



AUSTRALIAN STEM  
**VIDEO GAME  
CHALLENGE**

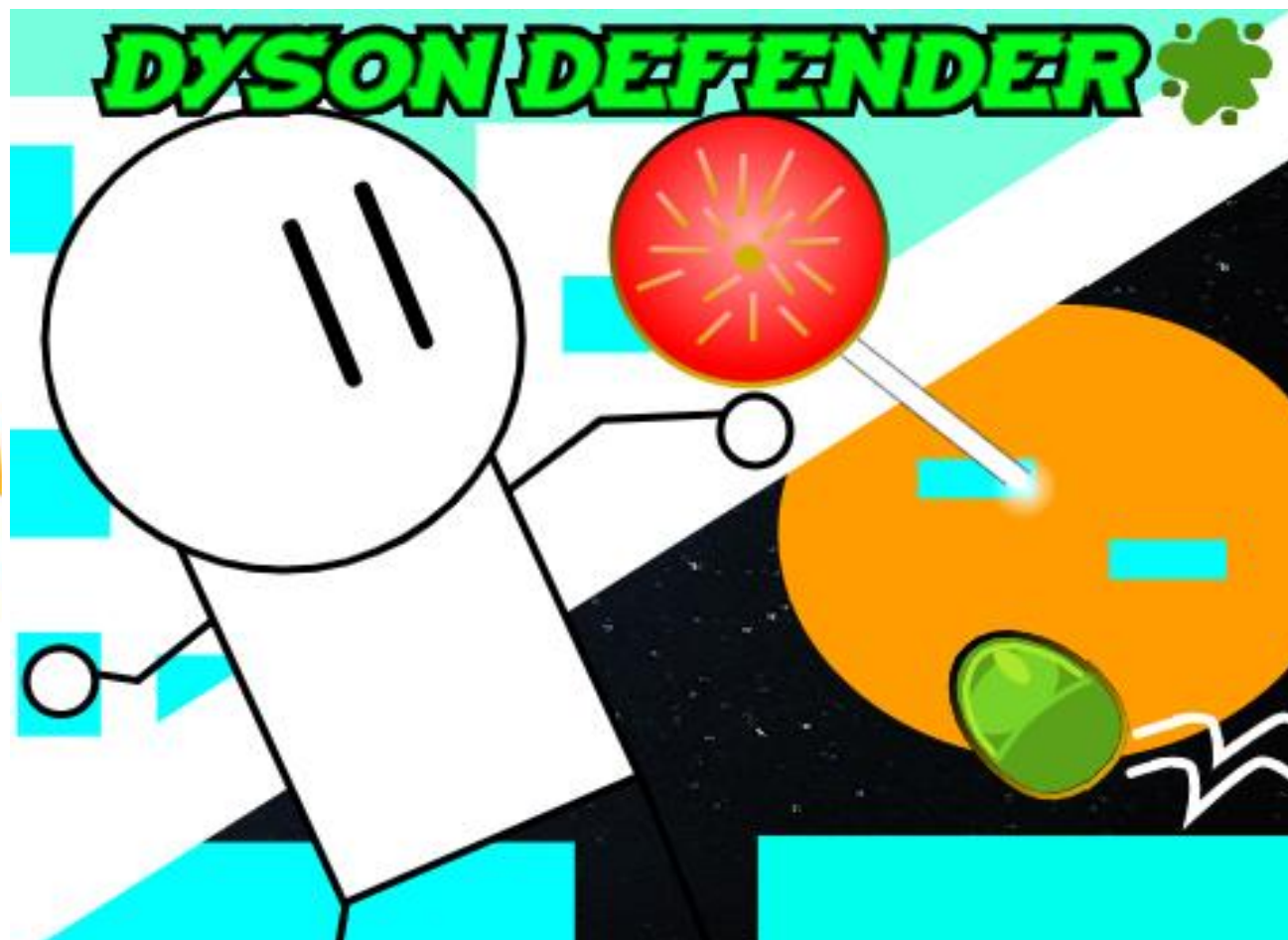


**2024 WINNER**

**World Dominators**  
**Dyson Defender**

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Dyson defender

Created by the team of  
World Domination



AUSTRALIAN STEM  
**VIDEO GAME  
CHALLENGE**

**10**  
YEARS  
OF ENGAGING  
KIDS IN STEM

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## Our team

Team member	Role
Akein Korottage Don	Programmer
Jack Faulkner	Artist/Visual Designer, Programmer 2
Agasthya Ghosh	Sound and Music Effects & Storyteller
Luke Melo	Programmer 3, Artist 2

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# Game overview

- What is your game about?

Dyson Defender is set in the future. Humans live in a Metropolis, a city built on a Dyson Sphere around our sun. It was called Startropolis.. A Dyson Sphere is a giant structure that surrounds the sun to use its solar power. One day there was a sudden power failure in Metropolis and an urgent investigation was needed. You were chosen – you are the Slime Boi, famous for falling into a vat of toxic slime as a child and gaining immunity to the sun's radiation. You can also transform into a slime at will – maybe this will be useful?

- How does the name of your game tell people what the game will be about?

'Dyson Defender' describes your character, and that you have to defend your home (Startropolis) on the Dyson sphere.

- What is this year's theme?

This year the Australian STEM Video Game Challenge's theme is stars. In our game humans have moved from the planets and now live around our star.

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# Game details

- What are the goals or objectives of your game?

Your objective to beat the level is to lure the energy sucking viruses into the sun. And your goal is to save Metropolis by removing the viruses from every level.

- What does the player do in the game?

The player jumps, climbs ladders, falls through grates, transforms, and cuts the webs that viruses build. The viruses are attracted to light, so the player lures them into the sun by holding a torch so the virus will move towards you.

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# Instructions

- How do you play your game? (e.g. arrow keys, mouse, space bar)

For the player movement, WAD or arrow keys for movement ('W' key/up arrow to jump, 'A' key/left arrow to move left and 'D' key/right arrow to move right). Space bar to transform from slime to human and vice versa. No other requirements are needed to play the game.

- How does the player finish the game & and levels?

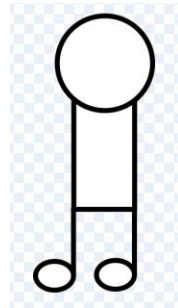
To finish a level, you must go through a portal. The portal will only show when you have successfully lured the virus into the sun. However, the first five levels introduce a new gameplay element to the player. For example, the first level's element is the power to lure viruses into the sun with a torch (viruses seek light). Then the second level's element is the power to transform from human to slime and vice versa. The final levels use all of the gameplay elements together.

# Characters/important objects

- Put pictures of characters and important objects of your game below.



This is a torch and is used for luring viruses into the sun



This is the slime, it is the transformation of the player and is meant for going down grates and for melting the virus' web/s. They Cannot collect torches

This is the sun and you have to lure the virus here for it to die. But beware, It can defeat YOU



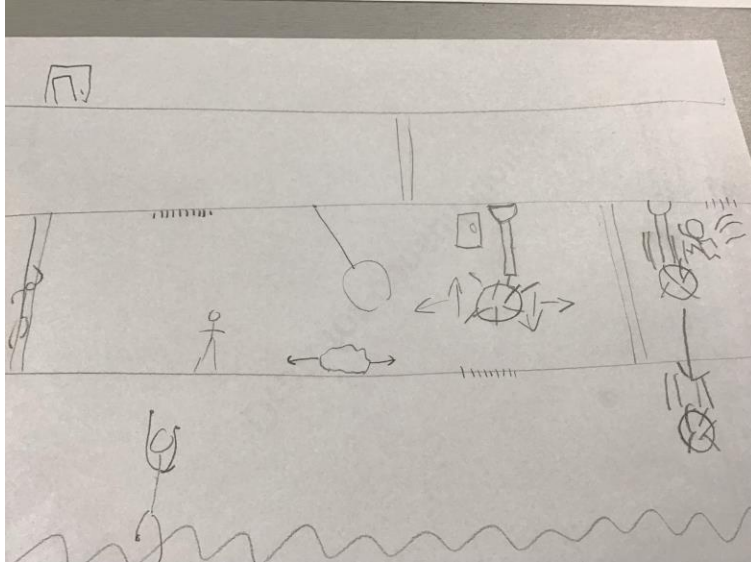
This is the player (you) and is meant for picking up the torch and climbing ladders.

This is the virus and is meant for eliminating you

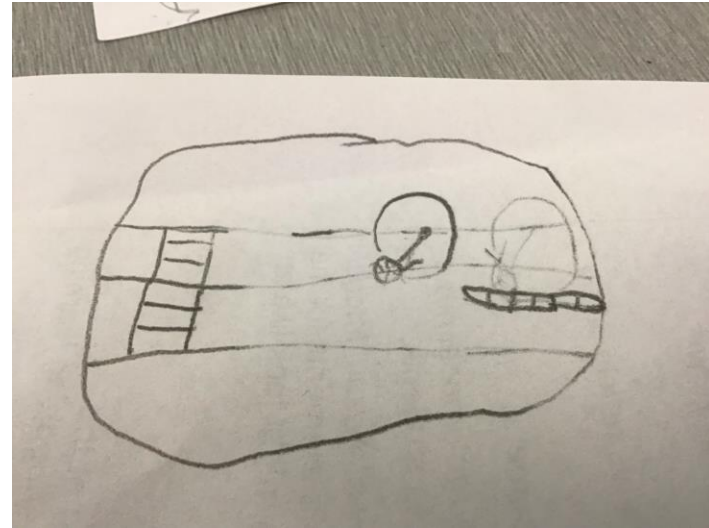


# Planning sheets

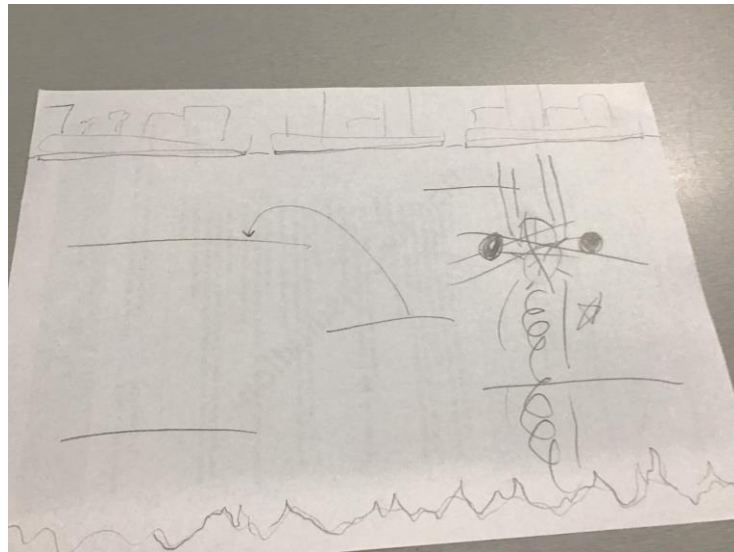
First concept



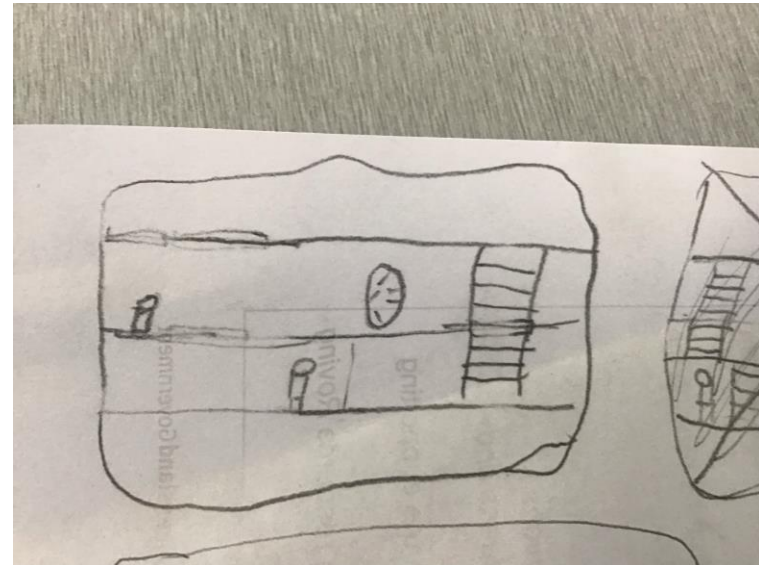
Level 5 design



Physics ideas



Level 6 design





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# Audio elements

- What are the important sounds in your game?

The important sounds in the game are the losing sound, the in-game music and the lobby music.

- How did you make your sounds and/or music?

A lot of them were just sounds from scratch but the in-game music and the lobby music was made using Chrome Music Lab's Song Maker.

<https://musiclab.chromeexperiments.com/Song-Maker>

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# Testing

- Does your game work? Yes/No
- How many people tested your game? 5
- Tester 1: The rope was disappearing when the torch was collected
- Tester 2: Same as 1.
- Tester 3: Had difficulty completing levels. Died a lot.
- Tester 4: Levels 5 and 6 wouldn't reset properly.
- Tester 5: Got stuck on ladder.

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# Reflecting

- What changes did you make after your game was tested?

We found the bugs causing the ropes to disappear or not disappear.

We added an extra brown line to ladders so the player won't get stuck.

We didn't change the difficulty. Most players could finish the levels.

- What would you do differently next time?

We would choose a type of game that's easier to make than a platformer!

Making new levels took longer than expected. We would start that much earlier.

- What are you most proud of?

I am most proud of our team's progress so far and I have always been proud of how hard the team is working.

