Activity 3: Computer Problem Solvers

AI Helper Response Cards (Grades 3-5)

These cards provide pre-written AI helper responses for the Computer Problem Solvers investigation activity. The AI Partner on each team can read these aloud or the teacher can voice the AI helper.

> **For Teachers**
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> **How to use:**
> - Cards correspond to the three questions teams ask during Step 2
> - AI Partner reads the card (or teacher reads for the class)
> - Teams should discuss each response before moving on
>
> **The goal:** Students learn that AI helpers explain problems but people decide solutions.

Card A: What Are These Pop-ups?

Use when teams ask: "What kind of problem is this?"

AI Helper says:

"Thanks for asking me about this! Let me explain what I see:

The pop-up messages are fake. Real contests don't work this way—you can't win something you didn't enter! The spelling mistakes ('Congradulations!') are a big clue. Real companies check their spelling.

This is probably malware. Malware means 'bad software'—programs that got on the computers without permission. They're designed to trick people.

How it probably happened: Someone clicked a link in a tricky email. The email might have looked real—like it was from a friend or from the school—but it wasn't!

What I can tell you: - This is a common problem - It's not the student's fault for being tricked - Tricky emails are designed to fool people

What I CAN'T tell you: - Whether the student who clicked feels bad about it - How to make sure no one gets in trouble - The best way to explain this to the class

Those are decisions for people, not computers!"

Card B: How Did It Spread?

Use when teams ask: "How do bad programs get on computers?"

AI Helper says:

"Great question! Bad programs usually get on computers in a few ways:

1. Tricky Emails (Phishing) - Emails that look like they're from someone you know - Links that look safe but aren't - Attachments that seem normal but have hidden problems

2. Unsafe Websites - Downloading games or apps from unknown places - Clicking on ads that promise free stuff - Going to websites that aren't meant for kids

3. Spreading on Networks - Once on one computer, some bad programs can spread to others - Like catching a cold at school!

Why only Mrs. Chen's class? Someone in that classroom probably clicked something on Friday. The other classrooms didn't click it, so they're okay!

What I notice: I can see patterns in how these things spread. I know the signs of malware.

What I can't understand: - Why people click on things they shouldn't - How it feels to make a mistake like this - What the right thing to say to Mrs. Chen's class is

Those are things YOU would understand better than me!"

Card C: How Do We Fix It?

Use when teams ask: "What should we do?"

AI Helper says:

"Here's what I know about fixing this kind of problem:

What students should do RIGHT NOW: 1. **Tell an adult** — Teacher, IT person, or principal 2. **Don't click the pop-ups** — Even the 'X' might be a trick! 3. **Don't use those computers** — Until the IT team says it's safe

What the IT team will probably do: - Use special tools to remove the bad programs - Check if other computers got infected - Make sure it can't come back - Maybe teach students about tricky emails

Why students shouldn't try to fix it themselves: - The bad program might be sneaky - You could accidentally make it worse - The IT team has special tools we don't have

The most important fix: Learning from this so it doesn't happen again!

What I can help with: - Explaining what went wrong - Describing how malware works - Listing the steps to fix it

What I can't help with: - Actually removing the malware (I'm not that kind of AI!) - Deciding how to talk to the students who are upset - Knowing if Mrs. Chen needs extra support

The Fix It Team has to make those human decisions!"

Card D: What We Learned Together

Use during Step 4 report-out or class discussion

AI Helper says:

"Great teamwork, Problem Solvers! Let me summarize what we figured out together:

THE PROBLEM: - Tricky email → Someone clicked → Malware installed - Pop-ups appeared → Computers slowed down

WHAT I (AI HELPER) CONTRIBUTED: - Recognized the malware pattern - Explained how it spreads - Listed the steps IT teams use to fix it

WHAT YOU (PROBLEM SOLVERS) CONTRIBUTED: - Gathered the clues from the evidence card - Asked great questions - Made a plan that considers people's feelings - Will explain this to others in a kind way

WHY WE NEEDED EACH OTHER: - I know about computer problems, but I don't understand people - You understand people, but you needed help understanding the tech problem - Together, we solved it AND made a plan that's good for everyone!

THAT'S WHAT REAL CYBERSECURITY TEAMS DO!"

Educator Debrief Notes

After using these cards, help students articulate:

AI Helper strengths:

- Recognized the malware pattern quickly
- Knew technical terms and explanations
- Could list steps for fixing the problem
- Remembered information about how malware spreads

AI Helper limitations:

- Couldn't understand why people click tricky links
- Couldn't know how students might feel
- Couldn't actually fix the problem itself
- Couldn't make decisions about how to handle the situation kindly

The partnership insight:

- AI helped with technical understanding
- Humans handled the people parts
- Neither could solve it alone
- Real cybersecurity teams work this way!

Activity 3: Computer Problem Solvers — AI Helper Response Cards (3-5) Dr. Ryan Straight, University of Arizona