

For my extension I chose to focus on updating the theme of my game, to add sound effects and to add game obstacles. I decided to set the new game level on Mars as this is more cohesive with my game character which was inspired by the Mars rover. I began by updating the colour of the background as well as the ground that the character moves across. I also added three hundred and forty random white ellipses to the background to create an illusion of stars and added forty red ellipses to the ground to look like craters. I removed the trees as I felt they didn't fit in with my new theme and replaced them with planets and a sun.

I changed the design of the canyons to look as if the ground has fallen away to reveal the starry background behind it. I also changed my collectable item from a coin to a plant sample to better suit my theme. For my game obstacles, I added spikes on the ground which when run over deactivate the robots gravity device causing the character to float slowly upwards until the character is off screen or the player presses the 'g' key. I also added a comet which occurs towards the end of the level which moves across the sky and creates a new canyon in front of the game character. I also added background music for the game as well as sound effects for when the character collects a plant or falls down a canyon, as well as when the gravity device fails due to the character running over spikes, for when the comet hits the ground and for when the character completes the level.

During my extension I gained a better understanding of the draw loop and how it is constantly being called to create the games animation. When first implementing the stars for the background I generated 340 random stars within the draw loop, however this placed stars in different locations very quickly each time the draw loop was called. This led me to move the loop to the setup function instead and to push the properties of the ellipses to an array which the draw loop can access. This means the stars will have the same properties each time the draw function is called despite their placement being randomised, meaning they stay in the same place throughout the game. I also used this method for the craters on the ground. This was also a challenge when it came to adding sound effects to the game. I initially thought a sound effect could be played after a condition is met, however due to the draw loop this meant the sound effect would be played repeatedly and not just once. This meant I had to add variables and loops which acted as counters to ensure the sound was only played once. I also learnt about p5.sound.js and how to add a new library of javascript as well as how to link it properly within the document.