### **M3 Test Plan**

* Portal
  + Go to level 8
  + Light ray should enter the green portal and exit from the purple portal, preserving the velocity
  + Light ray should be able to re-enter the purple portal and exit from the green portal
* Window Focus
  + Go to any level
  + Wait for a couple of light rays to be traveling on screen
  + Tabbing out of the window should pause the game
    - A paused game should perverse all light positions
    - A paused game for an extending period of time should resume all steps, i.e. timers should not ‘build up’ and cause unintended actions
  + Tabbing back into the game window should beginning stepping through world, starting from the state before tabbing out
* Black Hole Physics Gamification
  + Go to any level with a black hole
  + When light rays fly past the black hole at a certain angle it should temporarily orbit the black hole and be released (a slingshot effect) instead of slowly entering it.
* Improvement to Star
  + Allow multiple light particles to collide with the star to light it up. Then stop the supply of light particles to the star and watch the star lose its light over time
  + Expect: Instead of the star being turned on by a light particle, a light particle colliding with the star will supply it with some energy which slowly depletes over time. Energy gain can stack from multiple stars and there is a visual indication (brightness) to show the amount of energy a star has.
* End zone Gamification
  + Go to any level
  + When the light ray comes to proximity to the end zone it should be slightly sucked into the endzone like a mini black hole
    - This is to avoid being too precise with the endzone collision to provide better gameplay experience
* Mirror movement angle fix
  + Go to level 1
  + Click on the mirror in the bottom left corner on its top left corner and drag
  + Expect: the mirror rotates to match the mouse’s movement but remains relative to the mouse’s initial position when clicked (i.e. acting as if dragged by the top corner)
* Mirror rotation snapping
  + Go to level 1
  + Click on the mirror in the bottom left corner and drag in a circle
  + Expect: its rotation updates discreetly, snapping to increments of 7.5 degrees to align as close as possible with the mouse
* Mirror translation snapping
  + Go to level 1
  + Click on the mirror in the top left corner and drag left and right
  + Expect: its position updates discreetly, snapping to 1/10th of the rails’ length intervals to match the mouse’s position as close as possible
* Persistence Change
  + When starting the game for the first time, only level 1 should be unlocked
  + Go to level 1
  + Beat level 1
  + Level 2 should now be unlocked
  + Click on level 2
  + Should be able to access
  + Return to main menu
  + Click reset data
  + Go to level select
  + Nothing should have changed
  + Go back to main menu
  + Click on reset data
  + Click again to confirm
  + Go to level select
  + Level 2 should be locked again