



Subjects playing the Untitled Goose Game.

What affect do
video games
have on heart
rate?

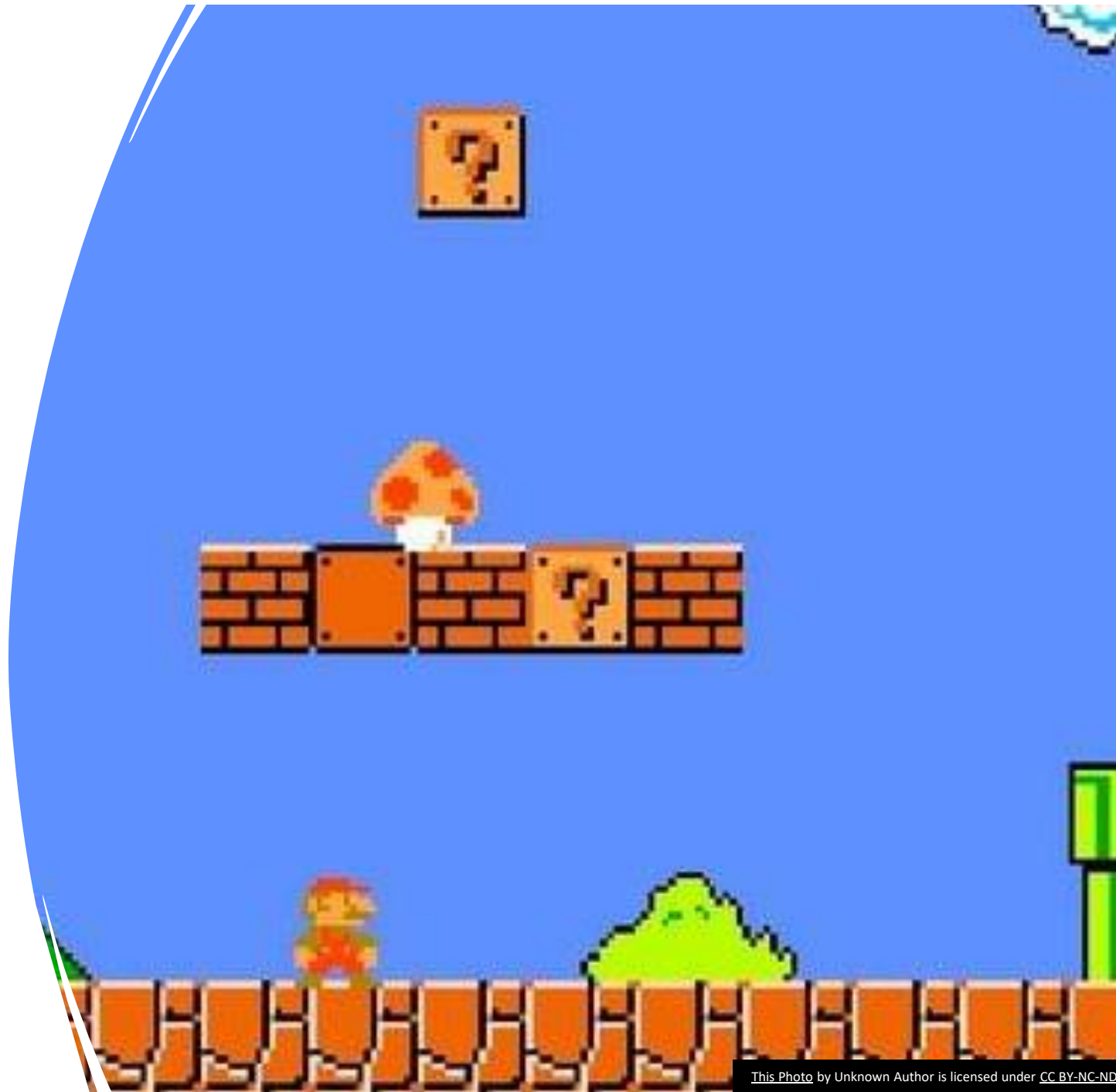
~~Two~~ 4th graders



Introduction

Welcome to the world of video games. There is an important bond between video games and heart rate. This is important because parents may want to know how video games affect their children.

Video games can be bad because video games increase heart rate for long periods of time which is not healthy. But short bursts are good for you. While running provides shorter boosts.



Question/Problem and Predictions

- Our primary question is how do video games affect heart rate?
- We thought Mario Kart would have a higher heart rate than the Untitled Goose Game because Mario Kart is a more stressful game than the Untitled Goose Game.



Discussion and Interpretation

- The evidence points in the favor of our hypothesis about Mario Kart and stressful games leading to a higher heart rate.
- All data showed that Mario Kart led to a higher mean heart rate for each child.
- Mean means an average heart rate.
- Some uncontrolled variables are listed below this is important because it could really change the answers to our test.
- Subject L's heart rate monitor may not have been working so info from him may be faulty.
- It is also possible some kids like video games more than others do so some may have been more excited , which effects heart rate.
- We did not take age into account, so we had a 7-year-old and 2 9-year-olds and a 11-year-old.
- We may have selected different modes in Mario Kart which would make it change drastically.
- Some kids might have been scared to play.
- We took breaks to reset Mario Kart which could lead to a lower minimum and maximum.



Investigative Methods

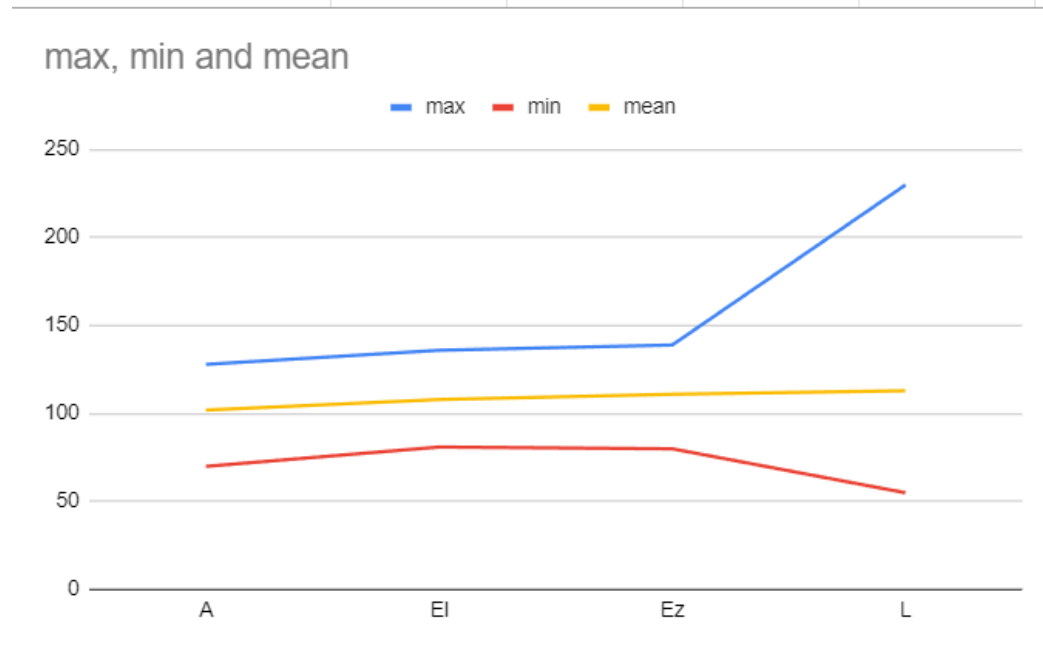
- 4 heart rate monitors and 4 i-pads.
- 4 subjects
- 2 video games
- 2 treadmills
- 2 consoles
- 2 computers

Investigative Procedure

1. Put on heart rate monitors
2. Set up consoles
3. Play game for 15 min.
4. Switch games
5. Play game for 15 min.
6. Walk for 5 min.
7. charted data
8. Interpret results
9. Make this [presentation]

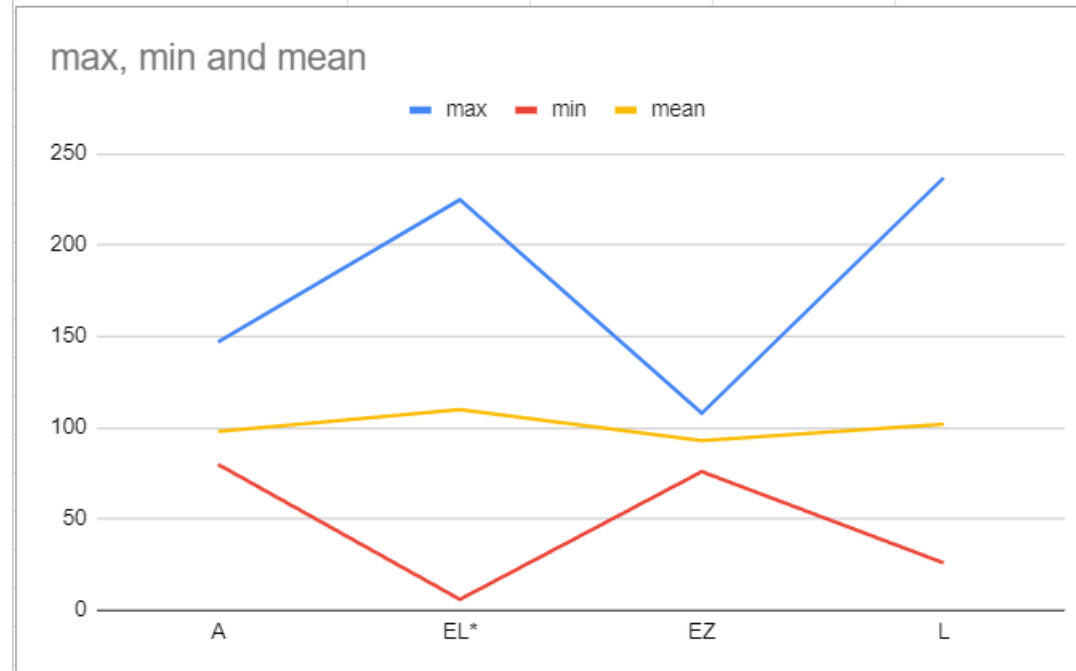
Results and Data Visualization – M.K.

	max	min	mean	
A	128	70	102	
EI	136	81	108	
Ez	139	80	111	
L	230	55	113	



Results and Data Visualization – U.G.G.

	max	min	mean	
A	147	80	98	
EL*	225	6	110	
EZ	108	76	93	
L	237	26	102	



*subject's monitor fell off

Results and Data Visualization – walking

	max	min	mean	
A		113	89	101
EL		132	97	117
EZ		127	102	115
L		237	35	109



Implications and Ideas for Future Research

If we did this study again, we would make sure everyone was of the same age. We would have paired Mario Kart races better.

If we had to do another study about heart rate, we would have done one called, “which game has the lowest heart rate” and investigate about how video games can control ADHD.

We also think that the topic we picked was important because it showed that Mario Kart had a higher mean heart rate than the Untitled Goose Game so that means it speeds up the mean heart rate.

Implications and Ideas for Future Research

- It gives parents information the impact video games have on their children's heart health.
- Changes
 1. Longer games.
 2. Games without breaks
 3. New video games

References

We got info from these sites

- Effects of Playing Video Games, Sachs Center, George Sachs PsyD
<https://sachscenter.com/effects-playing-video-games/>
- Are Video Games Bad for Your Heart? Greg Gaslow, Anschutz:
<https://news.cuanschutz.edu/medicine/are-video-games-bad-for-your-heart>
- How Video Games Can Impact your Heart Health, Discover Magazine:
<https://www.discovermagazine.com/health/how-video-games-can-impact-your-heart-health>



That's all Folks!