Research Question (Victor Shu)

My research question might be in shaders and rendering techniques for stylish rendering. Science Buddies will not use Unity default shaders. We are pursuing a flat, cartoonish art style. To achieve that, many things should be taken into consideration, which include how to shade the shapes properly, how to make the outer and inner lines of geometries, how to make different environments look different but share the same feeling. Various techniques will have their own pros and cons, and in my research, I should compare them carefully to pick one that suits our project the most. I am expecting that this is not an easy topic after some investigations I've already done. From a GDC talk given by a technical artist from Arc System who made Guilty Gear, they did a lot of things to make their anime-style rendering correct, including modifying the vertex normals, UV coordinates and have specialized textures. Though we might not use all these techniques, it is definitely something that deserves researching.