

2023 NATIONAL DESIGN PROJECT (THEME: WELLNESS)

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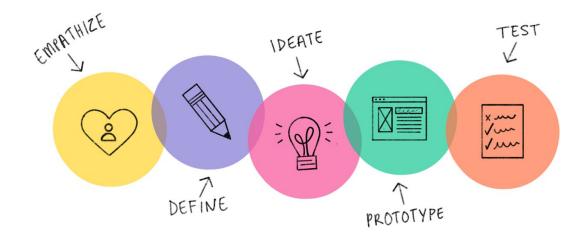
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CONTENT PAGE





Empathize

Identifying the problem & explore human context

Define

Research, observe, understand (Why is this important?)

Ideate

Brainstorm S or ideas a

Prototype

Start creating and experiment

Test

Implement the product, show & refine the idea.



PROBLEM STATEMENT:

The COVID-19 pandemic has shone a spotlight on wellness – specifically, the importance of our physical, mental, and emotional well-being to stay healthy and resilient. However, wellness goes beyond the physical and psychological state. As you explore this theme of Design for Wellness, you may consider the following:

Environmental Wellness

how might we promote the well-being of our planet, which faces dangers such as climate change, pollution, loss of biodiversity, waste and resource depletion?



Social Wellness

how might we design solutions to reduce social isolation and loneliness, improve social support networks and create opportunities for social connection?



how might we enhance wellness in the workplace and school by designing solutions to minimize stress and burnout, improving work-life harmony, and creating a healthy work/study environment?



Technology and Wellness

how might we design solutions that leverage technology to promote wellness, including digital tools for tracking health and wellness and virtual wellness programs?



Mental Wellness

how might we create solutions to promote mental wellness, such as reducing stress, anxiety, depression or the stigma associated with mental disorders?



Physical Wellness

how might we design solutions that promote physical wellness, including healthy eating, exercise, and sleep?

DEFINITION OF THEME (ONLINE)

What is wellness?

- The state of being healthy, especially when it is something that you actively try to achieve. (Link: https://dictionary.cambridge.org/dictionary/english/wellness)
- Wellness is the act of practicing healthy habits daily to attain better physical and mental health outcomes, so that instead of just surviving, you're thriving. (Link: https://www.pfizer.com/health-wellness/wellness/whless/wellness#:~:text=Wellness%20is%20the%20act%20of,surviving%2C%20you're%20thriving.)

What is mental?

Relating to the mind or involving the process of thinking. (Link: https://dictionary.cambridge.org/dictionary/english/mental)

MIND MAP

Examination context

People: Pri or Sec students Problem: High Expectations of doing well results in negative thoughts. Place: Classroom/Hall Solutions: Water bottle, sweets, take deep breath.

Boy-girl relationships
People: Sec students (13-16)

years old)

Problem: Unable to cope with breakups leading to poor

mental health. Place: Schools

Solutions: Self-regulate

People: Sec students (13-16

years old)

Problem: Unable to eat well because people tend to comment on their physical appearance, hence, they become depressed.

Place: Schools

Solutions: Counsellors to counsel

these people.

Fast Pace Industry

People: 50 to 60 years old.

Problem: With the fast and competitive environment, some older people find it difficult to adapt to the environment so

they tend to lose their jobs. Place: Fast Pace Industry

(Chemical/Bank)

Solution: Depend on their family members, however, often they get despise and end up having depression.

Presentation/Performance

People: Polytechnic students

Problem: First time doing an official presentation in front of the crowd and it is

graded.

Place: Audi, Lecture Theatre

Solutions: Talk to teammates, listen to

music, positive self-talk.

Area 1: School

Area 4:
Eating
Disorder

MENTAL
WELLNESS

Area 2: Home

Area 3: Work place

Political environment

People: 22 to 28 years old Problem: People who often just started in the new work force, cannot adapt to the

environment. Place: office

Solution: Find other jobs

and hop around.

CCA (Sports)

People: Primary School students (10-12

yrs old)

Problem: First time bring in a team sports. Feeling the pressure to hit expectations and compete with one another to make it to the school team.

Place: Field, Sports Hall, Outdoor court Solutions: Cry, Meditate, Stress relief toys, Gadgets for stress management.

Family problems

People: Mainly young people who don't know what to do when their parents fight. Problem: Parents undergoing divorce and often fight with violence at home.

Place: Living room

Solution: Counsellors and teachers to keep in contact with such students and counsel them. What happens if no one knows?

Financially poor

People: All ages (mainly younger people

who don't have a job).

Problem: The vicious cycle of poor financial health and poor mental health. A number of studies have demonstrated a cyclical link between financial

Place: Canteen (Where they have no

money for food).

Solution: Majority of these people

depend on FAS in school.

Design Opportunity

Area 1: School	Area 2: Home	Area 3: Workplace	Area 4: Eating Disorder
We intend to work on this area because we are a victim of this problem. We often feel stress during examination period, and it is hard to focus and do well. Nowadays, the school disallow students to bring in snacks which we heavily rely on to destress during the exam. When students start to do badly for examination, it affects their mental health. Hence, we are very keen to explore some ways to deal with these problems.	We kind of want to work on this area as well. However, comparing area 1 and 2, we would prefer area 1. Hence, we decided not to work on this area.	We decided not to work on this area as we have not gone out into the workforce, and we don't have many friends or relative who are working. It will be difficult to interview the users.	We decided not to work on this area as this may be a sensitive topic and users may not want to accept interviews from us.

Research 1 on existing problems related to area 1

Hundreds of students delayed in PSLE oral exam due to lag in online system

About 4 per cent of the 17,800 students who took the PSLE mother tongue language oral exam had their end time delayed.



Primary School Leoving Examination (PSLE) results are released at Horizon Primary School on Nov 24, 2021. (Photo Gaya Chandramohan)



Extracted from the news article: "But because of the delay, he ended up waiting outside the exam room for about 20 to 30 minutes after leaving the practice room. By then, he forgot everything he had prepared, his family said.

In usual conditions, he would only have to wait a few minutes before being let into the exam room. He told a teacher that he was stressed during the wait and they tried to reassure him, but he still ended up stuttering through the exam, the Primary 6 student told CNA.

Teachers later told him that SEAB may take the delay into account when computing the oral exam scores, he said.

"It was quite shocking for me to see (him like this), because I'm a first-time PSLE parent ... To see him, from the first day after the exams, was quite shocking for me, almost heart stopping," said his mother.

"When we came home, he broke down."

Link:

https://www.channelnewsasia.com/singapore/psle-mother-tongue-language-oral-exam-delay-online-system-primary-schools-3701046

Conclusion: In the situation like this, even the student's teacher could not help to relieve his stress. Maybe, we should design a product to help young students (Age – 12 to 16 years old) relieve their stress when they cannot cope.

Research 2 on existing problems related to area 1



Commentary: A hyper-competitive culture is breeding severe test anxiety among many students

The cases one clinical psychologist has seen suggests the idea that academic achievement is a necessary ingredient to obtain lifelong success can be a corrosive mindset.





Link:

https://www.channelnewsasia.com/commentary/hyper-competitive-culture-breeding-severe-test-anxiety-among-799076

Extracted from the news article: "Children and adolescents in Singapore face

problems, a commonly cited issue that afflicts many of the students we see at

pressures at school and at home. Other than relationship and family

the Institute of Mental Health is academic-based stress.."

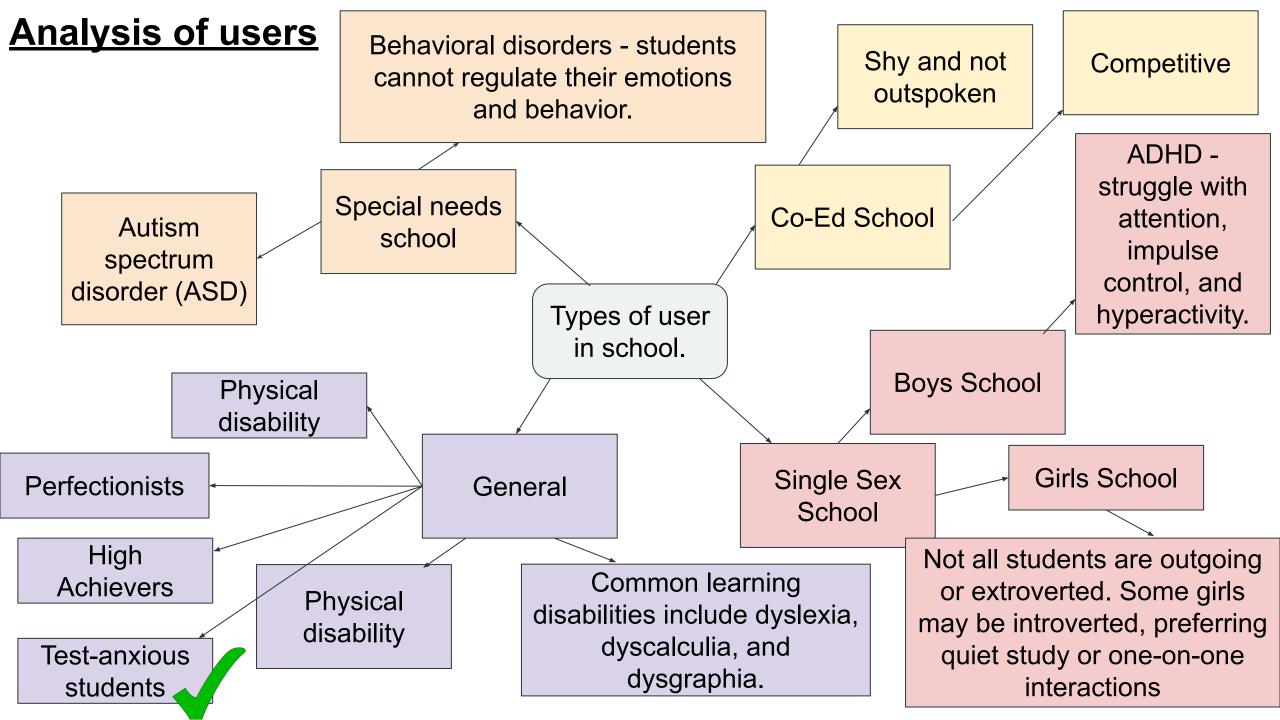
Conclusion: The pressure to do well is causing a lot of stress. This is becoming more and more severe. Maybe, as a designer, we should design something which can increase awareness or create a product which can efficiently assist these victims.

A competitive education system has put our students scholastically ahead of others globally, with benefits to individuals.

Studies have shown moderate amounts of stress and anxiety can motivate and encourage people to work harder and attain better performance.

Stress is an inevitable part of life, and exposing students to a reasonable amount in school builds resilience that will serve them well in their adult lives.

But an overly competitive culture can be detrimental for students' mental health. High expectations can lead to excessive stress and anxiety, especially during major examinations that have perceived consequence for one's future, such as the PSLE, and the O-, N- and A-Level national examinations.



Conclusion - User

In our project, our primary focus will be on assisting students who experience test anxiety. These students may have various conditions, including ADHD, introversion, or physical learning disabilities. However, they all share a common experience of experiencing test-related anxiety.

We will be targeting <u>students between the ages of 11 and 12</u> who are preparing for the Primary School Leaving Examination (PSLE), a significant examination in the sixth grade. While older students, aged 16 to 17, also face important exams, we have chosen to concentrate on younger children to help them develop healthy habits and effectively manage their mental well-being.

Research on current and past incidents where student's mental health

is compromised.

Students in distress: How can pressures be eased so they don't feel 'boxed in'?

Education Minister Chan Chun Sing outlined in Parliament a plan to ramp up counsellors in schools. But there are a few tricky things to overcome, say quests on this week's Heart of the













Extracted from the news article "While stress can come from sources other than school, Ms Yeap raised the critical role parents play. Knowing their child has a mental health issue can be a shock, denial can set in before guilt, which makes being supportive hard.

This is especially so for teenagers under 18. If they choose to seek help outside the school system – they need parental consent.

Looking out for signs of distress instead of dismissing their children's concerns altogether is critical. "Maybe my child is talking less, talking more than usual or becoming more withdrawn," she explains, adding how drastic changes in appetite, sleep and motivation levels are other key signals."

In conclusion: Students may not be open to sharing their stress to other people as they may feel that they will get made fun off. So these students will turn away from people and keep the stress in them. So maybe a product is needed to relieve this stress

Link:

https://www.channelnewsasia.com/singapore/singapore-school-stress-menta I-health-counselling-2097051

Types of environment

Big Hall: Sometimes, Students take their exam in the school hall, which may be a <u>big area</u>, causing the students to feel stress or students may feel stress due to high expectations from parents, self and from other people, causing there to be extra pressure and stress to do well.

Classrooms: Students may take their exams in the classroom. Sometimes the classroom may not have aircon, or the fan may not be blowing the student due to the location of where the student sits, causing him to feel very warm due to the warm temperature of the room and the stress he may be feeling. This will cause the student to feel more stress as the student will be already stress due to the exam and now the student needs to worry about how warm they are feeling.

Auditorium: in the auditorium, students are doing some last minute revision before their exams, and when they see their friends beside them also studying, they will feel a lot stress as when they study with their friends and when they are memorising and they do not remember, they will feel worried and feel stress.



Analysis of the problem

Students need a support when they are struggling. Maybe a symbol to remind them to do their best!

Environment need to be cooling so that students are comfortable.

Environment need to be quiet.

Physical symptoms of anxiety, such as racing heart, sweaty palms, and difficulty sleeping can occur during examination period which may exacerbate the student's stress level.

Students need a timer/watch to help them manage their time, clock in the class may spoil.

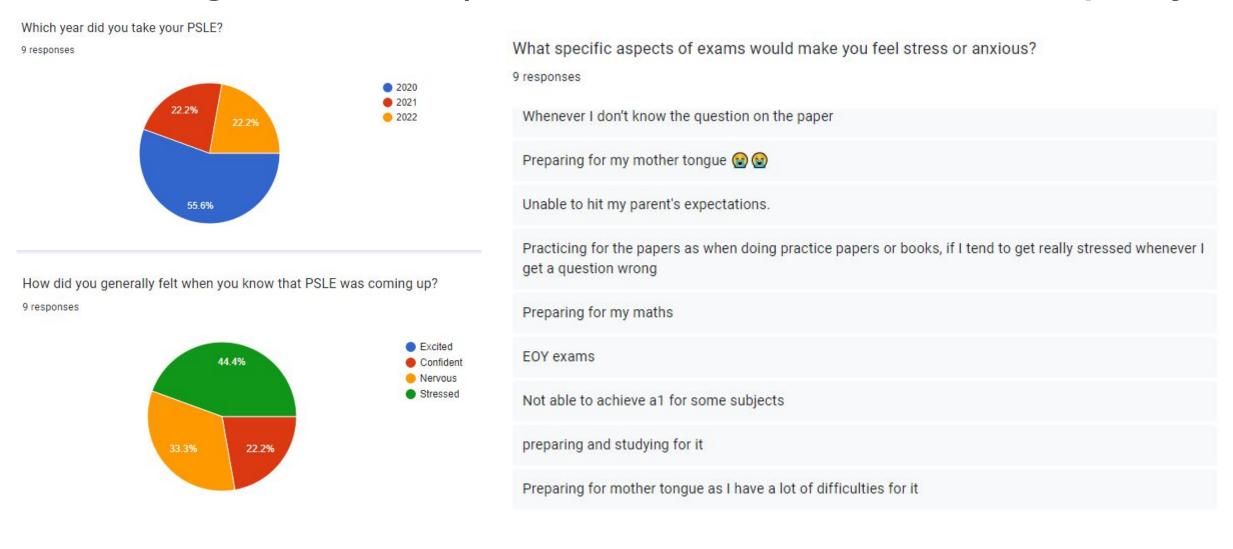
Final exams are crucial for student's academic future. It will determine the grades and potentially the student's eligibility for the next school that they attend. The high stakes of the exams can create pressure to perform well. This can be harmful if students don't know how to handle.

Teachers and parents may have high expectations on the student. They may feel the weight of these expectations and worry about disappointing their love ones.

Students have a limited amount of time to prepare for multiple subjects and exams. The fear of not having enough time to cover all the material adds to the student's stress. In an examination context, students often do not have much strategies to help them relieve stress, hence leading to blank minds.

Maybe, we should design a product to help students manage their stress level during the examination.

Interviewing of the users (P6 students who took PSLE in the past year)



Interviewing of the users (P6 students who took PSLE in the past year)

How do you cope with stress or anxiety during exams?

9 responses

Usually if I have the time, I would go to the toilet so that I calm myself down

By playing games on my phone

I drink lots of water and look around.

By playing games on my p

Playing games with my older brother whenever he's at home

by playing games

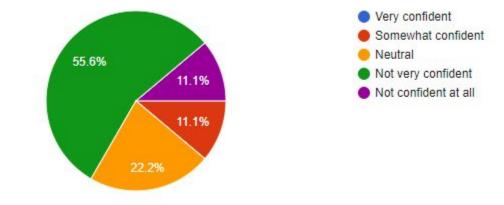
Drinking lots of water and staring everywhere

by playing basketball with my friends or with my older brother

To do questions that I already know

How confident do you usually feel in your abilities when taking an exam?

9 responses



How do you typically feel after completing an exam?

9 responses

Really happy

I would discuss my answers with my friends but I will scared if I get a different answer with them

Tempted to ask my friends what questions they had put for the exam

Anxious and unable to sleep well.

Anxious and stressed as I am scared I got a question that was easy, wrong

Really stressed

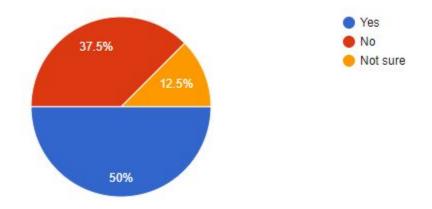
Relived

I usually would spin my pen around my hand

really relieved

Interviewing of the users (P6 students who took PSLE in the past year)

Do you ever experience relief or worry regarding your performance after an exam? 8 responses



What are some ways which you do which helps to relieve your anxiety and stress during examination period?

9 responses

I would stare around the place and fiddle with my fingers

Going out with my family

I talk to my friend and relieve stress. However, we are not allowed to talk during the examinations so I will fidget with my stationeries.

Playing games with my friends in school

Going to the gym with my brother

by playing games on my phone

I wish I could talk to my friend but I can't

by doing sports

Going to the toilet when I finish my paper and wash my face

Conclusion from the survey that was done across 9 past PSLE students

No.	Questions	Conclusion	Design Consideration
1.	Which year did you take your PSLE?	Majority of the people surveyed took their PSLE in 2020 which there were lockdowns and HBL at home. People will tend to be more unprepared for examination.	_
2.	How did you generally felt when you know that PSLE was coming up?	44.4% of the students felted stress and 33.33% of the students felt anxious. More than 70% of the 9 students were experiencing stress.	The product should be able to help the user relieve some stress before the examination.
3.	What specific aspects of exams would make you feel stress and anxious?	Most of the students struggled during the preparation process. Hence, practicing is important. Maybe a watch would be good to help the student practice with the right environment to help them be more prepared for the exam. On top of this. students were also concerned about their parents expectations. However, is this often true? Do parents really pressure their kids? There might be a time where the student over think.	The product should be able to tell the time so that it can help the user keep track of their time during practice.
4.	How do you cope with stress or anxiety during exams?	Majority of the students depend on their phone when they are feeling stress. However, this is not a good practice. As phones are not allowed during examinations. Maybe, a gadget which interest the user should be made to allow the user to fidget.	The product should be compact and portable such that the user can bring it into the examination hall.

Conclusion from the survey that was done across 9 past PSLE students

No.	Questions	Conclusion	Design Consideration
5.	How confident do you usually feel in your abilities when taking an exam?	55.6% said they were not confident and 11.1% said they were not confident at all. More than half the population isn't confident. Sometimes, family support and encouragement is important.	Maybe, the product can be made to help students remember their parents support.
6.	How do you typically feel after completing an exam?	Majority feel stress hence students will move on to the next paper feeling even more stress. Hence, it is important to help the user deal with their stress level at that moment.	The product should be able to allow users to relieve stress at any location.
7.	What do you wish to have in order to help you manage your stress during examination?	Bring to school during exam and able to fit into the pencil case.	The product should not be too big such that it cannot fit into the pencil case,

Current products which help people destress (Image board)



Current products which help people destress 1



Stress ball

Plus: Stress balls are light and portable so the user can bring it anywhere.

Minus: The stress relief provided by squeezing a stress ball is often temporary. It does not address the underlying cause of stress.

Interesting: Stress balls are relatively inexpensive and can be a cost-efficient stress relief tool.



Plus: Fidget toys can help individuals relieve stress and anxiety by offering a physical activity that can distract from negative thoughts or worries.

Minus: In some situations, fidgeting with toys can be distracting to others, especially in quiet or formal environments.

Interesting: Fidgeting with toys can enhance concentration and attention in some people, making them useful tools for individuals with attention disorders like ADHD.

Fidget toys



Soft push toys

Plus: Punching a toy can provide a healthy and productive outlet for stress and frustration.

Minus: Some individuals may have medical conditions or physical limitations that prevent them from safely using a punching bag.

Interesting: Punching a bag can make individuals feel empowered and in control of their emotions and physical responses.



Weighted Blanket

Plus: Weighted blankets provide gentle, evenly distributed pressure on the body, which can create a calming and comforting sensation similar to a warm hug..

Minus: High quality weighted blankets can be expensive compared to regular blankets. Inconvenient to bring around.

Interesting; Weighted blankets are often used as sensory tools for individuals with sensory processing disorders or autism. They can help regulate sensory input and promote self-soothing.

Current products which help people destress 2



Plus: Incense often emits pleasant fragrances that can have a calming effect on the mind. Certain scents, such as lavender or chamomile, are known for their stress-relief properties.

Minus: Some incense sticks or cones may contain synthetic fragrances or chemicals that can be harmful when burned. It's important to choose natural and non-toxic options if you have concerns about air quality and health.

Interesting: Incense comes in a wide range of scents, from floral and herbal to woody and resinous. Experimenting with different scents can be an enjoyable and personalized aspect of using incense for stress relief.



Plus: The physical manipulation of the cube's pieces can be soothing and tactilely satisfying. The feeling of turning and aligning the cube's sections can provide a sensory distraction from stress.

Minus: For some individuals, attempting to solve a Rubik's Cube can lead to frustration, especially if they find it challenging. This frustration might counteract its stress-relief benefits.

Interesting: There are competitive Rubik's Cube-solving communities and competitions worldwide. This can add an interesting dimension to using the cube as a stress-relief tool, as it can become a hobby or even a social activity.



Plus: Noise cancellation headphones can block out external noise, creating a quieter and more peaceful environment. This can help reduce stress caused by noisy surroundings, allowing you to focus or relax better.

Minus: High-quality noise-canceling headphones can be expensive, making them a significant investment. This cost might be a barrier for some individuals. **Interesting:** Some noise-canceling headphones have adaptive technology that adjusts the level of noise cancellation based on your environment. This can be interesting as it provides a dynamic listening experience.

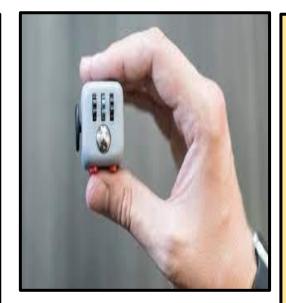
Current products which help people destress 3



Plus: Spinner rings provide a tactile and sensory distraction. The act of spinning the ring can help channel nervous or anxious energy and provide a calming sensation.

Minus: While spinner rings can be beneficial in reducing stress, they may also become a distraction in situations that require your full attention, such as during important conversations or while driving.

Interesting: Spinner rings come in various designs and materials, allowing you to choose one that appeals to your personal style and preferences. This can make the experience more enjoyable and personalized.



Plus: Fidget cubes are designed to offer a tactile and sensory experience that can help reduce stress and anxiety by providing an outlet for nervous energy. Minus: While fidget cubes can help some people focus, they may be distracting for others. It's essential to use them judiciously and consider the context, as excessive fidgeting can disrupt work or learning. **Interesting:** Some fidget

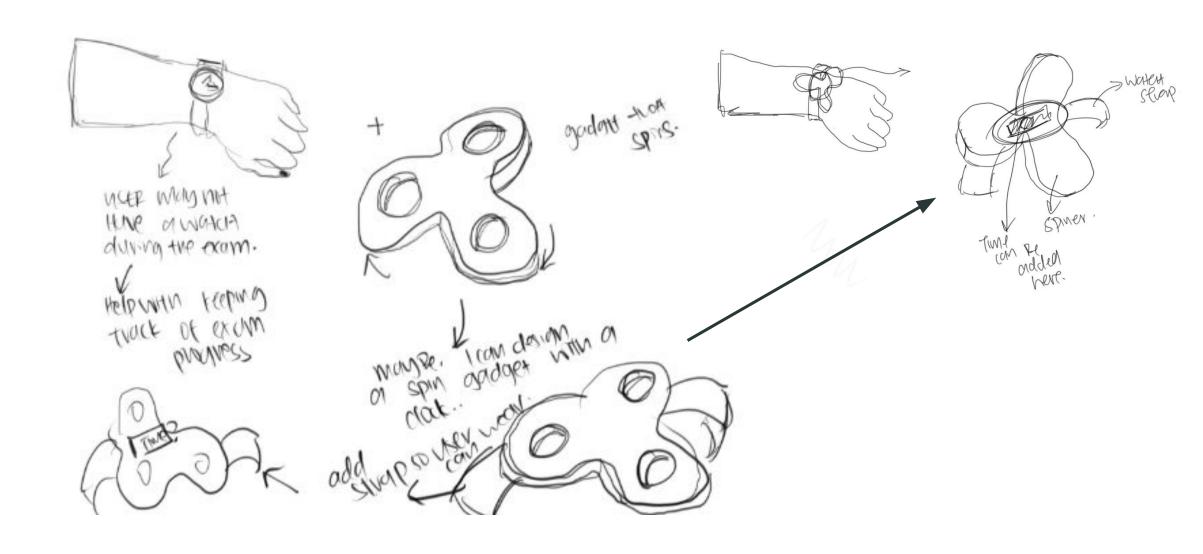
Interesting: Some fidget cubes allow for customization, allowing users to personalize the sensory elements to their preferences.

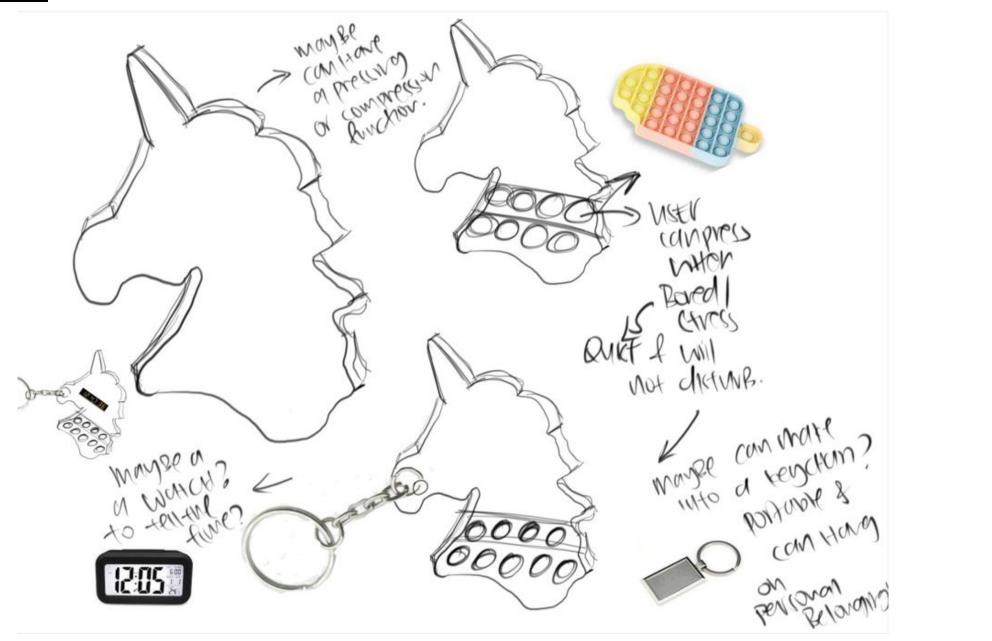


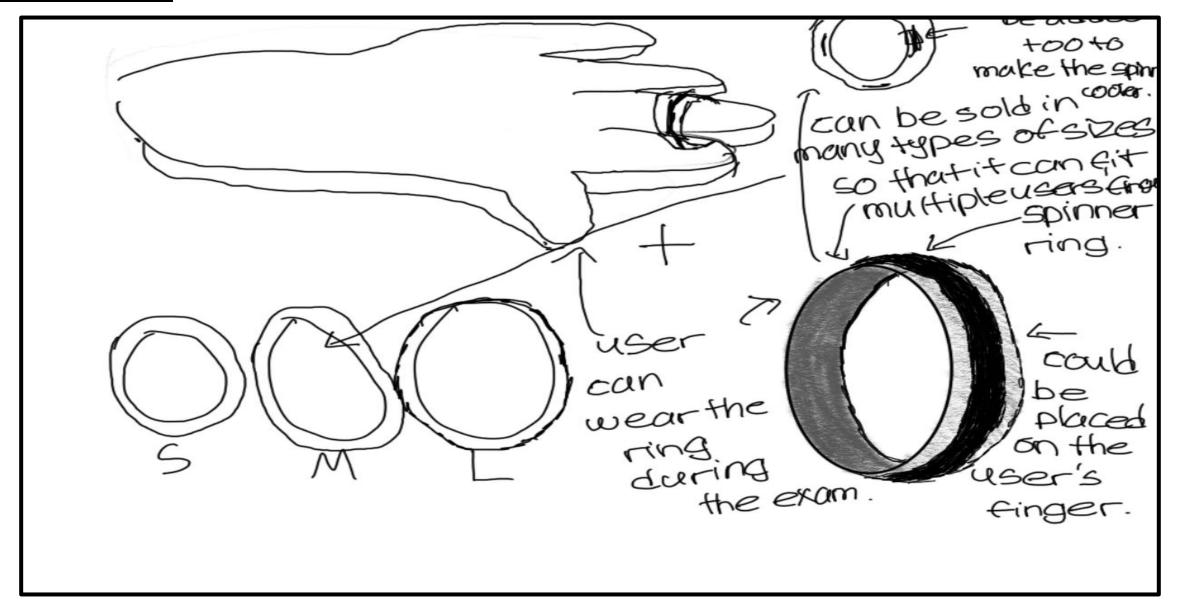
Plus: Squeezing and manipulating a giant pressure ball provides a tactile and sensory experience that can help relieve stress and tension. The physical action of squeezing the ball can be soothing.

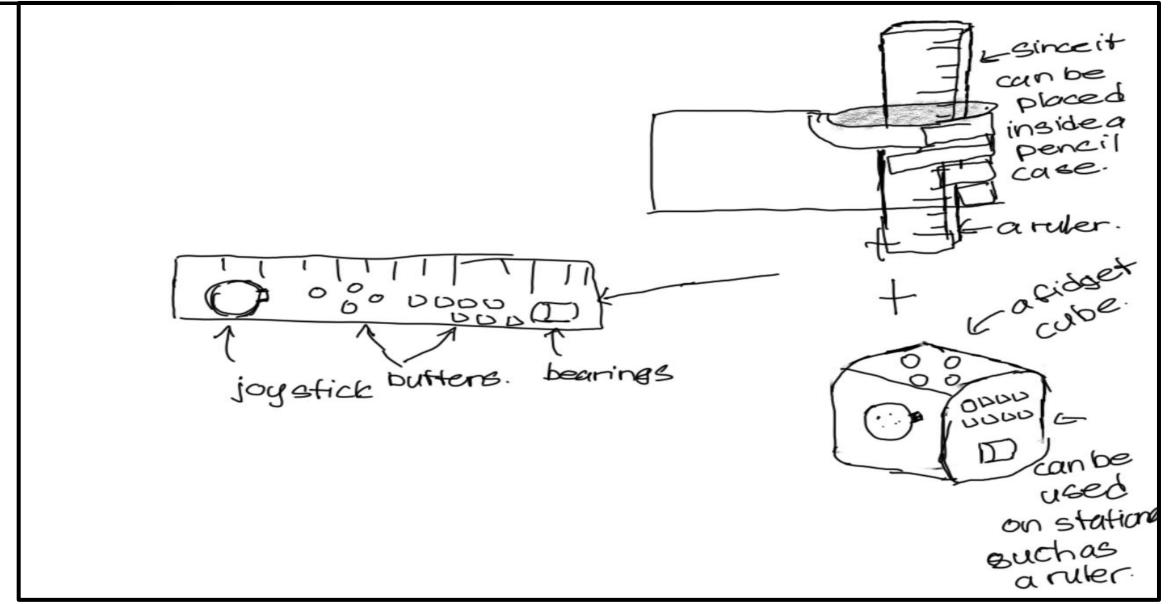
Minus: Pressure balls are a short-term solution for stress relief. They can provide immediate relief but may not address the underlying causes of stress or provide lasting benefits.

Interesting: Giant pressure balls come in various designs, colors, and textures. Exploring different options allows you to find one that suits your preferences and sensory needs.



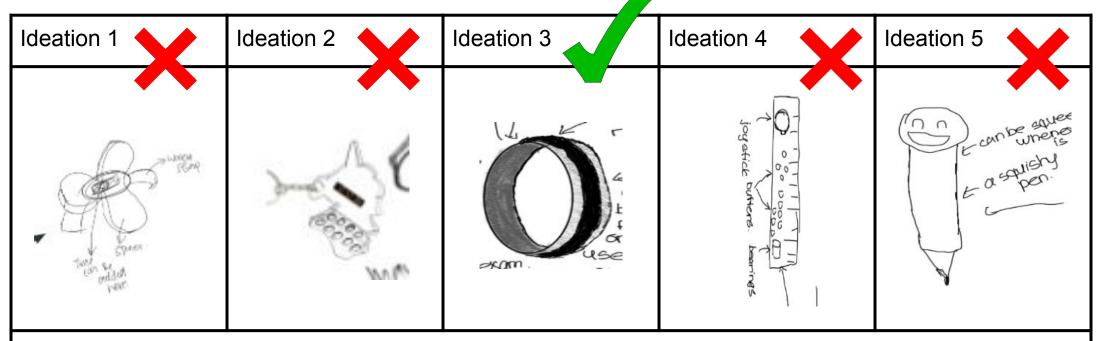






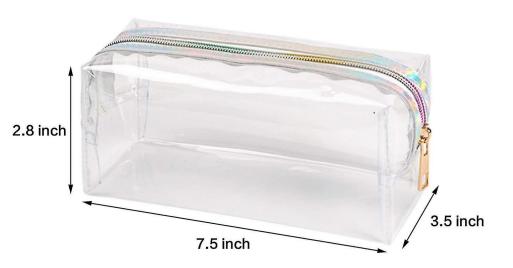
Ideation 5 Gince the user acould sell tilling about the view of the 15 a stream

Conclusion of the ideation



As a group, we have decided to develop Idea 3 as it seems to be interesting. At the same time, it meets some of our design specifications which we want to achieve.

Research - Dimensions

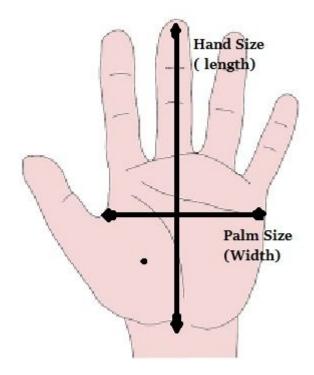


2.8 inch = 71.12 mm 7.5 inch = 190.5 mm

3.5 inch = 88.9 mm

Research - Anthropometric (User's Hand)

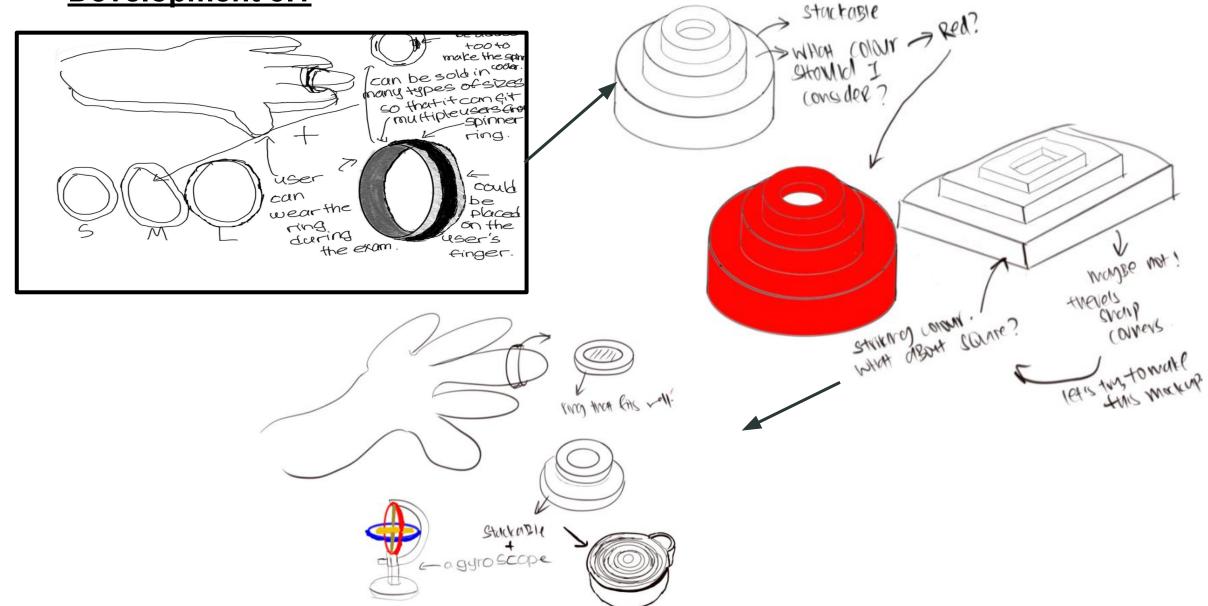
Age group (years)	Age (years)	Hand length (cm)	Hand width (cm)
Children (n =	25)		200 200
6	6.5 ± 0.3	13.2 ± 0.8	6.4 ± 0.2
6 7	7.3 ± 0.3	13.7 ± 1.2	6.6 ± 0.4
8 9	8.6 ± 0.2	14.2 ± 0.6	7.3 ± 0.3
9	9.4 ± 0.4	15.5 ± 1.5	7.4 ± 0.4
10	10.3 ± 0.3	16.5 ± 0.7	7.5 ± 0.4
Adults $(n = 2)$	5)		
20-24	22.5 ± 2.0	18.9 ± 1.5	8.1 ± 0.5



Design Specifications

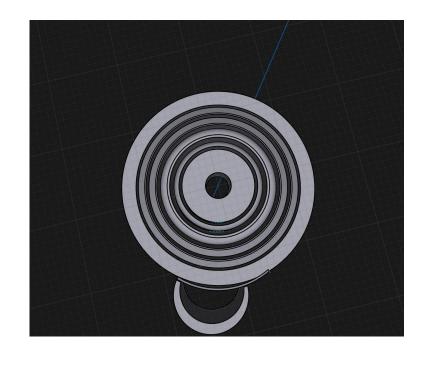
- 1. The product should be portable and able to fit into an average pencil size (77 x 190 x 88 mm) which students often bring into examination hall.
- 2. The product should not make any noise when the user is fidgeting.
- 3. The product should be compact and fits the user's hand comfortably.
- The product should not have sharp edges as the user needs to fiddle with the product. (Circle shape preferred)
- 5. The product should be easy to clean and maintain to ensure hygiene.
- 6. The product should be made of plastic to achieve it's lightweight property.
- 7. The product should Incorporate of stress-relief elements, such as soothing colors or textures.

Development 3.1

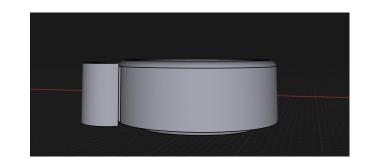


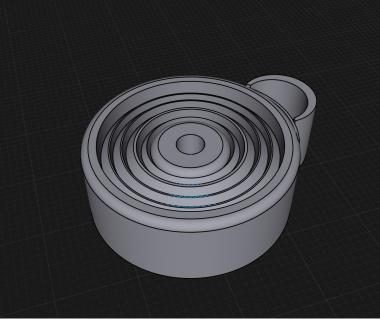
Drawing of the mock up

Top View Bottom View Side View









Mock up (made by 3D printer)







How to use the mock up?

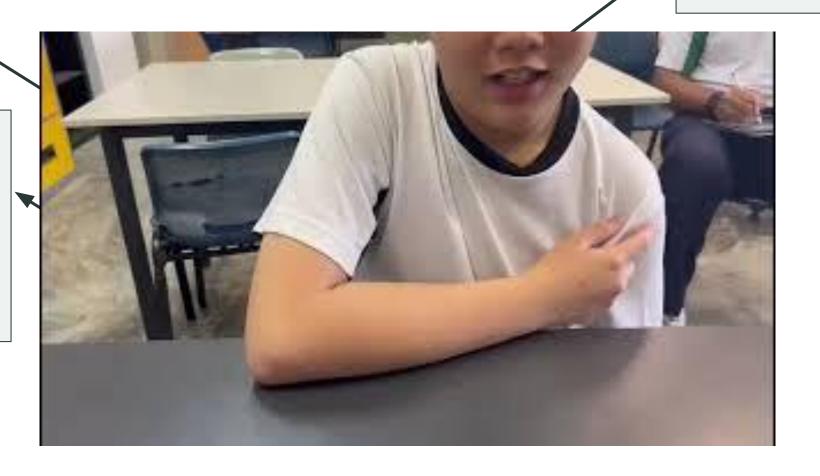


why red colour? It makes me more angry so more stressful.

User 1 feedback

Lightweight but too small for the user's hand.

It is easy to use but it is quite noisy. It might be distracting for others and it might disturb others. In addition, we may not be able to bring this into the exam hall. Teacher may confiscate this.



Conclusion

Design Specs	Conclusion after the interview
1. The product should be portable and able to fit into an average pencil size (77 x 190 x 88 mm) which students often bring into examination hall.	1. Product was portable and able to fit into the pencil case.
2. The product should not make any noise when the user is fidgeting.	2. Product was slightly noisy.
3. The product should be compact and fits the user's hand comfortably.	3. Product was compact and can fit the user's hand but it was too small.
4. The product should not have sharp edges as the user needs to fiddle with the product. (Circle shape preferred)	4. The product did not cut or injure the user so there were not sharp edges.
5. The product should be easy to clean and maintain to ensure hygiene.	5. The user was able to dismantle the product easily so it is easy to clean.
6. The product should be made of plastic to achieve it's lightweight property.	6. It was lightweight.
7. The product should Incorporate of stress-relief elements, such as soothing colors or textures.	7. User mentioned that the colour was too glaring.

Development of the idea

Based on the user experience, this gadget we made did not meet most of the design specifications. It did not help to destress the student. Let's continue to research and see what can we revolve our current product too.

Maybe, we can redesign the product to make it like a keychain which can be attached to the user's pencil case. This keychain can be a gift from their parents. We can promote the keychain as a symbol to improve children's mental health.

Design Situation

In the realm of education, young children frequently experience high levels of stress and anxiety before, during, and after examinations. These emotional challenges often lead to negative thoughts and hinder their ability to perform well during exams. The lack of effective coping mechanisms for managing this stress is a prevalent issue among students.

The challenge is to develop a solution that addresses the stress and anxiety experienced by young students during examinations. This solution aims to empower students with tools to manage their stress effectively, promote a sense of calmness, and improve their overall exam performance.

The proposed solution involves the creation of a specialized keychain that is given by parents to their children and attached to the students' pencil cases. This keychain will serve as a source of mental support during exams. When the students look at the keychain, it will remind them to take deep breaths and stay calm during the challenging exam moments. Simultaneously, parents who purchase and provide these keychains will be reminded of their child's hard work and the difficulties they face in their educational journey.

Research

Does the colour green help reduce stress?

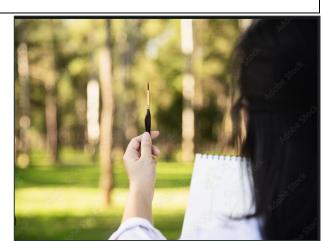
Green is a restful and quiet color. Because it symbolizes nature, green is one of the most beautiful and comforting colors that attracts harmonious feelings that can diffuse anxiety and helps us stay calm and refreshed. Beige greens and pale yellow-greens are the most stress-reducing shades in the green family.

https://timesofindia.indiatimes.com/life-style/health-fitness/de-stress/7-relaxing-colors-and-how-they-affect-your-mood/articleshow/4694 6305.cms

walking in a green environment induced a significant reduction in heart rate values as compared to the red and white conditions although no differences in gait speed were found. This corroborates the calming and relaxing effect of green on the human organism

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6379348/#:~:text=Study%201%20revealed%20that%20walking,green%20on%20the%20human%20organism.





Research

Are round shapes good for fidgeting?

The toy has been promoted as helping people who have trouble focusing or those who may need to fidget to relieve nervous energy, anxiety, or psychological stress. There are claims that a fidget spinner can help calm down people who have anxiety

https://en.wikipedia.org/wiki/Fidget_spinner#:~:text=The%20toy%20has%20been%20promoted,%2C%20anxiety%2C%20or%20psychological%20stress.

Fidget toys are designed to improve focus, relieve nervous energy, reduce anxiety and psychological stress. The physiological stimulation that fidgeting provides can bring your child's attention back to the task at hand and allow them to focus better, meaning they actually benefit from fidgeting and improve learning ability.

https://edxeducation.com/how-do-fidget-toys-help/



Research

What is the recommended size for an object to be fidget?

Many fidgeters like to keep something in a pocket, so that it is easily transported, discreet, and can be used without anyone seeing. Small fidgets can also be ideal for one-handed use and finger-tip manipulation. However, items that are a bit larger and chunkier can feel more substantial and engage more muscles and more parts of the brain.

Fidgets are made in in a variety of material. Plastic, metal, rubber, stone, and latex components can create items that feel soft, squishy, hard, wiry, or malleable.

Some people are drawn to a fidget because of the motion used to manipulate it. Consider what form of movement is most soothing — stretching, twisting, flexing, building, spinning, shaping, clicking

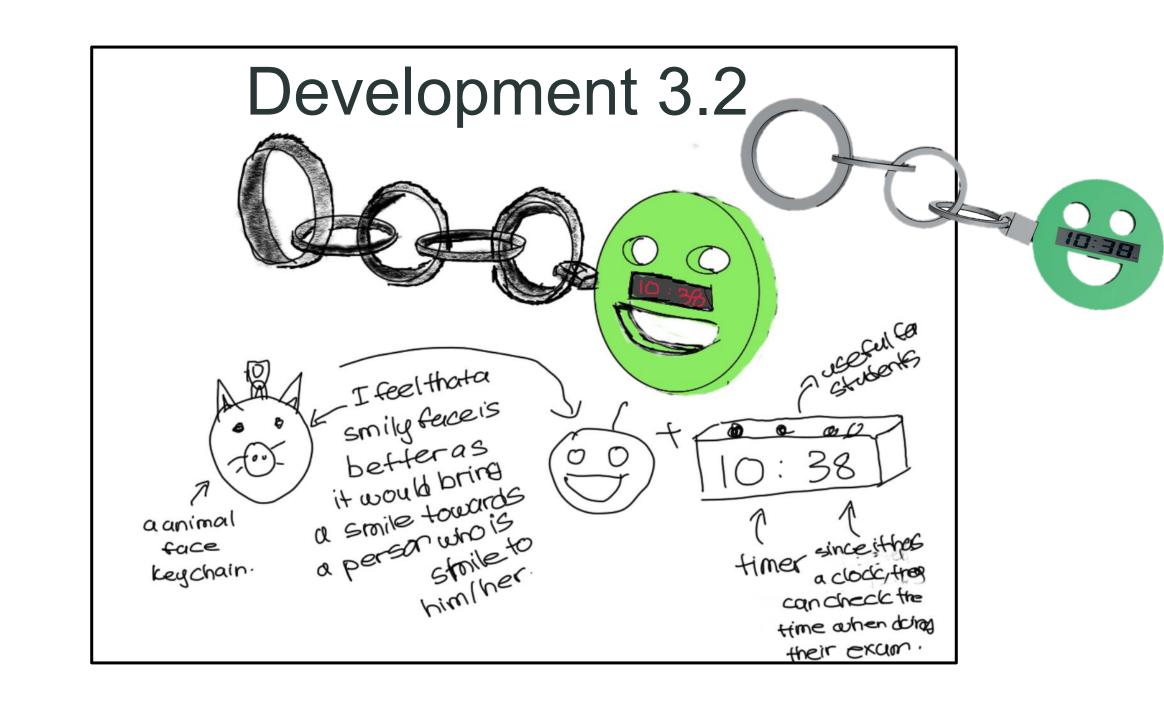
Can be used without causing distraction to the user or others around them

Can be used without looking, so the user can focus on the task or lesson

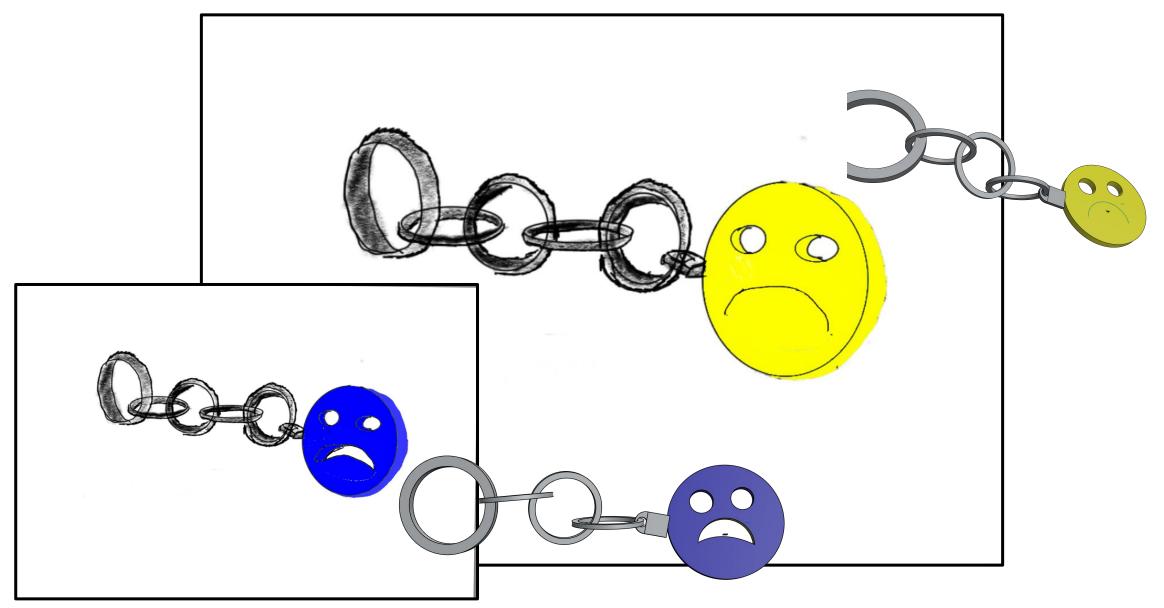
Meets the user's sensory needs (e.g., texture, shape, sensation)

Fits the user's physical abilities (in particular, motor skills and hand strength)

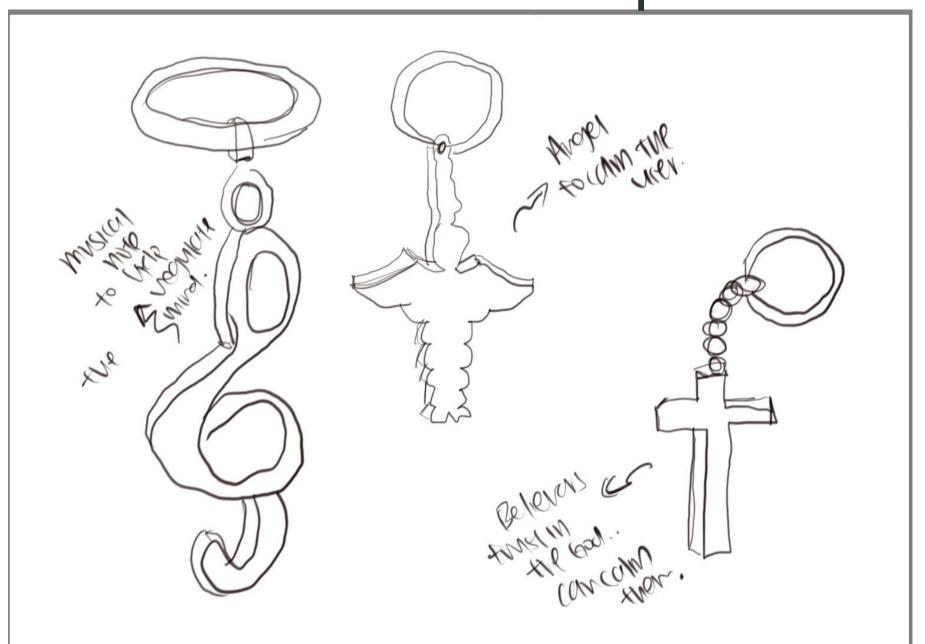
https://www.schoolhealth.com/blog/choosing-the-appropriate-fidget/



Development 3.3



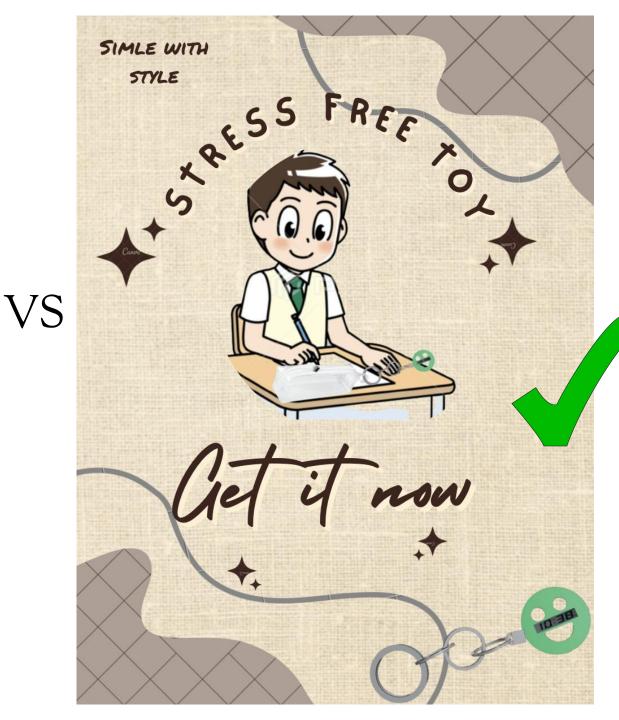
Development 3.4



Conclusion: Our group decided to go for this design:D Green to sooth the user's mind. Smiley face to keep him happy during the exam so that he can remain positive. In addition, this keychain is portable and can attach to a pencil case. Also, it does not distract anyone if the user plays around with it. It acts like an accessory.







Reflection (Gabriel)

Through this competition, I have learned how to use various software applications, including Sketchbook, Shaper3D, and GIF maker. Additionally, I have discovered effective ways to manage stress through the use of stress-relief toys. This newfound knowledge will prove valuable in my future endeavors. Whenever I encounter stress in the future, I now know the types of toys that can help me alleviate it. I also gained valuable experience in teamwork through this competition, as I collaborated effectively with my groupmates. I learned the importance of allocating tasks among team members, recognizing that this approach allows us to divide and conquer, efficiently accomplishing our goals

Reflection (Sanjay & E)

First and foremost, this competition offered a unique opportunity to explore a new skill set: digital design. Prior to this experience, I had little to no knowledge about using digital software for creative purposes. Learning how to create a smiling keychain in this way not only broadened my skill set but also opened up a whole new world of creative possibilities. I found the process of mastering the software to be challenging yet highly rewarding. This new skill is not only applicable to keychain design but can also be useful in various other aspects of life, from graphic design to personal projects.

Link to the google slides to watch the video and gif:

https://tinyurl.com/BobTheBuilders