

Environment Development Assessment 4

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Outliner|Index

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Introduction|Brief & Requirements

Brief:

You are now ready to start developing your work from the client's brief in which you have fleshed out.

Pre-production:

- You need to create a mind map in order to establish what assets you will need to concept and create.
- You need to gather reference for all of the assets that will need to be created
- You need to create a list of your assets and schedule
- You need to create small thumbnail sketches and a final concept

Production:

- You need to create primitive blockout of your assets
- You need to model and UV unwrap your assets
- You need to texture your assets
- You need to present it in UE4

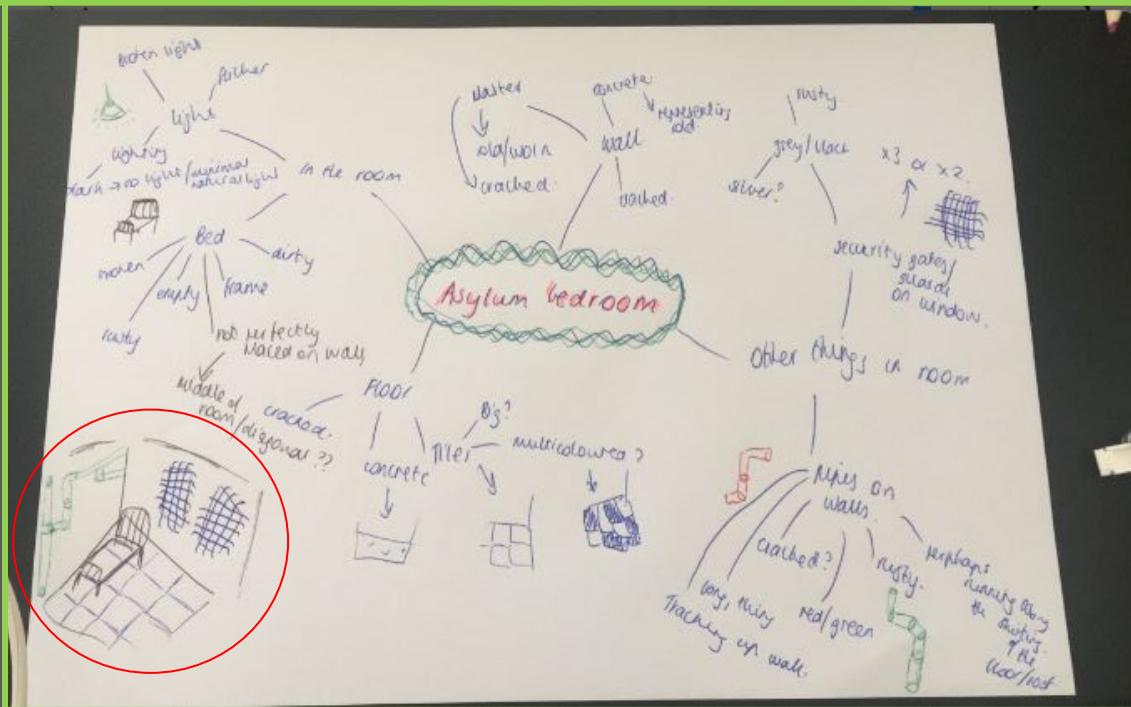
Task|Mind Map

Mind Map:

- Brainstorm your idea using the mind map technique to establish exactly what you need in your environment.
 - Add branches to yours ideas
 - Use relatable keywords
 - Use colour codes
 - Use images if necessary

Mind Map

- 1950's/1960's inspired



Task|References

Reference Tasks:

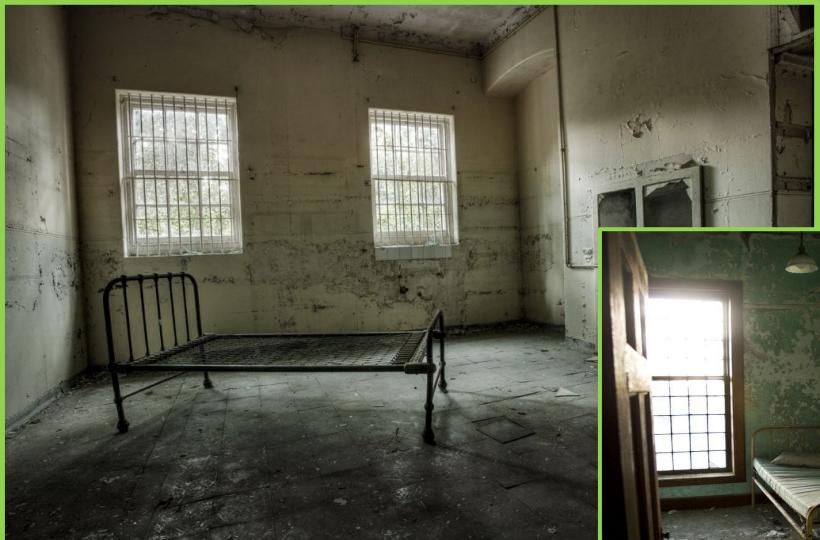
- Gather reference images for your asset, include material reference and consider the colour palette.
- Paste the images into the slide below.

Requirements:

- Add notes where relevant and crop images so that they only include the important elements.

Room environment references

The random position of the bed and paint flaking off the walls, along with the security gates/guards on the windows.



The greenish colouring to the room and simplism, though too much natural light.



Like the lighting and the high window

Batman Arkham Asylum has heavily contributed to influencing my design and ideas of the environment. The atmosphere it creates in being grungy, abandoned with a slight off, strange feel from the question marks is what is desirable.

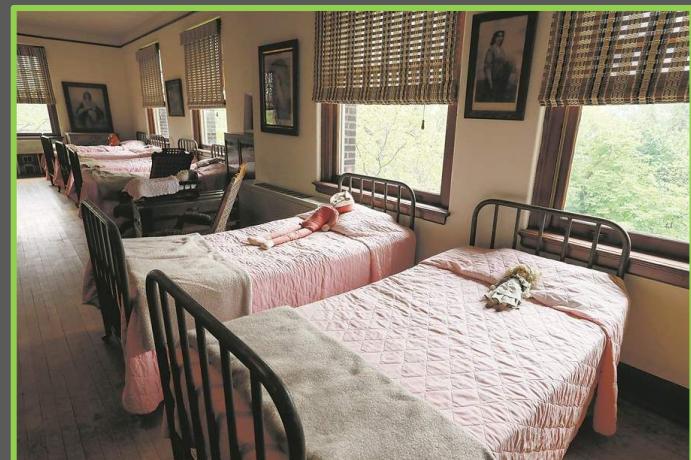
Asset x1 References

Empty bed frame



Simplistic, black frame, older style type of bed that was used in [REDACTED] orphanages (see on the right), in mental asylums and hospitals in the 1950's/1960's

The bottom framing is simplistic, no complicated mesh to support a supposed mattress



A children's orphanage, showing the beds on display from the 1960's

Asset x2 References

Pipe



Rusty
Collection of pipes,
not just singular

Runs along the wall.

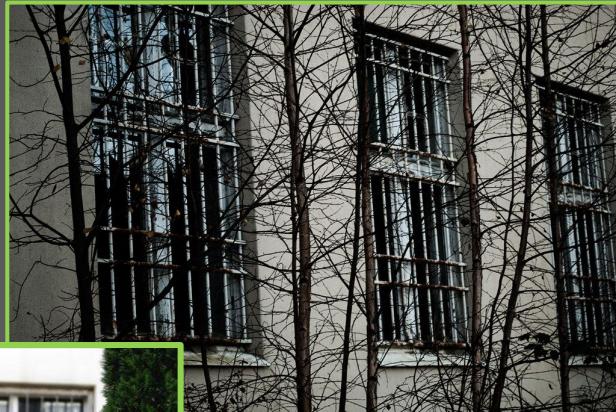


Rusty, with clear parts
of connection (elbow
connections) that you
can see externally.

Paint is coming off,
clear rust apparent.

Asset x3 References

Window security bars



Task|Asset List and Schedule

Asset List Tasks:

- List of all the assets that you would like to have
- Write a little description of each assets

Schedule Task:

- Write an approved due date with your teacher

Asset List and Schedule

Asset	Description	Due Date
For Example: Tree_01	Big old tree with lots of leaves, they are very lush and green.	8 th June. (depending on school timetable)
emptyBedFrame_01	1960's inspired empty (without mattress) black bed frame will be the centrepiece of the room.	
pipe_01	Rusty green pipes will track the room, preferably on the walls and the roof.	
windowSecurityBars_01	Silver/ grey bars on windows.	

Task|Thumbnail Sketches

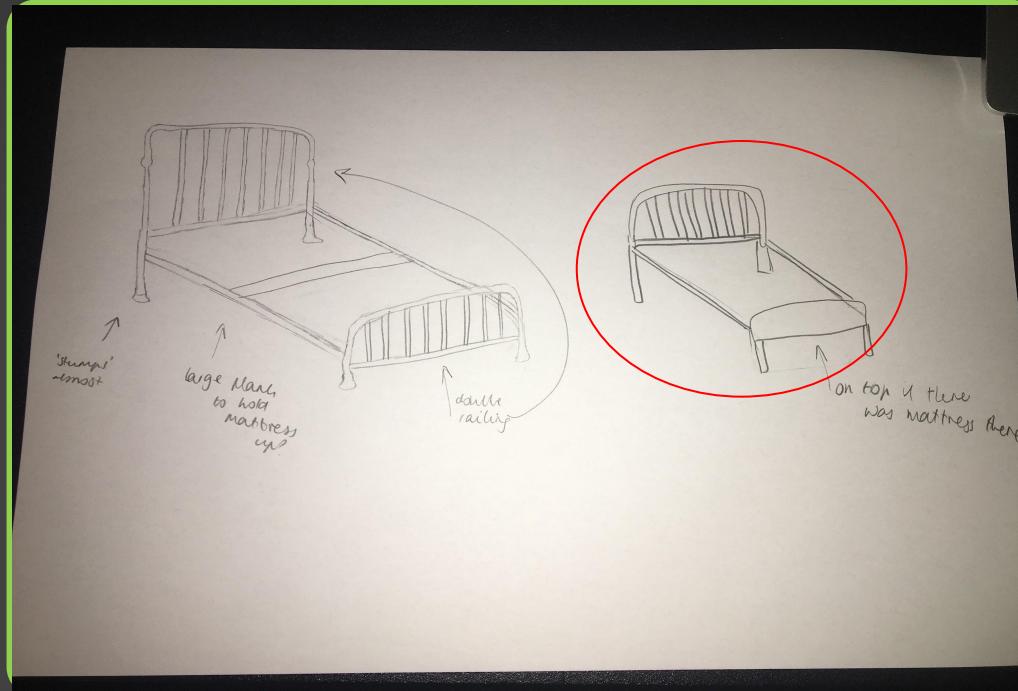
Concepting Tasks:

- Draw thumbnail sketches for your environmental assets
- Paste them into the slides below.

Requirements:

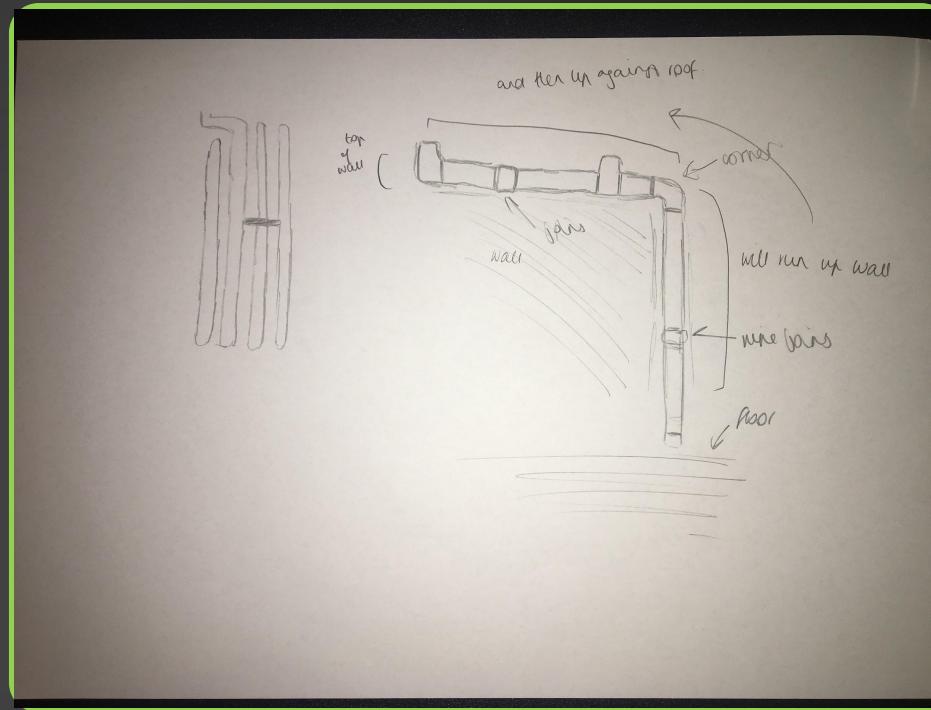
- Thumbnails must include the overall form and major details.

Concepting|Thumbnail Sketches (Draft 1)



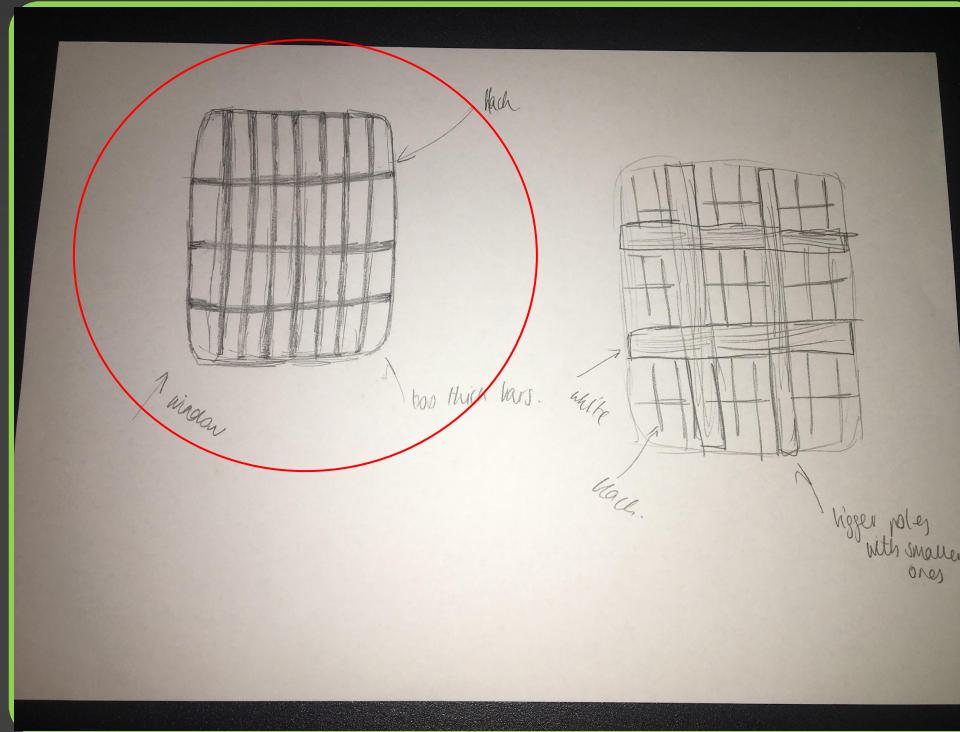
Asset 1 - Bed Frame

Concepting|Thumbnail Sketches (Draft 2)



Asset 2 - Pipe

Concepting|Thumbnail Sketches (Draft 3)



Asset 3 - Window Security Guards

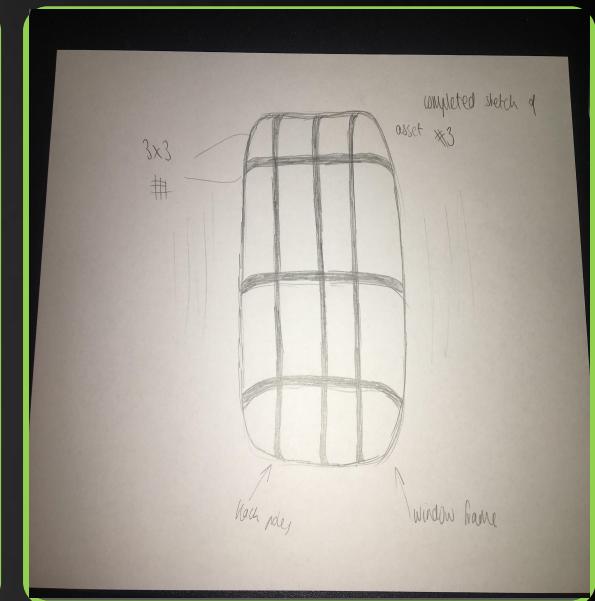
Concepting|Thumbnail Sketches (Final Pencil)



Asset 1



Asset 2



Asset 3

Task|Primitive Blockout

Blockout Tasks:

- In Maya, using only primitives polygon create a primitive blockout of your assets.

Requirements:

- The blockout should be the correct scale and represent the key forms of the design.

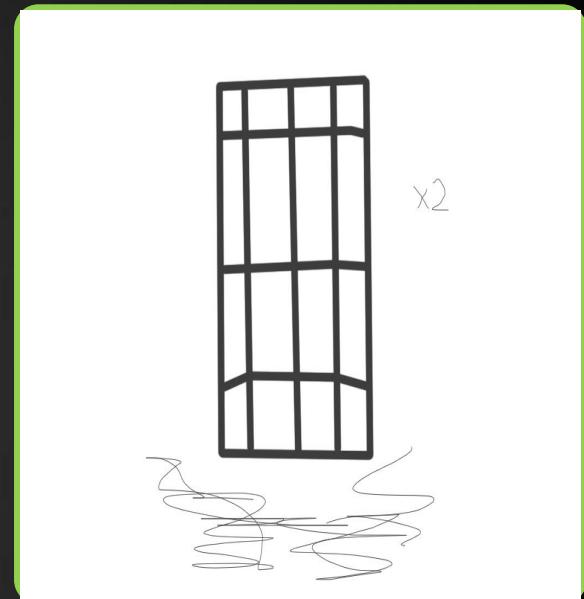
Concepting|Thumbnail Sketches (Coloured)



Asset 1 - Rusty Bed Frame



Asset 2 - Pipe



Asset 3 - Window Security Bar

Task|Final concept

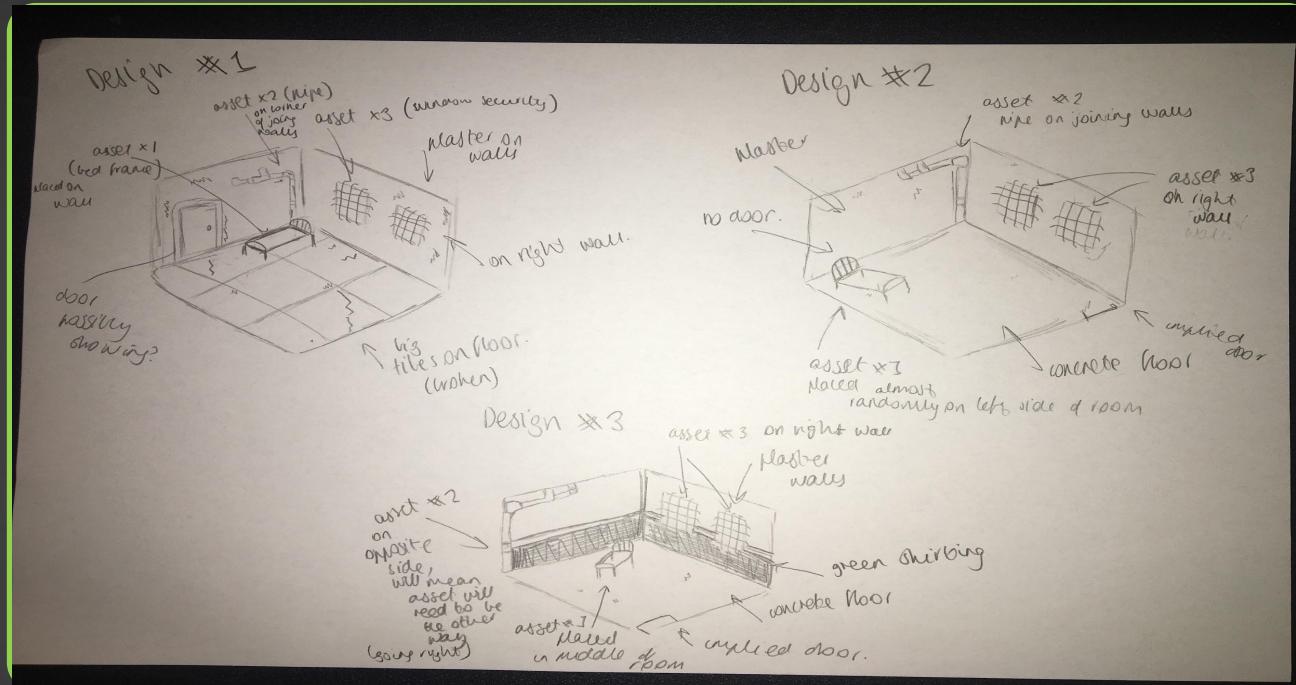
Concepting Tasks:

- Draw your final concept of your whole environment, include all of your assets.

Requirements:

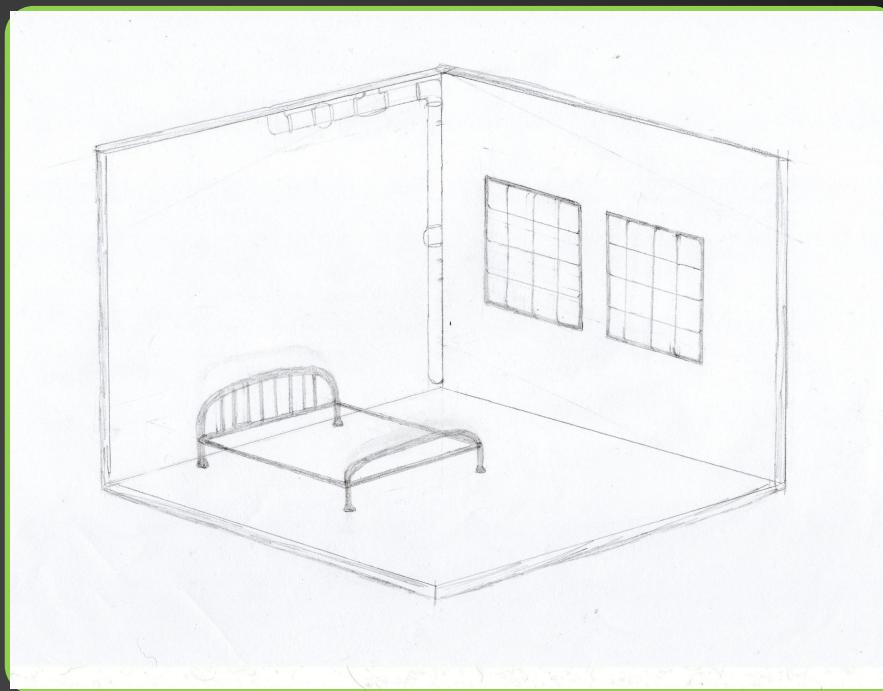
- Concept must include major and minor details
- Concept must include colours

Concepting|Final Concept (Layout Sketch)



Final Concept of Environment

Concepting|Final Concept (Pencil)



Final Concept of Environment

Concepting|Final Concept (Coloured 1)



Final Concept of Environment

Concepting|Final Concept (Coloured 2)



Final Concept of Environment

Concepting|Final Concept (Blockout in UE4)



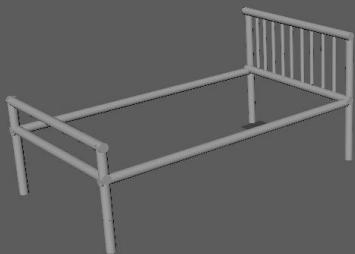
Final Concept of Environment

Feedback|Pre-production

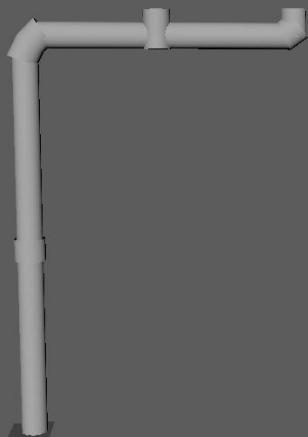
Obtain approval for your pre-production before modelling your asset.

Feedback	Approved
	<input type="checkbox"/>

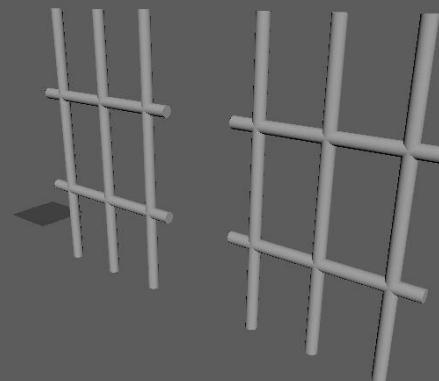
Primitive Blockout|All Assets in Maya



Asset 1 - Bed Frame

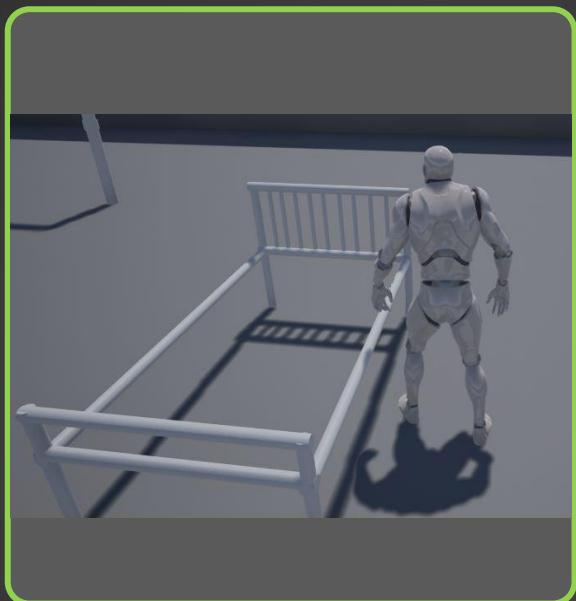


Asset 2 - Pipe



Asset 3 (Optional)

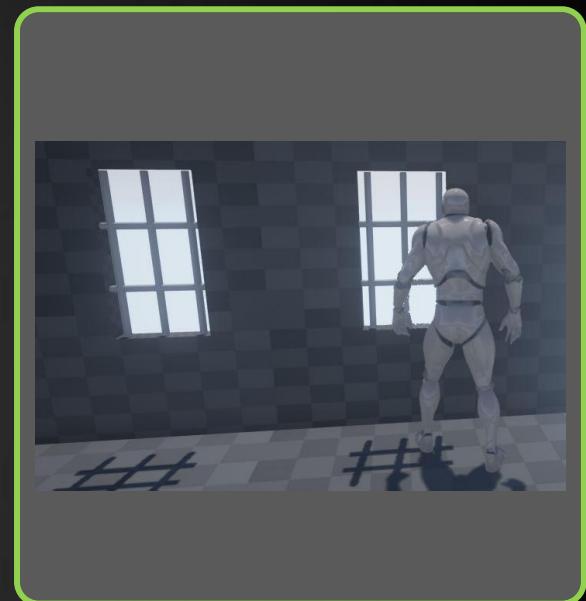
Primitive Blockout|All Assets in UE4



Asset 1 - Bed Frame



Asset 2 - Pipe



Asset 3 (Optional)

Task|Modelling

Modelling Tasks:

- In Maya create your environmental asset using polygon modelling techniques.
- Screen capture a perspective view of the model in **shaded wireframe mode** and paste it into the slide below.

UV unwrapping Tasks:

- Once you have completed your model, you then need to UV Unwrap it.
- Take a **UV snapshot** of your model UV layout and paste it into the slide below.

Requirements:

- Your mesh must meet the brief and technical requirements.
- Clean up your model by:
 - Remove/fix any: N-gons and hidden edges, duplicated objects
 - Delete your history
 - Freeze transforms
 - Set your pivots
 - Name your objects appropriately in the “Outliner”
 - Make sure that your UVs are within the 1 by 1 space

Modelling & UV|Asset 1



Grey Model

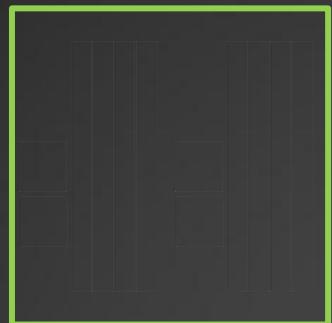


Perspective shaded wireframe

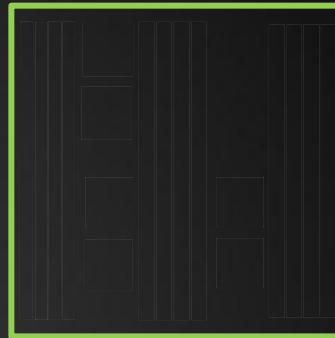
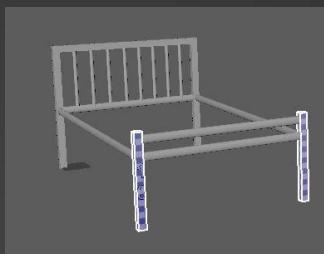


No light Model

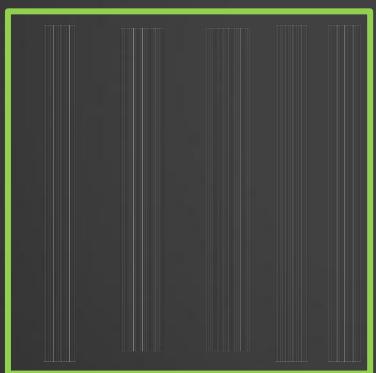
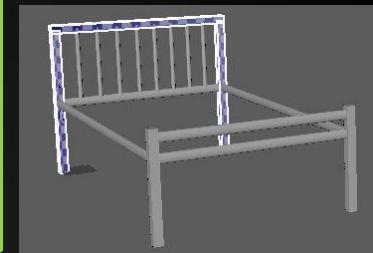
Modelling & UV|Asset 1



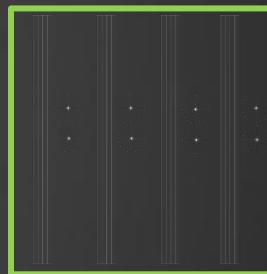
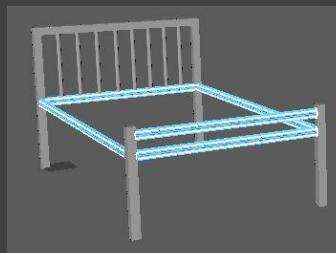
Front bed legs UV



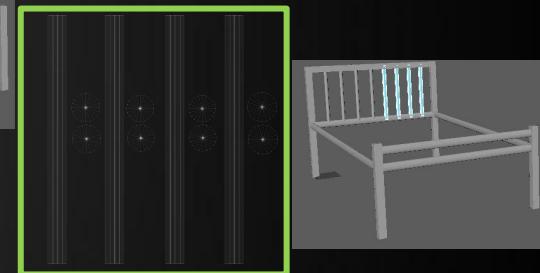
Back two legs and above frame UV



Frame UV



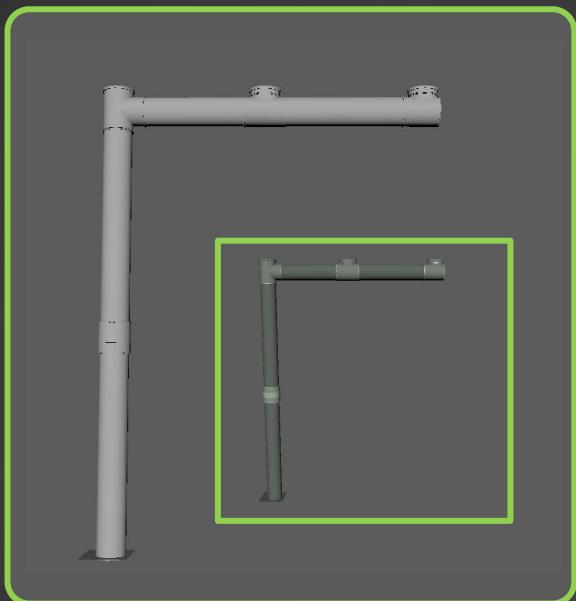
4 poles left side UV



4 poles right side UV



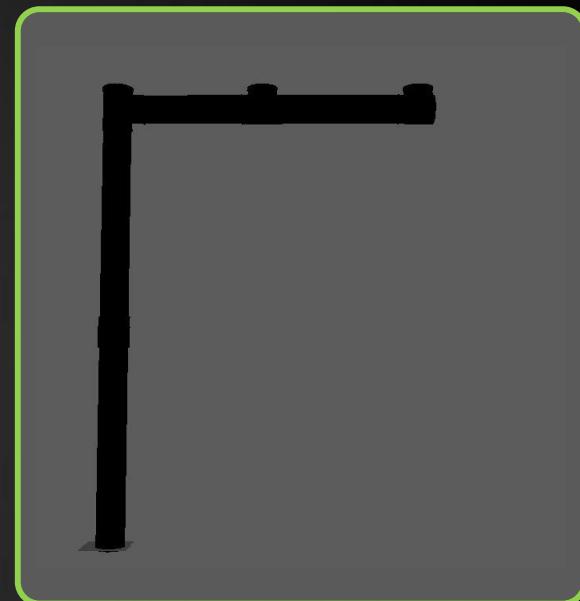
Modelling & UV|Asset 2



Grey Model

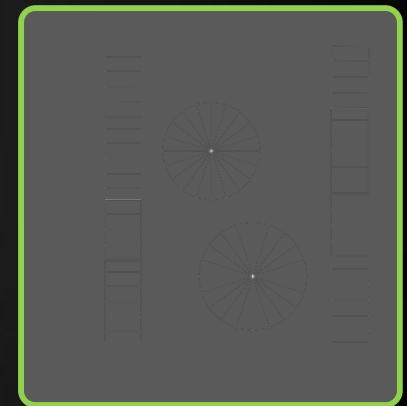
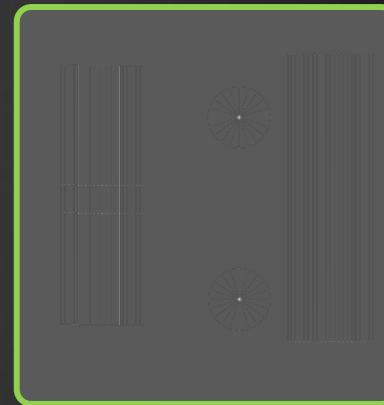
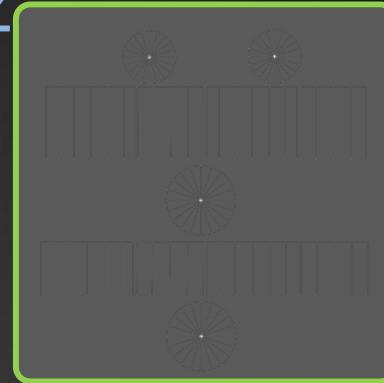
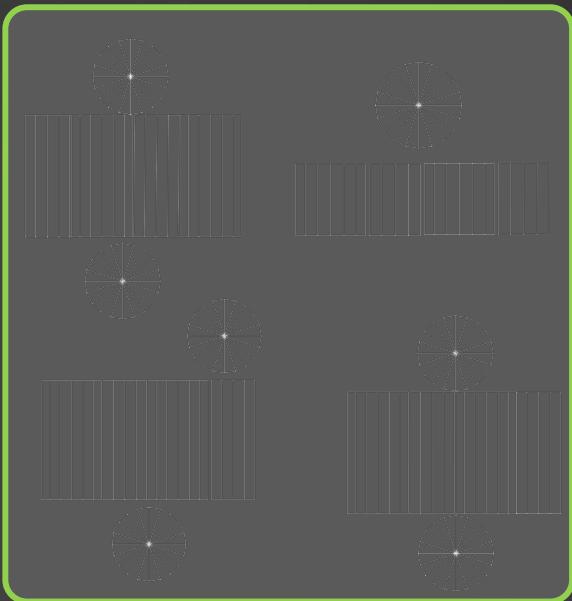


Perspective shaded wireframe

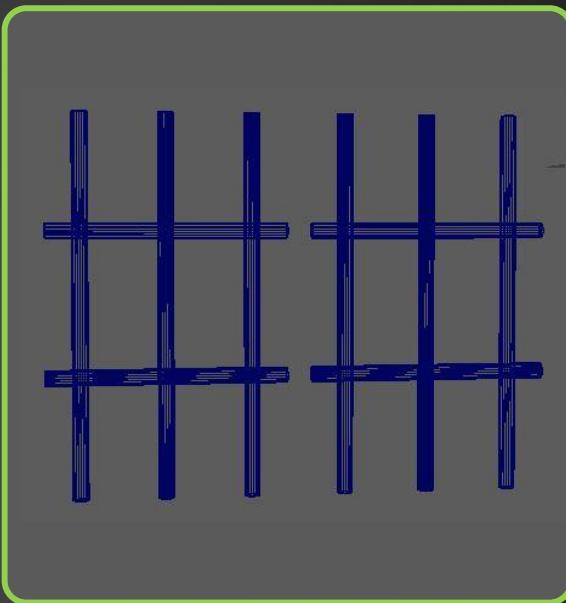


No light Model

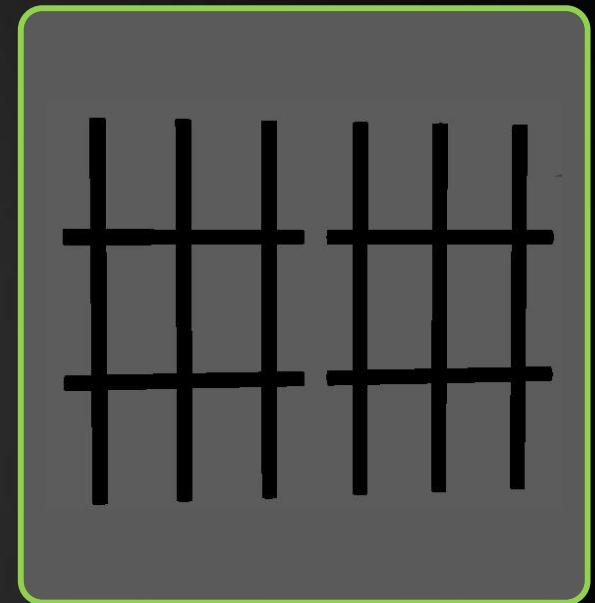
Modelling & UV|Asset 2



Modelling & UV|Asset 3

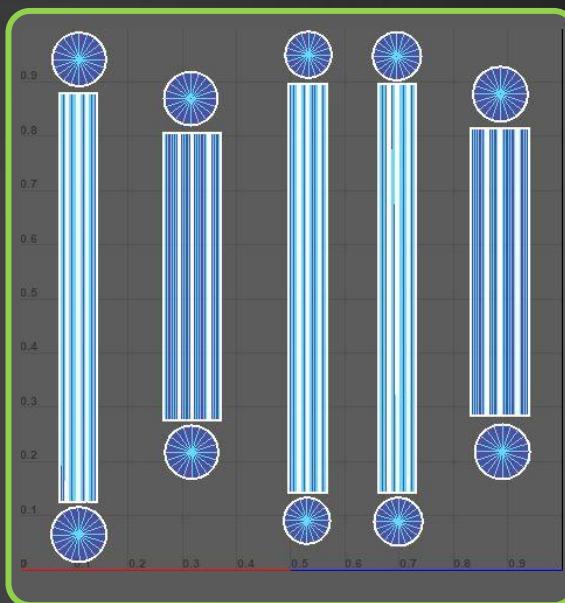


Perspective shaded wireframe



No light Model

Modelling & UV|Asset 3



UV Snapshot x2 (as there is two bars)

Task|Texturing

Texturing Tasks:

- Gather or create images to create the required texture map(s).
- Paste the textures into the slide below.
- Screen capture a perspective view of the model with the textures applied and paste it into the slide below.

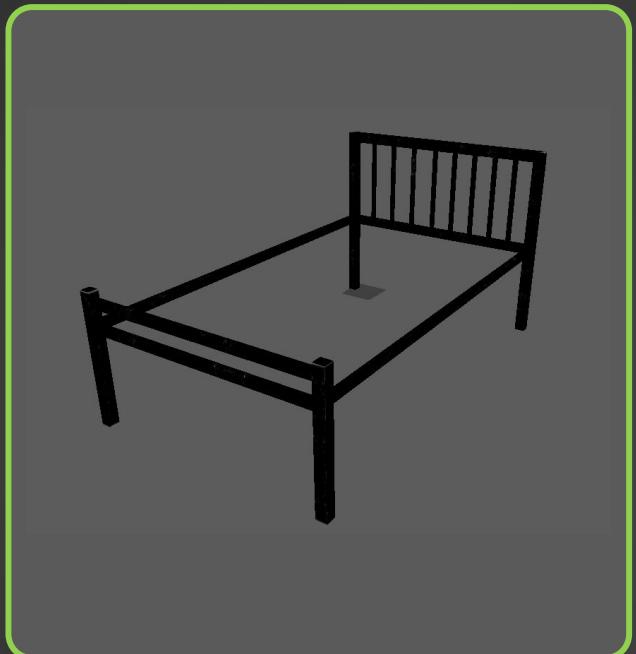
Maps required:

- Diffuse map
- Normal map (optional)

Requirements:

- Name your map(s) in an appropriate format
- Textures are to be exported in an appropriate format. E.g. PNG, JPG, TGA, etc

Textures|Asset 1

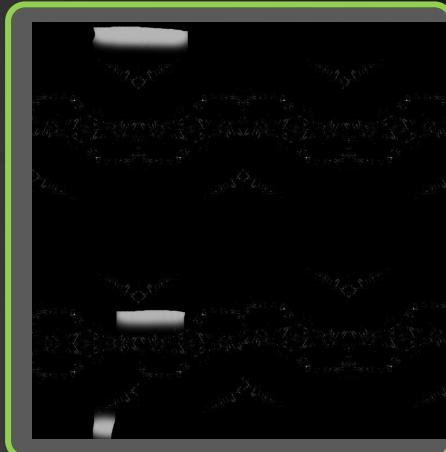
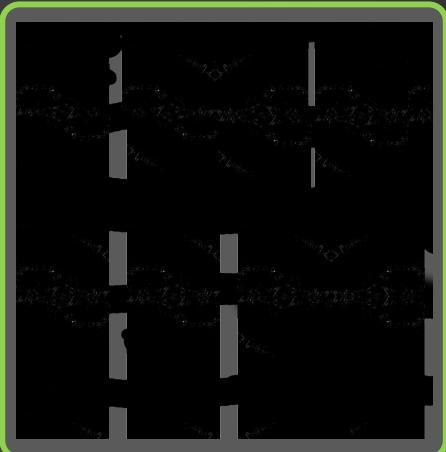


Textured Model



Diffuse

Textures|Asset 1



Textures|Asset 2



Textured Model

1

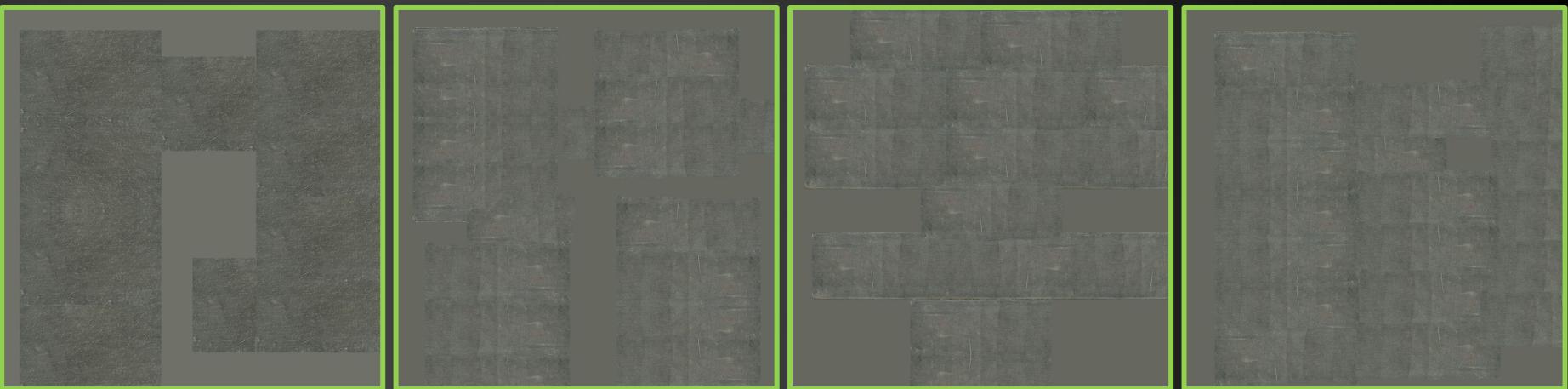


2

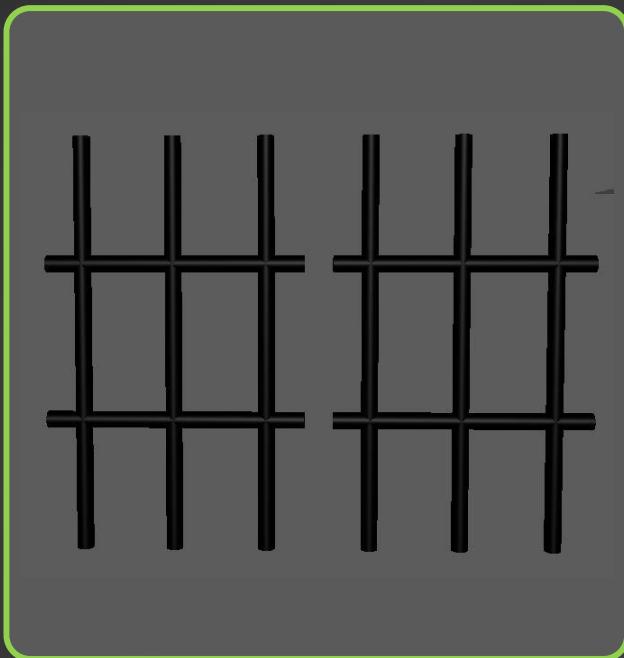


Diffuse.
Added to both:
Photoshop 2018
Colour Balance:
-2 cyan-red
+5 magenta-green
Photoshop 2018
Hue/Saturation:
+2 Hue
-2 Saturation
-4 Lightness

Textures|Asset 2



Textures| Asset 3



Textured Model



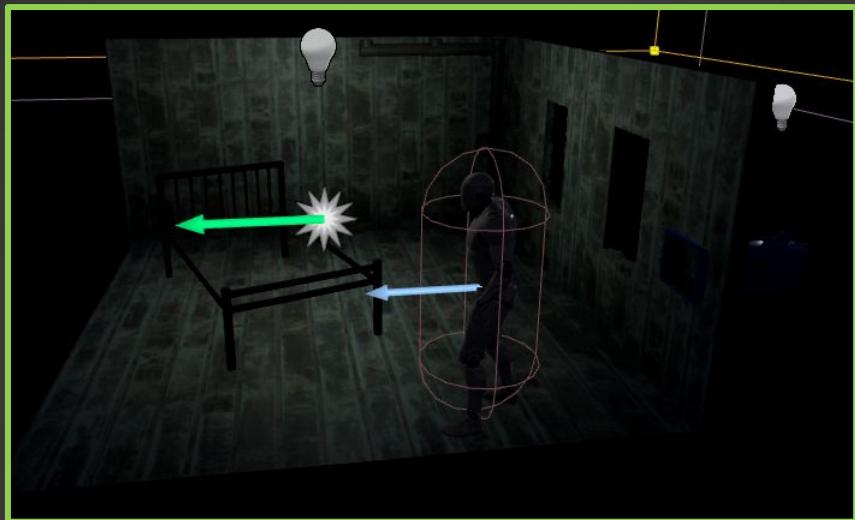
Blinn (Maya texture)

Task|Import into UE4

Import Tasks:

- Import your model into the game engine
- Apply all required materials and textures.
- Adjust the scene lighting and post processing filters.
- Take three screenshots of UE4 real-time render and paste it into the slide below.
 - Show different Angles

Final Level Shots



Level view 1



Bird's eye view 1

Final Level Shots



Level view 2



Looking out window with SkyBox 1

Final Level Shots



Visible particle (from particle system)



Level view 3

Final Level Shots



Level view 4

Task|Post Mortem

Post Mortem Tasks:

- Answer all the questions in the post mortem slide below.

Requirements:

- All questions must be answered in sentences (25 Words).
- Be sure to check your spelling, grammar and punctuation.

Post Mortem

Did the asset turn out as you expected? If so how is it different?

The assets I created using Maya turned out very well; though with time restrictions (and COVID restrictions), some changes had to be made to the assets for full completion. The main thing that was changed was the textures in Photoshop onto the grey models in Maya. I felt that some of them were very basic compared to what I wanted them to look like, though they still look very good.

What was challenging in its creation?

The most challenging part of the creation of this game environment was getting my skybox in UE4 to work as it somehow was not linked with my other lighting. Another somewhat challenging part was creating my pipe in making it look 'right' to be a pipe instead of just linking cylinders - research helped with that aspect.

What are you most proud of about the asset?

I am proud of all of my assets. On asset 1 (the bed frame), I am most proud of how well the bed frame shape looks even though the bed legs were originally supposed to be cylindrical. On asset 2 (the pipe), I am extremely proud of the texture and how it looks successfully like a pipe. And finally, on asset 3 (the window security bars), I like the Blinn texture reflecting like covered metal would.

What would you do differently?

Though there are not many things I would do differently, there are some things I would like to change or differ. One of these things would be devoting more time to Unreal Engine. This includes the weather and possibly particle systems, and also includes changing the room texture of the walls and floor to be more sophisticated and realistic.

What new skills / things did you learn?

Effective time management was developed whilst creating the assets and the game environment. This was because of the condescended amount of time available in creation due to COVID restrictions and missed lessons because of public holidays or 'Pupil Free Days'. It was really important to prioritise and work even more effectively than before. I also developed my skills with Maya, Photoshop and Unreal Engine 4. A major thing I learnt (for the first time) was how to use the skybox in UE4 and change the colour of the sky, and I also learnt how to texture objects in UE4.

Feedback|Final

Obtain approval for the final deliverables of the assessment.

Feedback	Approved
	<input type="checkbox"/>