Project – 3D Maze Level Design

DUE DATE: __/__/____

Design, Modeling & UV unwrapping

Creating games – like creating movies – needs actors, sets, scripts, sounds and effects. However, first you need a stage for the acting to take place. In the case of games, you need to design the level. Good level designers are in high demand. It requires an understanding of psychology, architecture and art in order to create something that is interesting to look at, easy to understand, and fun to play.

Use your research and pre-production work (separate handout) to design a modular kit that will make your level *authentic*. This level is a maze that takes place primarily indoors. However, it can have alternating interior and exterior spaces – to be discussed. Reuse geometry creatively so as to limit art fatigue.

Be clever. Be resourceful. *Astonish us!!*

Make priority lists:
   • What models do I need?
   • What will I do first and in what order?

Submit:
A zipped folder that includes:
   1. A fully completed pre-production document (see attached handout) -- including grey-blocked Unity level
   2. Your final Maya scene(s) just before Painter FBX export, that includes:
        i. Low & high poly meshes organized clearly
        ii. UVs fully unwrapped & laid out
   3. All your *individual* modular kit assets as FBXs (both low & high)

The rubric:
Your work will be graded upon the following criteria:

Pre-production & design	5
Modeling (low & high poly)	4
UV unwrapping (low poly only)	4
Aesthetic, detail & complexity	5
Organization	2
Late	(-2)
Total	20

Modular Kit Texturing & Level Assembly in Unity

1. Import each modular kit asset as its own individual FBX into Painter
2. Texture all your assets paying particular attention to environmental narrative
3. Import and use the same color scheme into each Painter scene
4. Make *at least* three versions of each texture set
5. Render each individual modular kit asset with one of its texture sets
6. Composite all the renders into one HD 1080 (1920 x 1080) layered PSD file
7. Export all your textures from Painter for use in Unity
8. Export all your models from Maya for use in Unity
9. Create prefabs (with necessary colliders) for all your assets
10. Replace your initial grey box build and assemble your entire maze level by duplicating prefabs and snapping them to each other
11. Use your texture sets and variance elements to alleviate any "art fatigue"
12. Add lights/lighting to enhance the desired mood
13. Add a FPS Controller and place at spawn point
14. Download and use the Post Processing Stack
15. Allow time for fixes, alterations and any necessary troubleshooting such as:
    - Adjusting scale
    - Creating an added variance
    - Adding more texture variety
    - Adding more environmental narrative clues
    - Modeling a custom collider in Maya for a staircase

Submit:
A zipped folder that includes:
1. Your *entire* Unity project, with its completed maze level scene
2. Include the composited Photoshop file of your asset renders (from Painter)

The rubric:
Your work will be graded upon the following criteria:

Texturing	5
PSD composite of renders	2
Unity Assembly	5
Lighting	2
Aesthetic	4
Organization	2
Late	(-2)
Total	20

Maze Play and Final Touches

Level Design 2018: https://vimeo.com/album/5087665

1. Add at least one Unity animation to your level (e.g. flickering/blinking lights, sliding or trapdoor obstacle, or other…)
2. Add *one* supporting free element from the Asset Store. This element should not overwhelm your own design. It should fit in the same world (e.g. trees or landscape outside windows, small plants or object inside your maze, etc.)
3. Record play (including sound). Make sure that you show any personal highlights and visual narrative elements.

Submit:
An MP4 of play in your level

The rubric:
Your work will be graded upon the following criteria:

Animation	3
Free Asset Store element	1
Edited MP4 of play (with sound)	3
Aesthetic	3
Late	(-1)
Total	10

PRE-PRODUCTION & DESIGN
(Complete fully & submit)

BRAINSTORMING

Answer all of the following questions:

1. What is the name of your level?

World Building: https://vimeo.com/album/3774760/video/153863906

2. What is your world type?

3. What event is central to the story of your game (macro or micro)?

4. What culture(s) defines your world?

Environment Narrative: https://vimeo.com/album/3774760/video/153930679

5. What visual elements will describe the history of your world and its society's values?

6. How will you visually provide plot points, hints, foreshadow events?

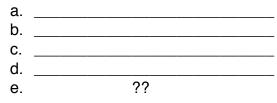7. How do you want players to react emotionally to the environment?

Directing Traffic:

8. Spawn point – What does the player first see? What makes it cool *at a glance* to explore? What gets the player moving?

9. What element(s) of gameplay will direct the player? How will you offer choices?

10. Visual clues? Weenies? Lighting? Foreshadowing? Rewards?

PRE-PRODUCTION

Modular Kit: Fill out the following lists and collect the required imagery:

1. Architectural (utilitarian) asset priority list
   a. _____
   b. _____
   c. _____
   d. _____
   e.   ??

2. Set dressing (variance) asset priority list
   a. _____
   b. _____
   c. _____
   d. _____
   e.   ??

3. Collect and submit a folder of specific images that you will be referencing to model each of your elements

4. Collect and submit a folder of images that are representative of the art style and mood you intend to emulate

5. Submit a color scheme: (screen capture from https://color.adobe.com/) – this should be for your entire level. The world you create needs to coexist artistically. Think about what elements, if any, may need color contrast.

6. Draw the mood of your level – no characters, no words and do not title your drawing:
   a. Choose a camera framing and angle looking at a section of your maze
   b. Pick from your architectural and set dressing lists above to help populate your scene
   c. Now consider the light source(s) and use this to help define the mood

Scan and submit your drawing.

PROTOTYPING

1. Design & draw out a (top down view) map of your maze. If it helps, you may use any of the following as a start. However, you may want/need to customize… and/or add verticality:
   a. http://www.mazegenerator.net/
   b. https://xefer.com/maze-generator
   c. http://puzzlemaker.discoveryeducation.com/AdvMazeSetupForm.html
2. Also include any of the following – if pertinent to the story and gameplay:
   a. Starting/spawn point
   b. Enemy starting/spawn locations
   c. Doors, teleports, gates
   d. Treasure chests and power-ups
   e. Bread crumb collectibles
   f. Traps, secret entrances and their areas of effect
   g. Obstacles, barriers, etc.
   h. Significant landmarks
3. Rapid-level prototyping – blocked out in 3D: Grey Box Level!
   a. Bring your map into Unity
   b. Assemble your entire level using Unity's simple primitives
   c. Import a FPS Controller and "play" your level

This last part will be completed next class.

Reminder: Omit any parts (of your design) that don't help *tell the story*.

Production Timetable:
Modeling, UV unwrapping & texturing

Architectural/Utilitarian Assets

Asset	Modeled	UV unwrapped	Textured (multiple)

Set dressing/Variance Assets

Asset	Modeled	UV unwrapped	Textured (multiple)