflection

What surprised you most about how online gaming works?

Where else in everyday technology do you think similar networking processes occur?

Final Thoughts

At the beginning of this worksheet, we asked:

Does your bullet travel through the internet?

Now complete this sentence:

"When I fire a bullet in Fortnite, the internet doesn't send an actual bullet. Instead..."

Anthony's Challenge

One Game. Two Connections.

For this challenge, you're going to become your own network technician.

If you have access to both Wi-Fi and Ethernet, test your connection using each.

Test 1 — Wi-Fi

Connect your computer using Wi-Fi.

Run the gateway and internet ping tests from Section 6.

Record your results.

Gateway Average: _____ ms

Internet Average: _____ ms

Packet Loss: _____ %

Test 2 — Ethernet

Connect your computer directly to your router using an Ethernet cable.

Repeat the same tests.

Gateway Average: _____ ms

Internet Average: _____ ms

Packet Loss: _____ %

Compare Your Results

Which connection performed better?

Did you notice any difference in latency or packet loss?

Why might Ethernet provide a more consistent connection than Wi-Fi?

If you cannot test both connection types, repeat the same tests at different times of day and compare the results.

The Final Challenge

The next time you play an online game, remember:

Behind every button press is a chain of devices, protocols, packets and systems communicating across networks.

The bullet might be virtual.

But the networking behind it is very real.

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Learn it. Understand it. Apply it.