

COMP 3202

assignment 1- Marking guide.

Listed in order of priority

Priority	Item	Objective
1	Economical use of polygons	Check for excess polygons and depth complexity. Check polygon budget at onset of a project.
2	Ordered hierarchy	The hierarchy structure should be efficiently ordered and polygon nodes named appropriately.
	Scaling of model	Items within the model should be scaled to look realistic
3	Good structured LOD's	Good distances set for change in detail. Structure of Lod (replacement / additive)
	Textures applied correctly	Textures should be applied and scaled correctly to the polygon
4	Non-planar polygons	All of single polygons vertices should be sitting on the same plane
	Gaps in geometry	All polygons should meet correctly where they touch with no gaps showing
	Z fighting	Check model for overlapping and coplanar polygons
	Missing polygons	Check for polygons facing the wrong way or missing
	Neat texture/Material/object palette	Only items in model to be stored in palettes

The most common problems or faults are listed below.

Excess Polygons

A number of students made all the house polygons double sided. There is a difference between 'Double sided' and Show back faces. Double Sided creates a polygon viewable from both sides at run time (essentially two polygons). Show Backsides is an aid to modelling and shows the polygon as if it faced both ways. However at run time the polygon only faces one way.

Leaving the tops on the support poles or ends to the Steps. These polygons aren't seen and should be removed.

The Hierarchy.

Review the notes on this and look at the model provided for an example of organizing it Geographically. If it's still not clear come and ask!

Limit the number of state changes within a polygon node. A number of students used a single polygon node for all the walls, roof, windows and doors. It has an impact on the draw time and may become critical so keep it to a minimum. Generally I would group the single door and walls together and use a separate node for the roof. It's a balance between state changes and number of polygon nodes used.

LOD's.

Most students only had a simple Level Of Detail that switched polygons on or off. A good example of replacement LOD (high polys for Low) would be either the Window shade or Corner detail. Take a look at the model provided for the format of making one LOD a child of the other. Also on setting the centre of the LOD to the centre of the object that it affects. (Middle mouse click on the LOD axis to translate it).

Texture Application

Match up the cladding boards of the house. Select all the wall polygons and use Cubic rather than planar to apply the texture pattern.

Scaling

Some of the scaling and positioning of doors, windows and steps were incredibly unrealistic. Windows are not generally 2cm from the floor and 30cm tall !. Similarly the average front door is not 3m wide!. Go and measure a set of steps or stairs, they will all be of a similar size and ratio. Not surprisingly these dimensions will be similar the world over !

It does not matter whether you are building atoms, molecules or buildings if the relationship of the sizes within and between them is wrong it will attract the eye. Why do you think Australia is full of things like 'The Big Pineapple, Banana, Shrimp or Wellington' ?.