

How to do an experimental project for Science Fair

1. Background research can help us understand better about our project. We can use the 5 Whs to give more stuff to talk.
2. Question: Is video games bad for your eyes?
2. Find a hypothesis from background research.
If _ Then _ because _.

4. Decide on

a. Controlled Variable

- Something that is kept constant through out the experiment
lighting, distance of screen location,
bt screen & room

b. Manipulated Variable

- One state or value that is purposely changed.

c. Responding Variable

- A quantity, value or state that changes when a variable is manipulated. Spontaneous blink rate

5. Materials list:

6. Procedure step by step instruction on how to do the whole experiment.

* Must repeat 3 times

↳ this will prove your results can be reproduced

7. Results and observations,

8. Conclusion

9. Application and Extension

20-20-20 rule
1-2-10 rule



What were in 4A

Background Research Jan 5

Google key words

1. Dry eyes in kids
2. What is the normal blink rate?
3. Will they build up a eye that does not blink and the other eye does the work?
4. How does your eye get damage from the screen?
5. Does looking at different screens affect the blink rate?
6. What is an eye strain?
7. How does the blinking help the eye?

Screen = smartphones
 tablets
 Gaming consoles
 TVs
 Computers

vs

Other daily activities

- eat
- sing
- listen
- answer questions
- draw
- color it in
- lego?
- board game?

✓ Dominick the donkey (Jungles)
 ✓

key word to talk about
 screens can cause eye fatigue
 you blink less and can lose your
 focus. This can also cause
 eye strain and nearsightedness.

Intro switched to online school
 since the pandemic started many
 kids in the world have been
 on screen time can cause
 your eyes to get dry and tired.
 This can also cause eye strain
 and nearsightedness. Previous
 studies used subjective surveys
 to measure



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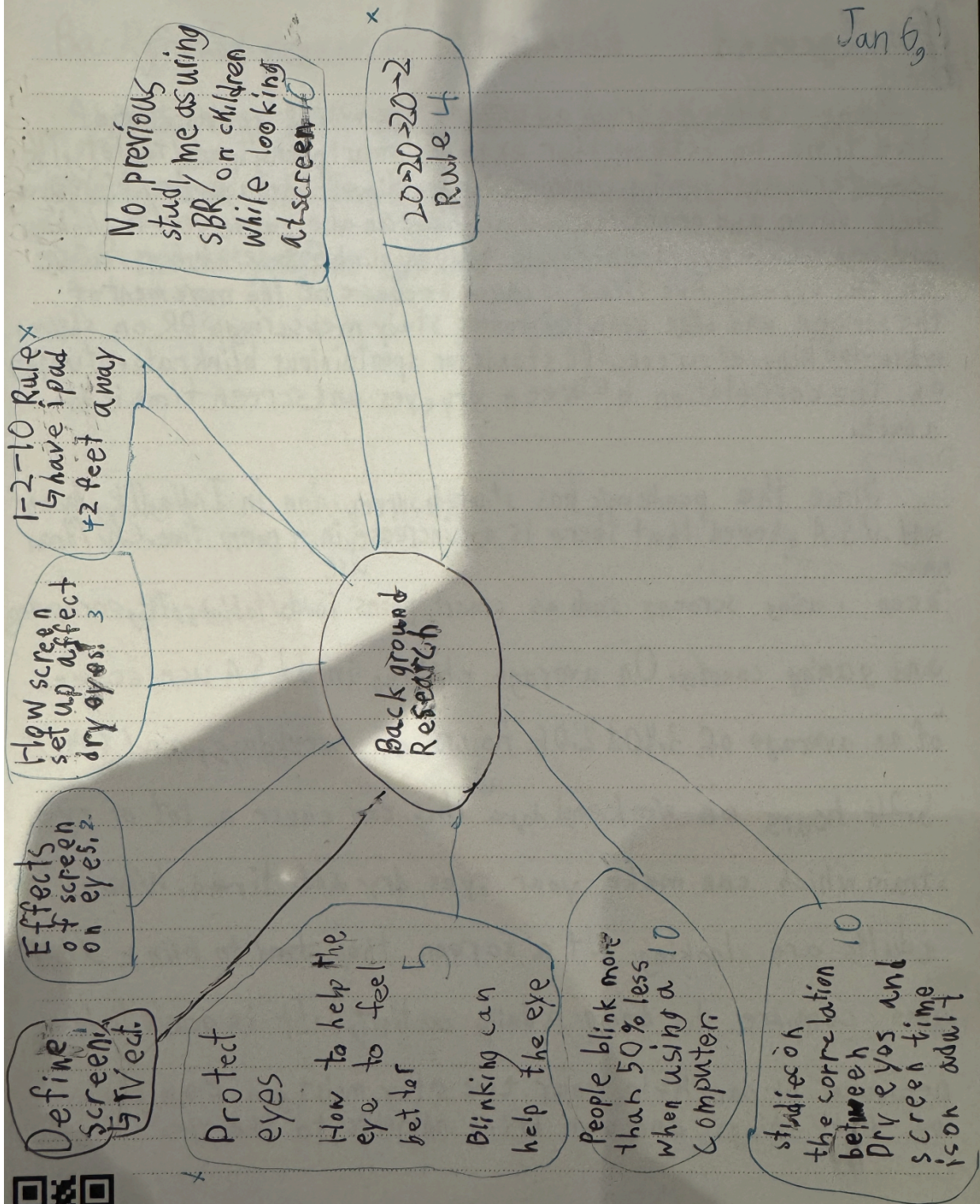
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Jan 6,



Background Research

Jan 7

Draft 1

Many children from all around the world spend a lot of the time on screens, for example smartphones, ipads/tablets, TVs, computers and gaming consoles. Screen time can cause dry, tired eyes, blurry vision and nearsightedness. This can also cause you to blink less and can cause eyestrain. People tend to blink 50% less when you are on the screen. Eye strain is caused because of the movement of the screen and blue light. No previous study measuring SBR on children while looking at screens. SBR stands for spontaneous blink rate. Studies on the correlation between dry eyes and screen time is on adults.

Draft 2

Since the pandemic has started, survey done in India, U.K., Japan and U.S.A showed that there is an increase in screen time. Children have been using screens such as smart phones, ipads/tablets, TVs, computers and gaming consoles. On average children in U.S.A use screen of an average of 3.40 ± 2.06 hours of weekdays, and 6.40 ± 5.24 hours on weekend days. This can cause a lot of eye strain which can make your eyes dry and tired. When adults are looking at a screen they tend to blink 50% less compare to doing a daily activity. It is good to blink because it can help your eye stay moist, can clean of dirty things and can bring nutrients to the eye.