Graphics Programming Project

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***Object Oriented representation of game objects:*** I created a Sphere using sphere geometry, which gradually changes colour. I also made an array of cubes and a class called “Cube” I then used Box Geometry and mesh basic Material to make a cubes.

**Multiple game objects:** I had a sphere and a cube. The aim was to not hit the cubes.

**Game objective, level completion and scoring:** The main game objective is to not let the sphere hit the cube. My game also contains level competition. Each time a level goes up the speed increase in the sphere. I also had a score.

**Object movement :** The Plane moves which in turn moves my sphere. This can be seen in the animate function.

**Collision detection:** I used collision detection for when my sphere hit a cube. A pop up shows and says game over. It shows u your final score and asks if u want to restart or to end game.

**Camera movement**: I have a camera and a camera helper added to my scene.

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**Mathematical complexity** : I used mathematical complexity when getting the collision to work. I found this a harder task. I have commented out my trial and error in the collision function.Text

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**Shadows:** I cast shadows on my sphere, I also have a wireframe attached too.

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I also casted shadows and a spotlight and ambient light to my scene

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**References:**  
I mostly used previous labs to help me make this game. I used my previous Pokémon ball labs to help me figure out the collision.

I used <https://www.w3schools.com/howto/howto_js_popup.asp> to help me create the pop ups.