Computer System Diagnostics Exploration Guide   **NAME: _____**

1. Open your computer's resource monitor by holding down control + shift and then tapping escape. Click "More Details" in the lower left. Navigate to the Performance tab. How many MEGABYTES of RAM does your computer have? (You'll need to convert the GB to MB)

2. What percent of the RAM is used right now?

3. When the computer is sitting idle, how much of the CPU is being used?

4. What speed is the processor running at? Describe how this speed is measured (i.e. what is a gigahert?)

5. Navigate back to the Processes tab. How many applications are open now? How many background processes?

6. Click on the column headers like "CPU" or "Memory" to sort by that value. Which application is the most resource intensive? How much does it use?

7. What Background process is the most resource intensive? How much does it use?

8. Let's learn about different resource needs for various programs. To complete this table, have your resource monitor open when you activate the following programs and record your observations:

Program name	Resting CPU use	Highest active CPU use	Total memory Use	Graphics processing unit
Chrome browser with youtube open on one tab				
Microsoft edge with youtbe open on one tab				
Chrome with earth.google.com/web loaded				
Netbeans 8.2				
Paint				
Program of your choosing 1:				
Program of your choosing 1:				

9. We can use the resource monitor to kill processes that are stuck, or that we don't like, or that we think might be a security risk. Some processes are more important than others. Your goal here is to learn about a few background processes that make windows work, and try to see if you can kill some essential processes and gum up windows so badly you have to shut down and restart.

10. Check on these processes in your details tab. Record how much CPU and memory each is using. THEN Look up on the internet what the following background processes do. You'll want to search for something like "windows 10 process svchost.exe" and read about what it does. DO NOT search "What does svchost.exe do?"
    a) svchost.exe

    b) wininit.exe

    c) RAVBg64.exe

11. Which of these three do you think is the most important? Why?

12. Try right clicking each of these processes and click "End process tree". Record any chances in your computer's behavior.

13. Now, see how much RAM you can consume by opening as many windows and programs as you can. When you have reached as much memory use as you can, record your max memory percent, and the number of applications you have open.

14. How does your computer's behavior change with so much memory used?