## **Rubric Detail**

A rubric lists grading criteria that instructors use to evaluate student work. Your instructor linked a rubric to this item and made it available to you. Select **Grid View** or **List View** to change the rubric's layout.

Name: Assignment 4 rubric

**Exit** 

	Acceptable	Fair	Good	Perfect
Scene setup	No lights are present in scene	Between 1 and 3 lights are present	3 lights are present, but none are spotlights	Scene has at least three lights (evidenced by XML file and/or the visual output), at least one is a spotlight
Lighting data	No evidence that light and material data were sent to shader		Either light or material data is partly or incorrectly passed to shaders	Light and material data are passed correctly to shaders in scene graph rendering
Lighting implementation	No evidence that lighting was attempted during rendering	Lights are not correctly handled in 2 types of nodes.	Lights are not correctly handled in 1 type of node	Lights are correctly handled in rendering in all three nodes
Spotlight implementation	No evidence that spotlights were implemented.	Code to send spotlight data and use it in shader is partial, and does not work	Spotlight data is sent correctly, but there is error in implementation of spotlights in shader	Spotlight data sent to shader, spotlights implemented in shader correctly

	Acceptable	Fair	Good	Perfect
Animating object	An attempt has been made to make an object, but not complete	Object has fewer than 10 instances	XML file does n ot identify in comments which nodes will be used to animate	Model has at least 10 instances, XML file marks nodes that will be used for animation in comments
Animation visual	Nothing moves on the screen	Something moving is seen, but does not seem to match what code is attempting to do	Animation shows object having only 1 kind of motion, or animation is not obvious visually, or some implausible motion is implemented with respect to the object	Animation shows object having 2 independent degrees of motion
Animation implementation	No evidence that animation has been attempted	Animation is created by adding code to the nodes themselves, instead of externally	Animate function is written correctly, but more haphazard without using any common time reference	animate function is correctly written, uses some time reference
Program preparation	No evidence toggling has been attempted, README is not present	Program does not allow toggling of lights, README is present	Program allows toggling of lights but using different keys that were not documented in README	Program, when run, allows toggling of lights by the specified keys, README file mentions what was completed or not
Extra credit			Video of animation is either submitted directly on blackboard, or link is not included in README	Video of animation made, looks satisfactory and link is present in README

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