Logbook:

I stayed safe by not staying up too late, not playing too much, and staying away from the screen.

1/23/2025— Today, I came up with an official idea for the science fair. I play video games sometimes, so I was wondering if video games will have an impact on your brain (dumber). I have more experience with video games so I thought this would be a good topic.
Official Question: Does playing video games affect your thinking skills?

Before I started researching video games and their impact on the brain, I researched how often children play video games a day. I learned that an average child plays an average of 1.5 to 2 hours daily.

After that, I researched how often children play video games a week. I learned that 25% of Americans play 3-7 hours a week, 25% play 8-12 hours a week, and 25% 13 hours or more.

Then, I researched if playing video games affects your intelligence. I learned that children who played more games than the average increased their intelligence between the two measurements by approximately 2.5 IQ points more than the average.

1/25/2025

Today, I decided which variable I will change. I decided that I will change how much video games I will play. I also decided on a “Fair Test” for the math problems. Math problems will be from Math Kangaroo. The Fair Test is that I will put “points” for completing the Math Problems in the time, which is 1 hour.

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1/30/2025

Today, I did the safety form. I decided what safety I can do. I also decided

who is going to supervise my science project, which is my parents. Also, I will be careful about not getting closer to the screen.

I also decided on a more fair test by not working on the same problems of the math kangaroo workbook. I will do the same year of the math workbook, but I will do different problems on the worksheet. So I will do part of the easy worksheet (considered as 3 points each problem, and I will do 2 problems), do part of the medium difficulty (considered as 4 points each problem, and I will do 2 problems of it), and I will do the hardest of the worksheet (considered as 5 points each problem, and I will do 2 problems of it). Also 6 points if the time is under 7 min.

2/06/2025: I filled out the safety form and also I made a new signature. I made a plan that when I am at home, I am going to make 3 worksheets for my trials based on the Math Kangaroo workbook. I will take 2 easy problems, 2 semi-hard problems, and 2 hard problems. And put them on the worksheet that I made. I will repeat this process for the other 2 worksheets (for the other trials) and they would be different problems.
I also decided that I will just do the worksheet one day, and then play 30 min of video games the next day and do the worksheet, and then play 1 hr of video games the next day.
Also, I did more research for my project.
I was wondering if different types of video games have different impacts on your brain. I learned that not all video games affect your brain equally.
Another thing that I was wondering about is how video games were made.
Video games were made in the 1950s and 1960s computer scientists began designing simple games and simulations on minicomputers and mainframes. They were made by some MIT (Massachusetts Institute of Technology) students.
I also added on the slideshow which shows the project a bar graph that shows how video games affected my brain.
I also added a picture of the math workbook that I am going to use.

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2/7/2025

This is the day when I will do trial 1 for my science project. I will put the results in the google slides. The results for the first trial is that I got a total of 20 pts, all problems right on the easy and semi-hard levels, all wrong on the hard level. The time is 6:55.09 which is under 7 min so 6 pts.

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2/13/2025

I decided that I will do the experiment this week because I found another game that might work better, which is called “Unravel 2”. It is based on teamwork, and it is more of a strategy game. I think strategy games will impact more on your brain. I also know that parents will only give kids strategy games. Also from my other research, I found out that a lot of games were based on strategy, so I chose a game that might have the most impact on your brain.

Which means that I will start the whole experiment over, and also do different problems from different years. Instead of problems from 2021, I will do problems from 2020.

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2/14/2025

Today, I recorded the data that I got from trial 1. As a result, I got 4/6 correct (Easy and semi-hard), and then I got the time of 6:42.33, which means that I got 6 pts. So 3*2+4*2+6=20

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2/20/2025

Today, I changed the experiment process for this project. Instead of doing only 10 easy problems from Year 2000 and 2002 and 2004 for all the trials. I also changed that you get one point for each correct answer. And I also shortened the time to 3 min to get 3 points.

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2/21/2025

Today, I did trial 1. I got 6 pts for the number of correct answers, and the total amount of points was 6 pts.

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2/22/2025

Today, I did trial 2. I got 4 pts for the number of correct answers, and the total amount of points was 7 pts.

— —

2/23/2025

Today, I did trial 3. I got 6 pts for the number of correct answers, and the total amount of points was 9 pts.

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2/24/2025

Today, I analyzed and organized the data and put it on my slideshow. As a result, I got smarter every time I played more games, especially when you play more. (According to my experiment)Then, I turned the slideshow and this logbook in. I also did some final revising and editing before submitting.

Bibliography:

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2025 Safety Form

☑ I have written a research plan that includes the following:
- The question or problem being addressed and the expected outcome
- Describes in detail the method and procedures including all safety precautions Includes all procedures to be used for data collection and/or building your prototype, if an engineering project
- Identifies any potential risks and safety precautions to complete the project safely
- Who will be supervising your project? For approval, an adult over 18 must be present and supervising during experimentation or prototype development and building.

☑ I have reviewed this research plan with my:
- Teacher
- Parent/Guardian
- Any other 18+ Adult who will be supervising the project (if not listed above)

☑ I have reviewed the rules for The Academy of Science – St. Louis Science Fair and verified with my teacher that my project adheres to the rules.

☑ I have reviewed the additional rules that apply if my project involves any of the following:
- Mold
- Bacteria
- Humans

I acknowledge that all of the above safety precautions will be followed and that this project will be completed in a safe manner. I also acknowledge that no humans or animals (vertebrates or invertebrates) will be harmed in any way.

Print or Type Student Name	Student Signature	Date
Jialin Kang		2-6-25
Print or Type Parent/Guardian Name	Parent/Guardian Signature	Date
April Kim		2-6-25
Print or Type Teacher Name	Teacher Signature*	Date
Brendan Kearney		1-16-2025

*You may include a project approval email from your teacher in lieu of a teacher signature.

Questions? Contact your science teacher, or the Academy Fair Director at sciencefair@academyofsciencestl.org