Compiling

Open the `framework.vcxproj` file in Visual Studio.
Set the environment to `Release`.
Run build and run in Visual Studio's environment.

Controls

LMB - Rotate view
RMB - Translate view in third-person
Shift + LMB - Rotate light

F - Toggle between third-person and first-person
WASD - Move in first-person

1 - Default Lighting
2 - Make teapot "improbably reflective"

Report

Much of this project was rather simple due to all of the objects having their texture coordinates baked-in (thank you Utah for your teapot). Though I would also qualify much of that as busywork and not an actual demonstration of my skills, so I am simply happy that it was not required on my end.

Most of the objects I textured simply needed me to assign the texture to the supplied texCoord. Now in most of those cases, I also needed to multiply the texture's scale to make it logically fit into the world, but that's not worth writing about in-depth.

The skydome was an exercise in mapping a texture to something different than the native texCoord. Strictly speaking there's nothing stopping me from doing so, but to get the proportions we desired I just had to use the supplied equations.

The sea was largely the same exercise, even using an identical texture, but it acted as my initial implementation of normal maps. In the simplest terms, that has me taking a second texture's hues and interpreting them as "I will pretend the normal is angled differently". This lets the water cast shadows and catch light glares despite being an entirely-flat surface in the actual geometry.

Normal maps were applied to several objects, but I would additionally like to mention one thing about the sea: I made the normal map into a scrolling texture. It's nothing too fancy, just displacing the normal texture based on the program's total runtime, but it creates the illusion of flowing water. Just for visual flare.