

**CMSI 371-01**  
**COMPUTER GRAPHICS**  
Spring 2015

## Assignment 0430a Feedback

All outcomes may now reach + proficiency.

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Your texture mapping almost—*almost*—makes up for the lack of lighting in your scene. But in the end we really can't ignore the various aspects that go into lighting, especially those normal vectors. In addition, the sample code already builds upon lighting code, so in the end, without too much additional time, I think you could have followed the priorities better and still accomplished texture mapping.

The texture mapping also distracted you from the camera matrix. Think of the potential you could have unlocked with that—flyovers, simulated spaceships, etc. And again I don't think it would have required that much additional time.

*1b* — | ...Technically the management of normal vectors would have fulfilled this. But texture mapping does require texture coordinates, and that does require a bit of work. What they don't require is careful enumeration of triangles so that their vertices are in the right order, so that's why they fall short.

*1c* — + ...Children are nicely supported though, and texture coordinates are handled here exactly as normal vectors would have been.

*2a* — | ...Normally a completely absent camera would have made this lower, but we will factor in the work required at computing texture coordinates across a sphere.

*2b* — | ...Now this I will ding a bit, because really, your scene *begs* for perspective. Imagine how much more compelling those planets would look if they got smaller as they orbited farther away from the viewer.

*2c* — | ...This also gets a little consideration but cannot be maxxed out, because in the end, lighting computations involve more variables and calculation than texture mapping (which, at the shader level, is virtually a one-liner).

*3a* — + ...We will allow the texture-mapping functionality, especially the ability to give each Shape its own texture that gets used automatically, to fulfill this outcome.

*3d* — | ...This is like *2c* though.

*4a* — + ...Here we allow texture-mapping to replace lighting and camera again.

*4b* — | ...We assign | here because the texture-mapping code can be unified a bit. Imagine, for example, that instead of all those `createTextures` plus the `load` event handling in the main program, setting a texture is a matter of supplying a URL when creating the Shape. Now *that* would really clean things up.

*4c* — + ...Some bad/inconsistent indentation and commented-out code scene, but not so frequent as to be disruptive when reading the code.

*4d* — +

*4e* — +

*4f* — + ...Consideration given for extra effort and other personal issues.