

Assignment 1 Phase 2: Texture Mapping (</index.php/11-course/78-assignment-1-phase-2-texture-mapping>)

Program Description

Implement texture mapping techniques, including anti-aliasing, multi-texturing, and cube environmental mapping.

Apply specified techniques to given materials.

Due Day

2016/11/16 23:59

Please upload your entire files as a zip file to e3.

Please upload entire solution, project, source code, and objects!

And please use your school id as your file name.

For example: 9655862V1.zip

Since you can't delete the uploaded files, you can just upload a new one.

Requirement

Please use mipmap to all the textures!

And the camera should be mobile. (As the Assignment 1 Phase 1)

Scene file describes which texture mapping technique should be applied.

There are four cases. The blue font shows the format string.

1. no-texture

The following models does not use texture.

Just draw them with lighting only.

2. single-texture ImageFileName1

The following models only use one texture.

Apply the texture mapping to them.

Please also disable the back face culling.

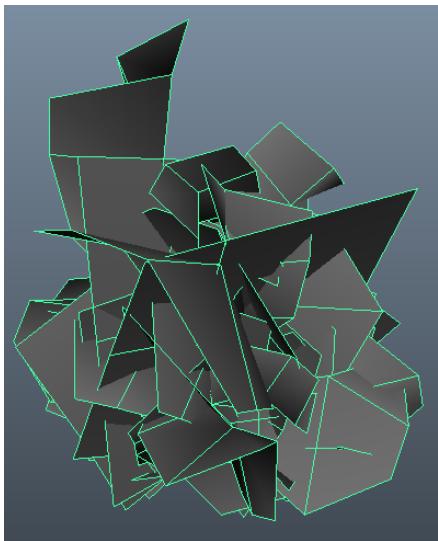
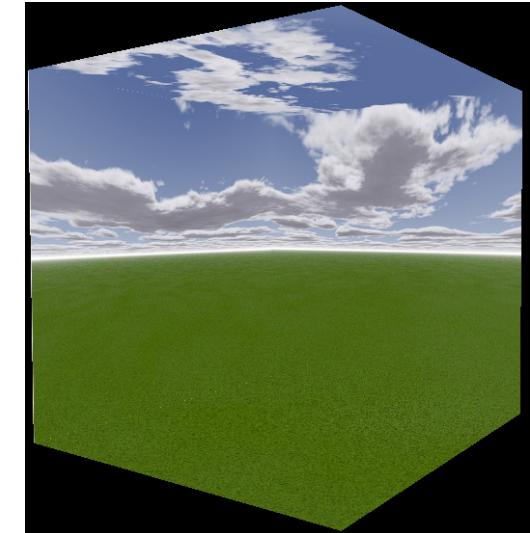
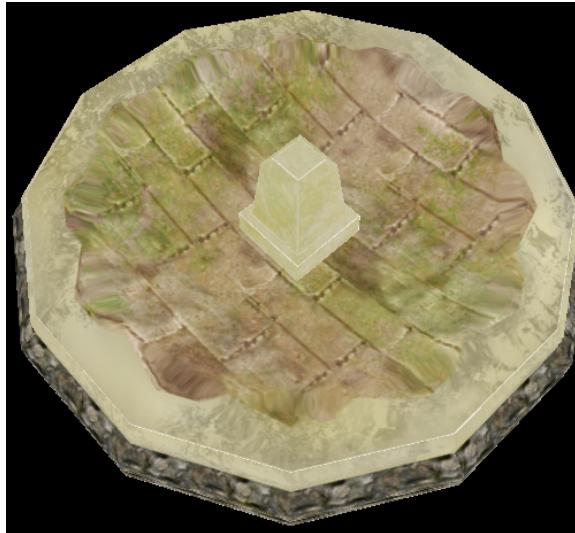
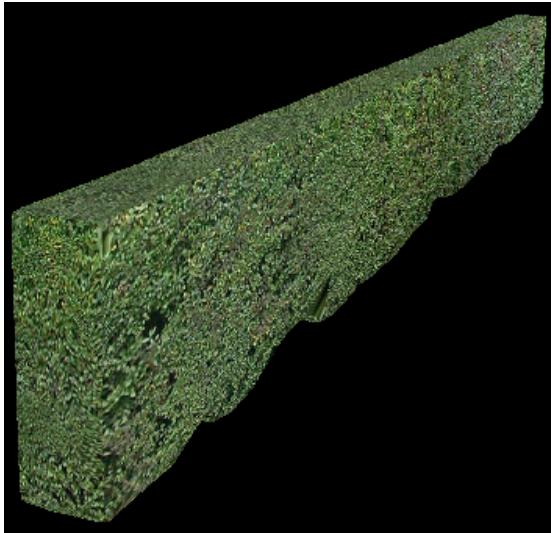
Use GL_REPLACE to apply the color.

Enable alpha test for billboard.

You can use these code:

```
glEnable(GL_ALPHA_TEST);
glAlphaFunc(GL_GREATER, 0.5f);
```

Examples:



+



=



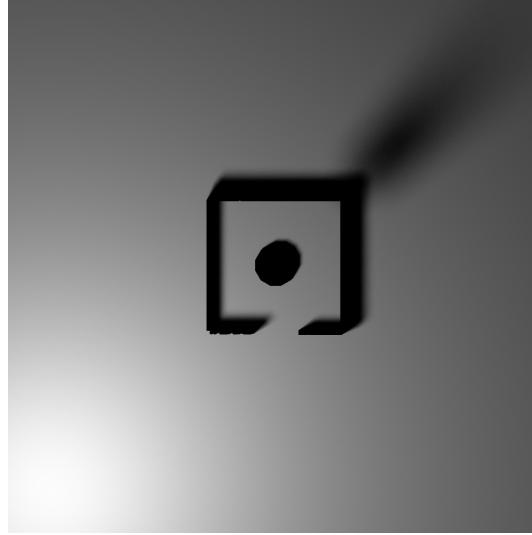
3. multi-texture ImageFileName1 ImageFileName2

The following models need **two texture**.

Apply the multi-texture to them.

Combine the color by **GL_MODULATE**

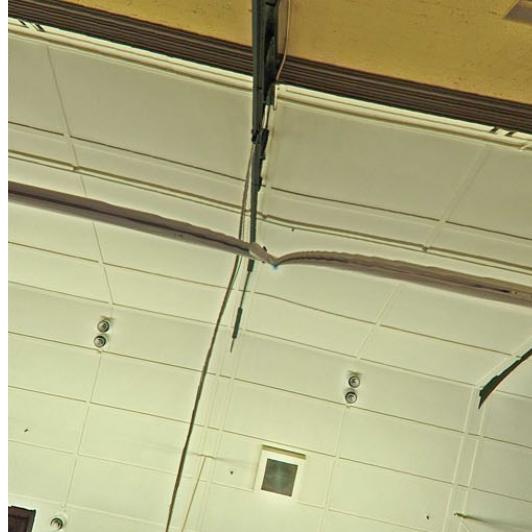
Examples:



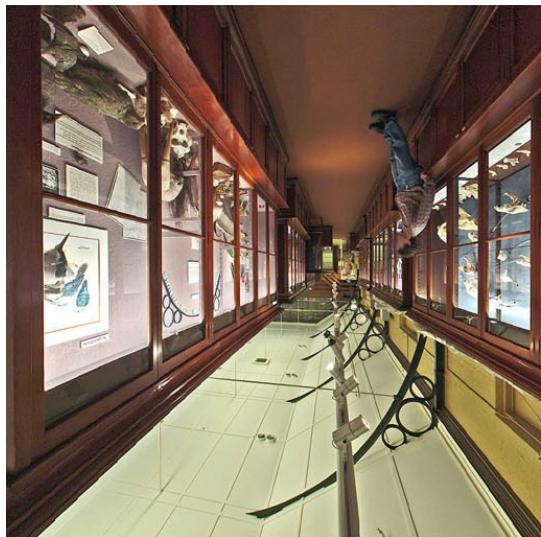
4. cube-map [Image1](#) [Image2](#) [Image3](#) [Image4](#) [Image5](#) [Image6](#)

The following models requires **cube environmental mapping**.
Apply the cube environmental mapping to them.

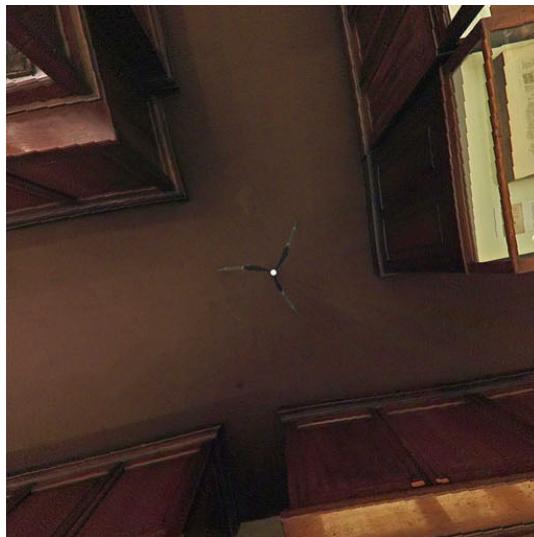
Examples:



Env_positive_x



Env_positive_y



Env_positive_z



Env_negative_x



Env_negative_y



Env_negative_z

+ environment mapping =

Test Scenes

[Park scene \(Click to download!\)](#)



[\(/images/course/data/icg/2016Fall/HW1-2/park.zip\)Chess scene \(Click to download!\)](#)



(/images/course/data/icg/2016Fall/HW1-2/Chess.zip)

System Administrator: Joshua, Web Administrator: Joshua, System Build: Joshua

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