| Program/shader creation | | | | |
|-------------------------|-------------------|-----------------------|----------|-------|
| Case | Expected | Actual Outcome | Solution | Notes |
| | Outcome | | | |
| Shaders are created | No console errors | As expected | N/A | |
| and attached to | should appear | | | |
| program | | | | |

| | | FPS | | |
|--------------------|---------------------------|----------------|----------|-------|
| Case | Expected Outcome | Actual Outcome | Solution | Notes |
| Player starts game | Game should run at 60 FPS | As expected | N/A | |
| | | | | |

| | | WebGL rendering | | |
|-----------------|---|-----------------|----------|-------|
| Case | Expected Outcome | Actual Outcome | Solution | Notes |
| Game is running | No WebGL offscreen errors should appear in console | As expected | N/A | |
| | | | | |

| PointerLock controls | | | | |
|---|--|----------------|----------|-------|
| Case | Expected Outcome | Actual Outcome | Solution | Notes |
| Player starts game, and clicks the screen | Their mouse pointer gets locked | As expected | N/A | |
| Player presses escape | Mouse gets released from pointerlock | As expected | N/A | |

| | | Player movement | | |
|---|---|-----------------|----------|---|
| Case | Expected Outcome | Actual Outcome | Solution | Notes |
| When player holds UP arrow key | Player should move forward | As expected | N/A | Perhaps change to W for forward makes more sense |
| When player holds DOWN arrow key | Player should move backwards | As expected | N/A | Perhaps change to S for backward makes more sense |
| Player moves mouse whilst pointer is locked | Players camera should rotate in correct direction | As expected | N/A | |

| | | Object creation | | |
|---------------------------------|---|-----------------|----------|-------|
| Case | Expected Outcome | Actual Outcome | Solution | Notes |
| Game objects/meshes are created | All objects should have twice the number of indices to vertices | As expected | N/A | |
| | | | | |

| Audio | | | | |
|---------------------------------|---|----------------|----------|-------|
| Case | Expected Outcome | Actual Outcome | Solution | Notes |
| Game objects/meshes are created | All objects should have twice the number of indices to vertices | As expected | N/A | |
| | | | | |

| | WorldState | | | | | |
|---|---|----------------|----------|-------|--|--|
| Case | Expected Outcome | Actual Outcome | Solution | Notes | | |
| Game saves every specified amount of time | Player position is saved | As expected | N/A | | | |
| Game loads with saved position in storage | If previous position saved, that gets loaded as the current player position | As expected | N/A | | | |
| Game loads for first time | If no previously saved position the player position | As expected | N/A | | | |

| gets se | t to the | | |
|---------|----------|--|--|
| origina | l spawn | | |
| point | | | |

| | Prospecting | | | | |
|---|---|----------------|----------|-----------------------|--|
| Case | Expected Outcome | Actual Outcome | Solution | Notes | |
| Player is in range of rock, and holds P key to prospect | Prospecting bar displays and starts incrementing | As expected | N/A | | |
| Player is prospecting rock and lets go of P key | The prospecting bar disappears and the value is reset | As expected | N/A | | |
| Player not in range of rock and tries to prospect | Nothing should happen | As expected | N/A | | |
| Player fully prospects rock | Prospecting bar should disappear and value resets | As expected | N/A | | |
| Player starts prospecting rock, then moves out of range | Prospecting bar should disappear | Fails | | Bar doesn't disappear | |

| | | Fog | | |
|-----------------------|--------------------|-----------------------|----------|-------|
| Case | Expected | Actual Outcome | Solution | Notes |
| | Outcome | | | |
| An object is far away | Its texture should | As expected | N/A | |
| from the player | be completed | | | |
| | blended with the | | | |
| | sky colour | | | |

| Collision | | | | | |
|--------------------------|---------------------|----------------|-----------------|---------------------|--|
| Case | Expected | Actual Outcome | Solution | Notes | |
| | Outcome | | | | |
| Player tries to walk off | They get pushed | As expected | N/A | | |
| map | back | | | | |
| Player collides with | They get pushed | As expected | N/A | | |
| rock | back | | | | |
| Player walks over | The users height | As expected | Space terrain | Very bumpy with low | |
| terrain | gets set to nearest | | vertices closer | movement speed | |
| | terrain vertex | | together | | |
| | height | | | | |

| Inventory | | | | | |
|--|--|----------------|----------|-------|--|
| Case | Expected Outcome | Actual Outcome | Solution | Notes | |
| Player prospects rock | It gets added to their inventory | As expected | N/A | | |
| Player is in range of rock with full inventory | Rock doesn't get added to their inventory, and "inventory full" message displays | As expected | N/A | | |
| Player goes in range of lander | Player inventory gets emptied | As expected | N/A | | |

| Hitpoints bar | | | | | | |
|----------------------|---------------------|----------------|----------|-------|--|--|
| Case | Expected | Actual Outcome | Solution | Notes | | |
| | Outcome | | | | | |
| Player collides with | Hitpoints | As expected | N/A | | | |
| rock | decrease by 10, | | | | | |
| | and GUI updates | | | | | |
| Player collides with | Hitpoints stays the | As expected | N/A | | | |
| edge of map | same | | | | | |
| Player reaches 0 | Game over screen | | | | | |
| hitpoints | | | | | | |