

## **Limitations and Potential Improvements of the System**

In this document I will explore the reasons behind the limitations identified and their causes, followed by potential improvements to either eliminate or elevate these issues.

The first limitation is the size of the program. This limitation exists as a factor of time and the requirements of the program. The program has to be a limited size, as it is intended to be played during break time. This means that I had to limit the gameplay with this in mind. Out of all the limitations, this has the least effect on the end result of the game. Like stated before, my client only wanted a short game. Having a game that would take an hour or more to complete would be impractical in a school setting. In terms of improvement, by changing the main character (or not, the robot is still a neutral figure) I could attempt to span the game into multiple different subjects across the GCSE spectrum. This would be done by focusing on the implementation of a 'neutral area' for my design. Each subject would be broken up into a world and you would access each world from this area, allowing you to visit a wealth of levels across the spectrum of subjects.

The next limitation of my solution is the puzzles. This mainly branches from my inexperience with coding. A better grasp of coding would not only allow me to implement objects with greater efficiency (allowing for more objects in the time frame), but would vastly improve the quality of the puzzles. The first issue I have mentioned before, this is the lack of animation. If there was an animation that activated when the objects changed state, then not only would it allow for some of the more complex subjects to be implemented into the game, but I believe it would help the user get a better grasp of the themes behind the puzzles. I believe the best way to improve the limitations that exist due to my objects would be to employ specialist gaming libraries to gain functions that exist for object interactions.

Another limitation of my program is the art. While stylised, I believe that it will always lack the clarity to ensure that anyone who views an object will be able to tell what it is. This is quite a nervous position to be in, as in a game that exists to promote its themes, if a user is consistently struggling to interpret visuals then the game has failed. A solution to this would be to team up with someone whose artistic talent is greater than mine (like an A-level art student) and have them provide the art. This would require a degree of communication between us, but wouldn't require too much co-ordination. I'd send them a list of objects that I would like to be drawn and start coding the solution using placeholder names for the images. The artist will then create the images and send them to me batch by batch. I would then change the name of the images they sent me so that they fit the placeholders and are instantly implemented into the game.