

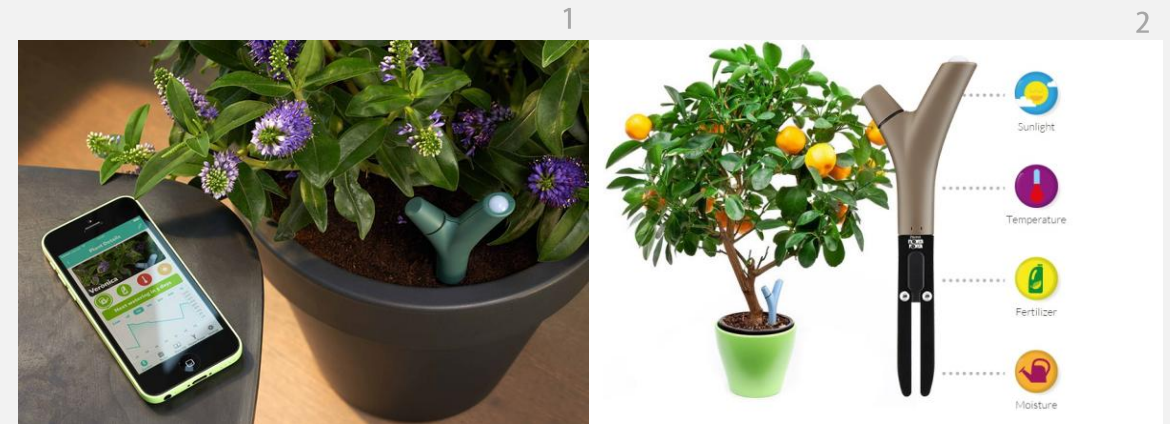
Table Farm Visual Style Guide



Our goal is to create a companion app, similar to Parrot Flower Power (top right), for the Table Farm device by Urban Farming Company (bottom right).

Initially we looked at PFP but their app is a purely data based management system. We are producing an interactive gaming experience, featuring an immersive world and educational properties, targeted at 7-12 year old children.

Similar apps on the market include Viridi and Plant Nanny, both games centred around caring for plants. However, both are taken literally and based on real world growth cycles, and feature minimum interaction. We aim to take the tie to the real world they provide, and give a fantastical spin on it.



We've chosen to have a modern fantasy adaptation of the real plant the device we will be working with, giving a creative visual experience to engage children.

Our primary influences are Alice in Wonderland and No Mans Sky.

Other titles to look at include The Islands, Rayman, Fantasy Life, The Lorax, The Witness and Firewatch.



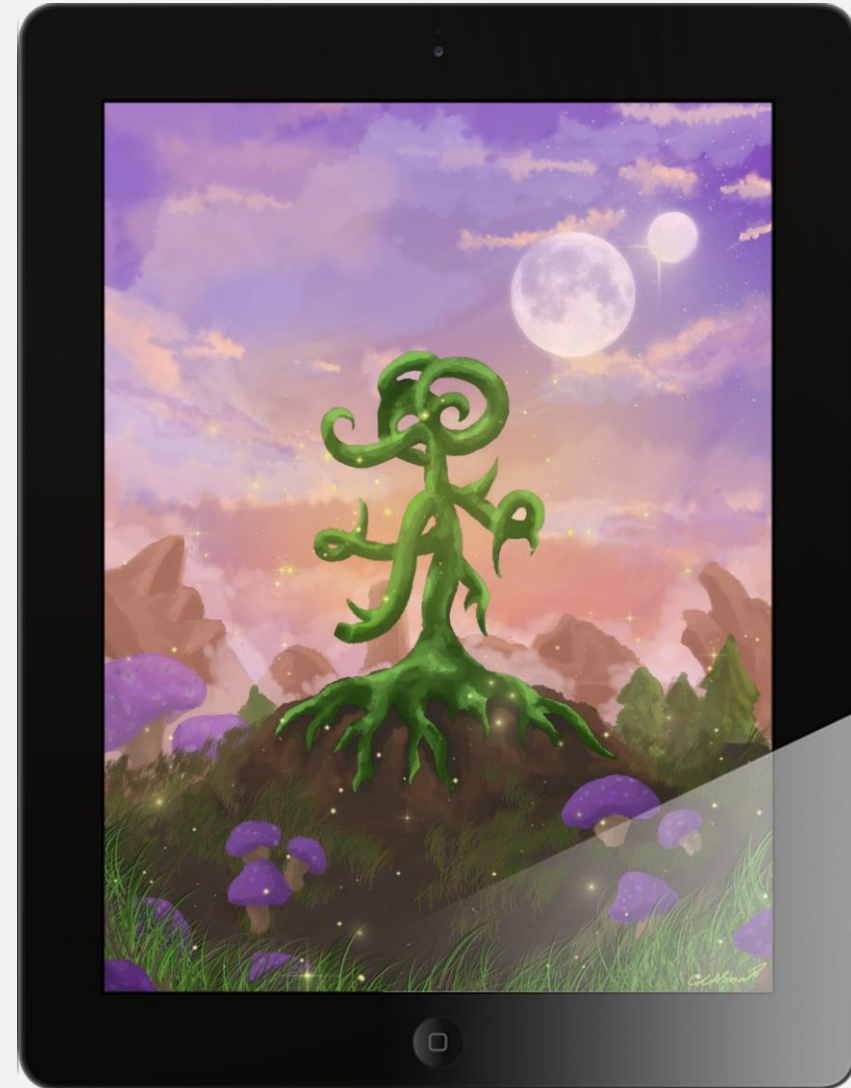
An initial aesthetic board produced to show the overall style of the game that we aim to capture. All 3D work produced should maintain this look for the end result.

The game is an app for the Urban Farming Company. It will be a companion piece for their technology, a table top plant incubator and monitor.

We aim to produce a 3D app with the camera being focussed on a plant in the centre, pivoting around this point to show an immersive fantastical planet.

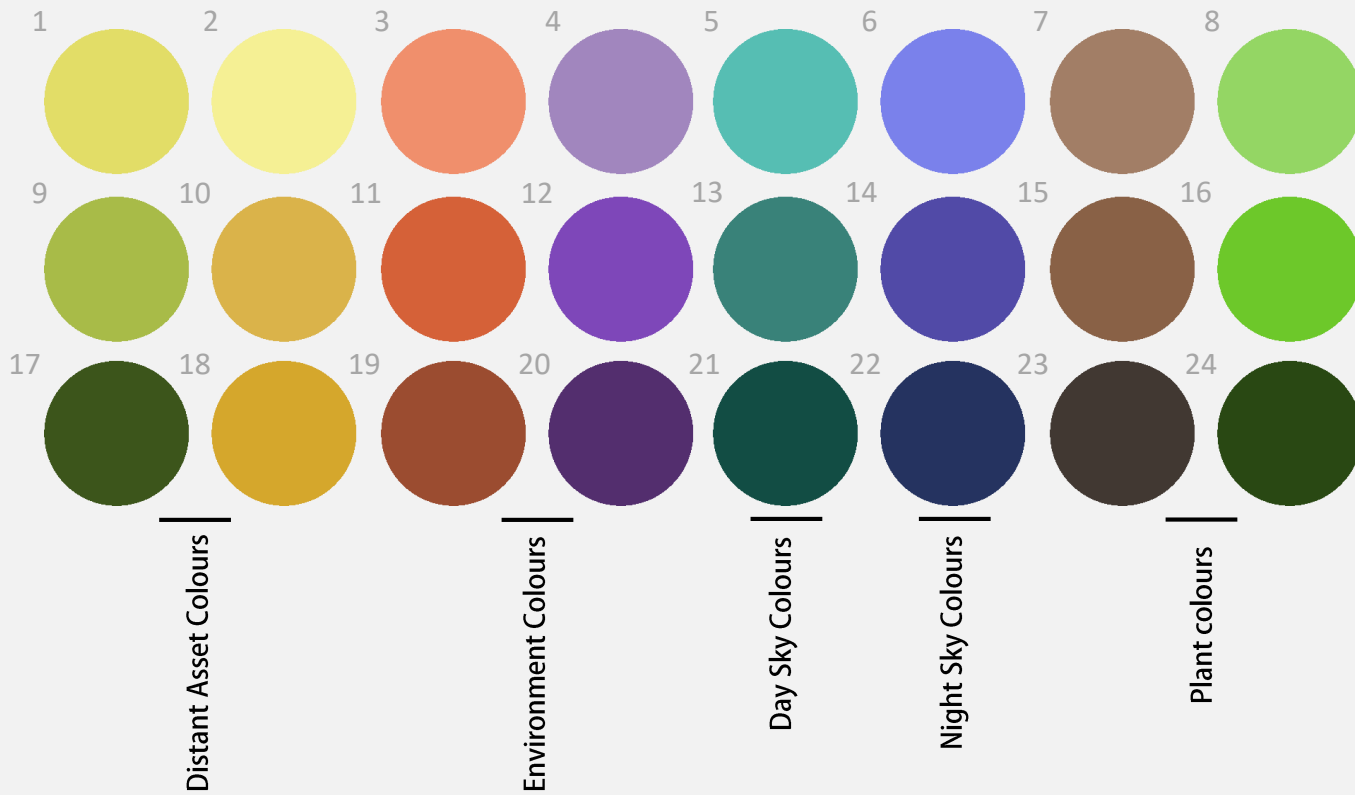


Concept art capturing the feel of what the final game should look like. Fantastical colour schemes, brightened worlds, and nonsensical plant designs to give an unrealistic visual experience.



hedera games

Initial Concept



Colour	R	G	B	Colour	R	G	B
1	226	221	103	13	57	130	121
2	245	240	148	14	81	74	167
3	240	143	108	15	137	97	70
4	161	134	190	16	109	200	42
5	86	190	179	17	60	85	27
6	122	129	235	18	213	167	44
7	162	126	102	19	155	76	48
8	148	214	100	20	83	46	110
9	168	187	72	21	18	77	68
10	218	179	74	22	37	51	96
11	213	97	56	23	65	56	50
12	126	71	185	24	41	72	19

A chart showing colours to be maintained through the game. The RGB for each colour is listed on the right.

Software

3D – Autodesk Maya; Industry standard, better equipped for our animation requirements

2D – Adobe Photoshop; Industry standard, transparency allowance

Engine – Unity; Industry standard, ideal for phone apps

File Types

3D – .FBX format; allows easier import to Unity further down pipeline

2D - .PNG format; lossless and retains transparency where required

File Sizes

FBX – >700 KB, uploaded in compressed .zip folders

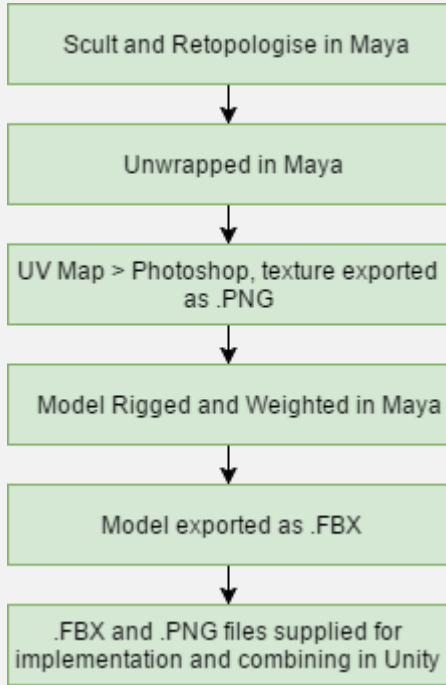
PNG – >1 MB, 1920x1080 screen size, 72 dpi

Poly Count

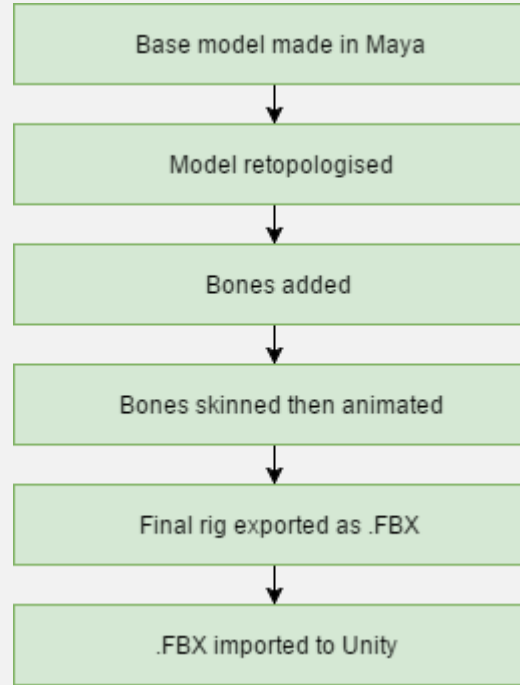
Environmental – 200-500 polys per asset. Amount relative to scale of object (small objects e.g. mushrooms = 200-300, trees = 400-500)

Plants - >5000 polys per asset. Higher poly counts should be kept for final evolutions. Maximum values should only be approached to allow animation fluidity.

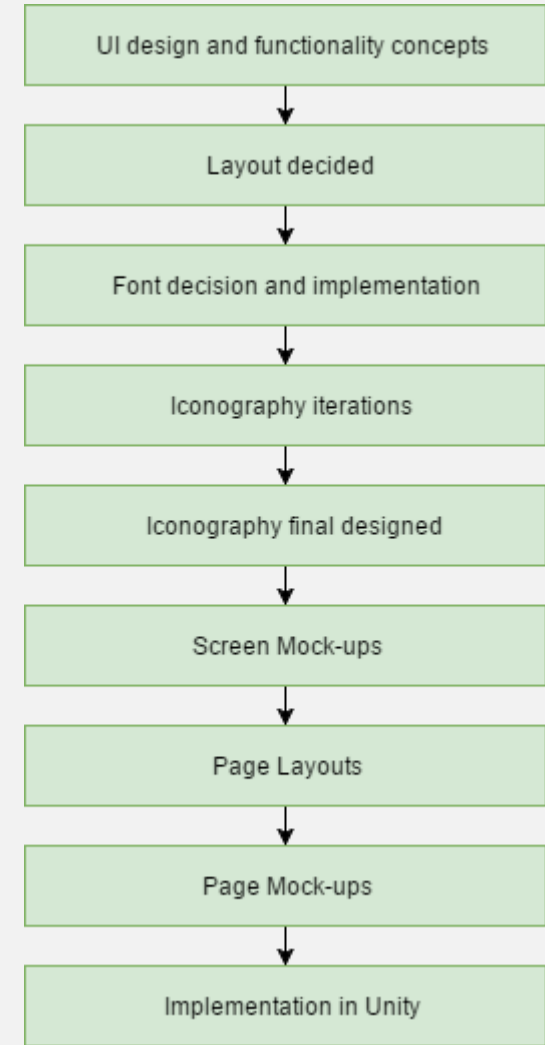




Pipeline for 3D environment asset production.



Pipeline for 3D plant asset production.



Pipeline for UI development.

Overall Assets Required;

- 1 – Plant
- 2 – Environment
- 3 – User Interface
- 4 – Miscellaneous

Plant;

- 1.1 – Plant conceptualisation
- 1.2 – Plant first evolution
 - 1.2.1 – Plant second evolution
 - 1.2.3 – Plant final evolution
- 1.3 – Repeat steps under 1.2 as required (at least 3 plant iterations)
- 1.4 – Plant UV and texturing
- 1.5 – Plant rigging
- 1.6 – Plant weight-mapping
- 1.7 – Plant animation

Environment;

- 2.1 – Environmental base mesh
 - 2.1.2 – Environmental base textures and UV maps
- 2.2 – Scenery asset meshes
 - 2.2.1 – Asset textures and UV maps
 - 2.2.2 – Asset rigging
- 2.3.3 – Asset weight-mapping
- 2.3.4 – Asset animation
- 2.4 – Asset exporting and implementation
 - 2.4.1 – Asset arrangement in scene

User interface;

- 3.1 – Design concepts and guides
- 3.2 – Final font selection
- 3.3 – Stat bar designs
 - 3.3.1 - Iconography

- 3.4 – Menu 1 button design
- 3.5 – Menu 2 button design
 - 3.5.1 – Stat sub-page design
 - 3.5.2 – Option pages menu design
- 3.6 – Mini-game iconography
 - 3.6.1 – Mini-game page design

Miscellaneous;

- 4.1 – Concept Art
- 4.2 – Mini game 3D assets
- 4.3 – Skybox colouring and visual approval
- 4.4 – Logo and branding

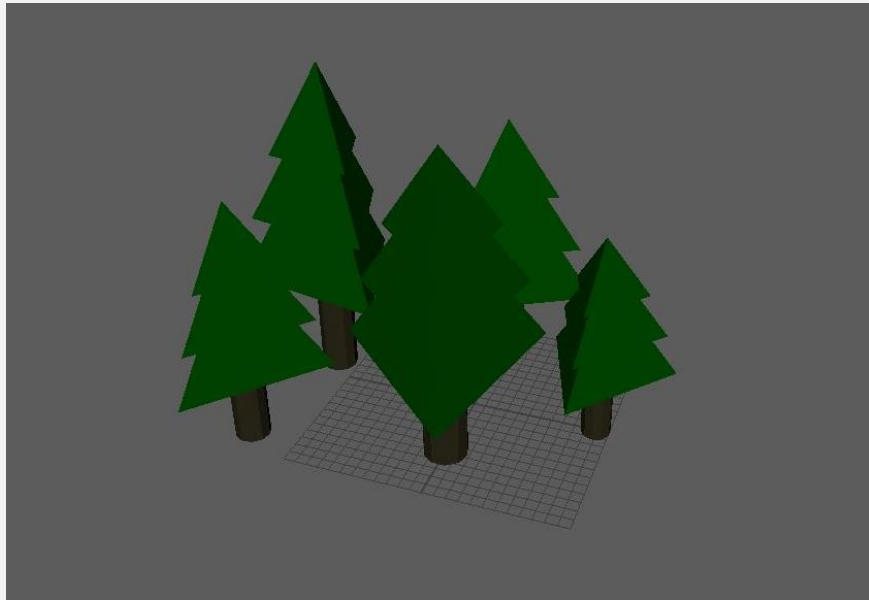


Environment



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The environmental assets will follow the previously defined, low-poly art style. They should remain minimalistic and fairly simple to create, yet remain visually appealing. Assets will include trees, over-sized mushrooms, rock formations, wood posts, and other natural landscape elements.

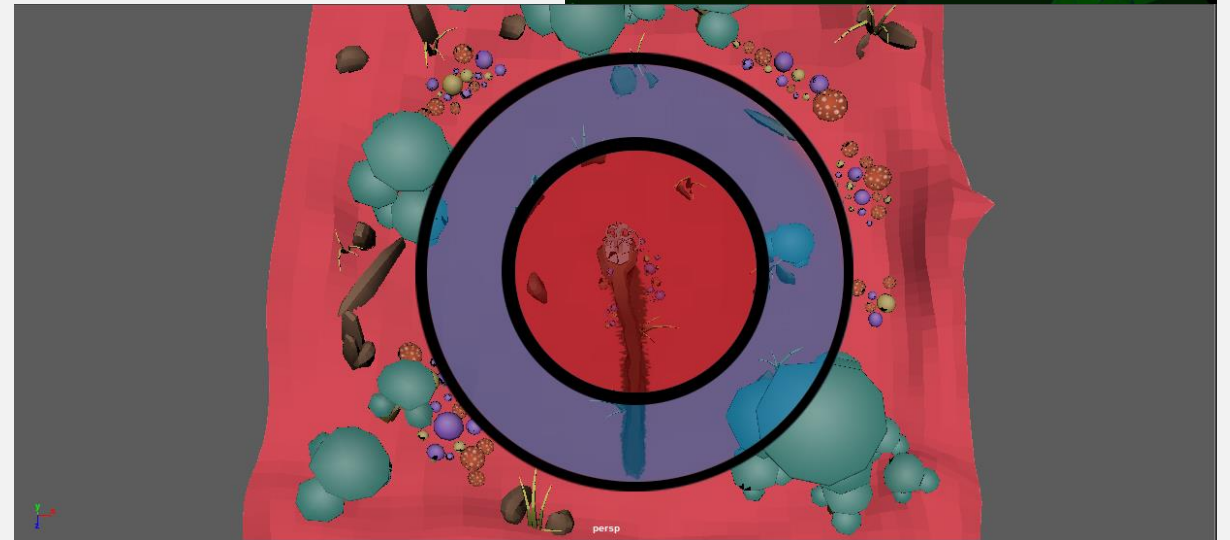
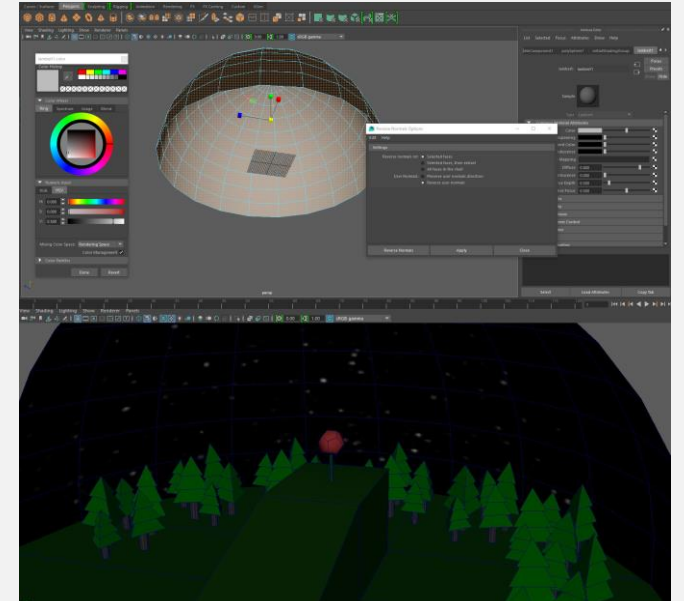


Half a sphere, with inverted faces, creates a biodome that will house the sky texture for day/night cycles. The environment will be built within the floor of the dome, following the diagrams below.

The ground will be sculpted and re-topologised to create a heightened mound for the tree, surrounded with fog to focus our attention and add to fantasy aesthetic. An initial test showing layout and function of this is shown on the right.

Environmental asset distribution works on a tier System.

- Red Inner Tier – small assets only, keep focus on plant.
- Blue Mid Tier – mid range assets, max ~12, retain focus on central area
- Outer Tier – Anything goes, create interesting enclosed area for a visually appealing background



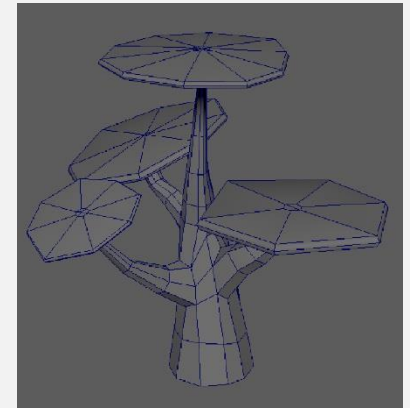
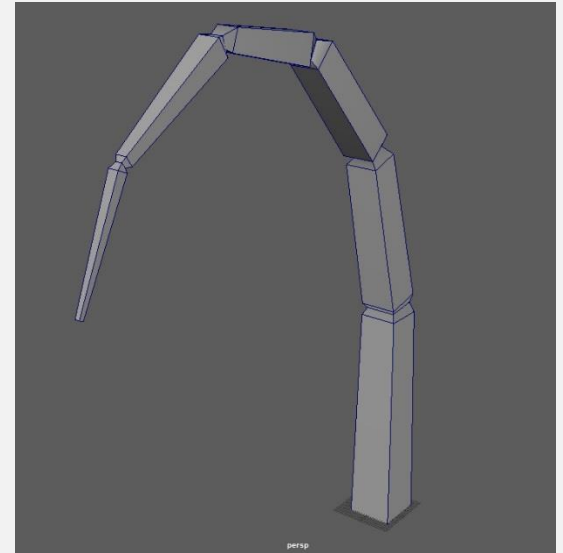
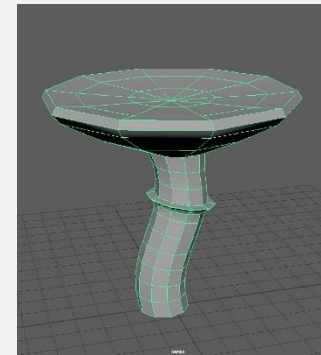
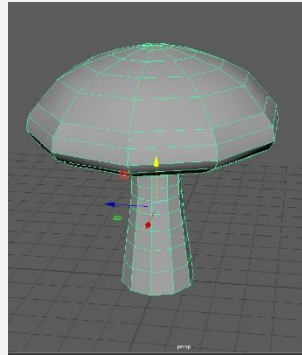
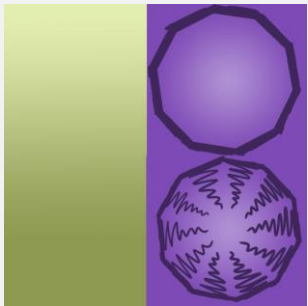


Low-poly, cleanly topologized models with continued edge loops for animation purposes. Models should be easily read from any angle and have a strong silhouette. Sharp edges should be sustained to create a blocky, undetailed appearance.



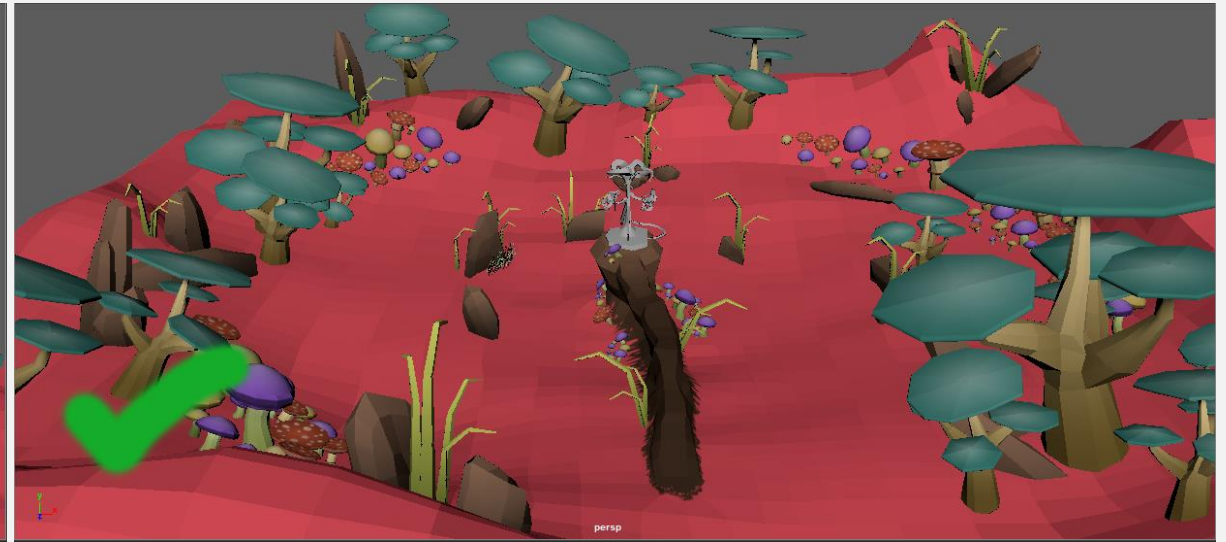
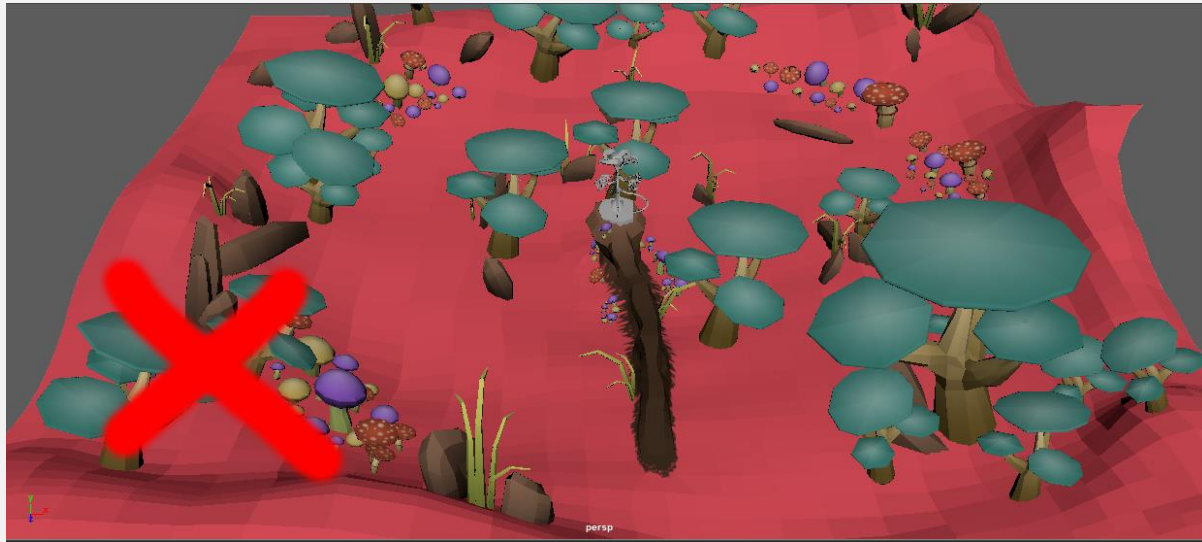
Textures do not use Maya shaders as they will be applied directly in engine.

Textures should be minimalistic, adhere to the colour scheme, and use gradients for a cel shaded appearance. Only minimal detail should be painted in if required (e.g. spots on mushrooms), and this detail should be kept as flat shaded as possible.



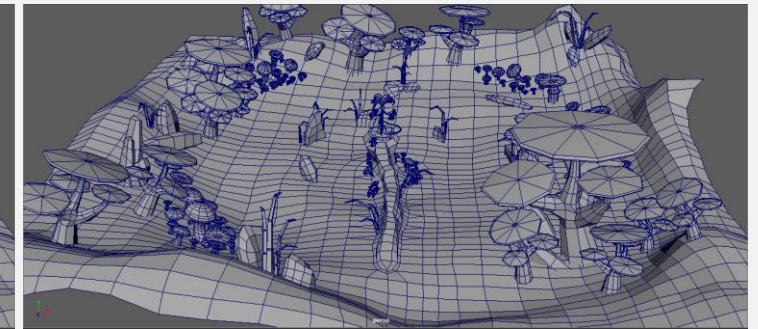
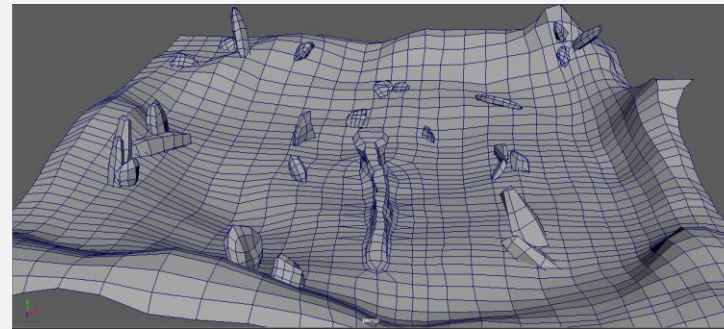
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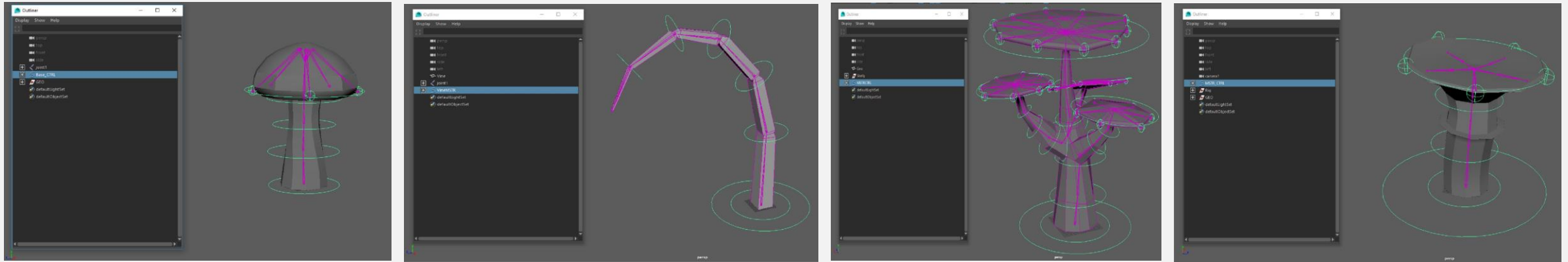
Environmental Modelling & Texturing



Environmental positioning should ensure that the camera is focussed on a pivot around the plant, not above.

Animation should be kept minimal, basic idle movement only. Anything out-with this restrained scope of motion should be used sparingly, and should only decrease the size of the model so as the models do not become more imposing and draw focus.





Rigging should be clean and minimalist to allow for small, idle movements only.

Rigs should use primarily circle and sphere handles and most movement should be focussed around stalks/branches.

Boning should be kept primarily to simple splines to allow stalks/branches to bend where needed. In cases such as mushroom caps, as seen above, a star system to allow rotation and some warping should be implemented.

Example Animations;

Idle animation line up

<https://youtu.be/wDBqv9FxcHA>

Tree idle animation

<https://youtu.be/Oi4ewfx1q1E>

Mushroom idle animation

https://youtu.be/MXkTOMR_mY

Vine curl in animation

<https://youtu.be/Vk1OdJTB-6g>

Vine curl out animation

<https://youtu.be/CQUmktMU2pk>



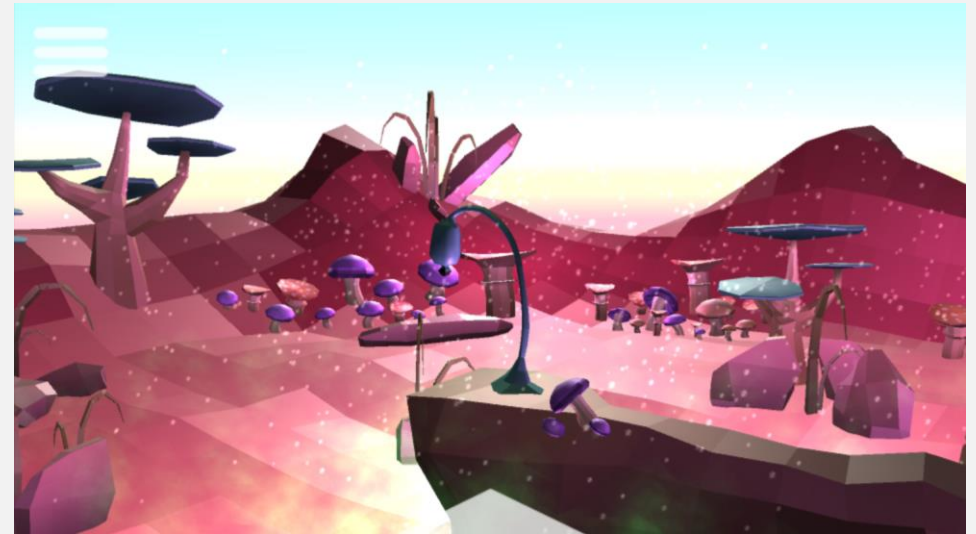
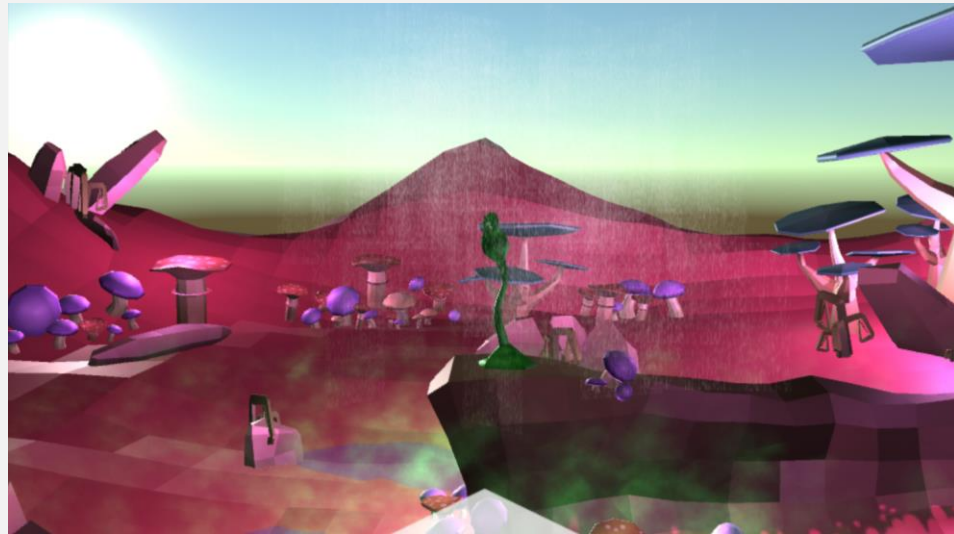
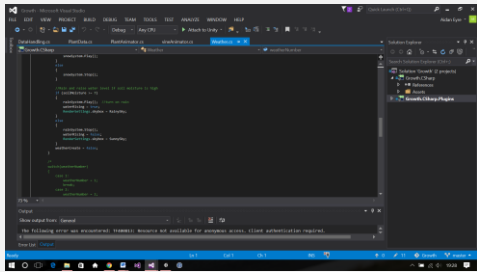
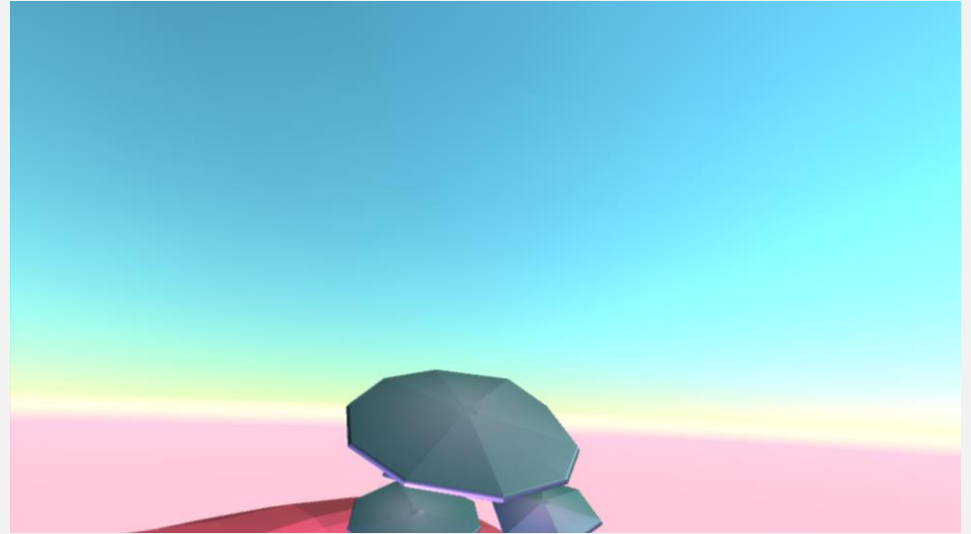
Environmental Rigging & Animating

The sky will be created and altered using Unity's skybox ability.

On top of having a day/night cycle that changes over time, the sky will change colour scheme to reflect the weather systems that have been put in place.

Environmental affects and weather that are featured;

- **Rain;** falls from sky, water reservoirs around environment fill, sky darkens. Based on when soil moisture is high.
- **Snow;** falls from sky. Based on low temperatures.
- **Sun;** clear skies, bright daylight, vivid environment. Default state.



Plants

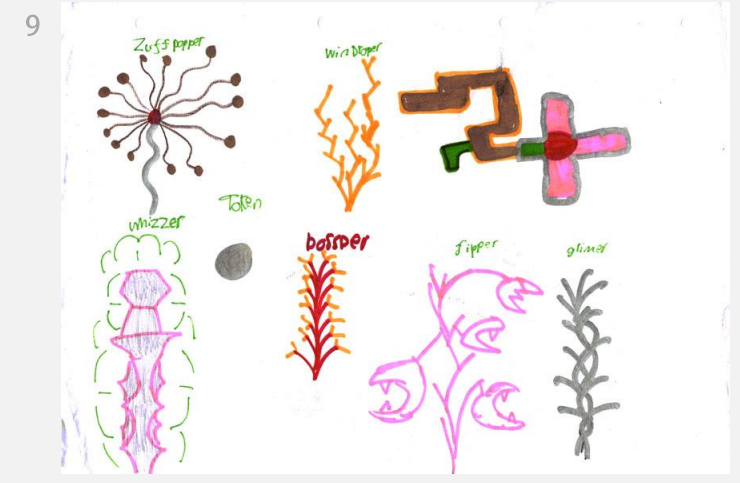
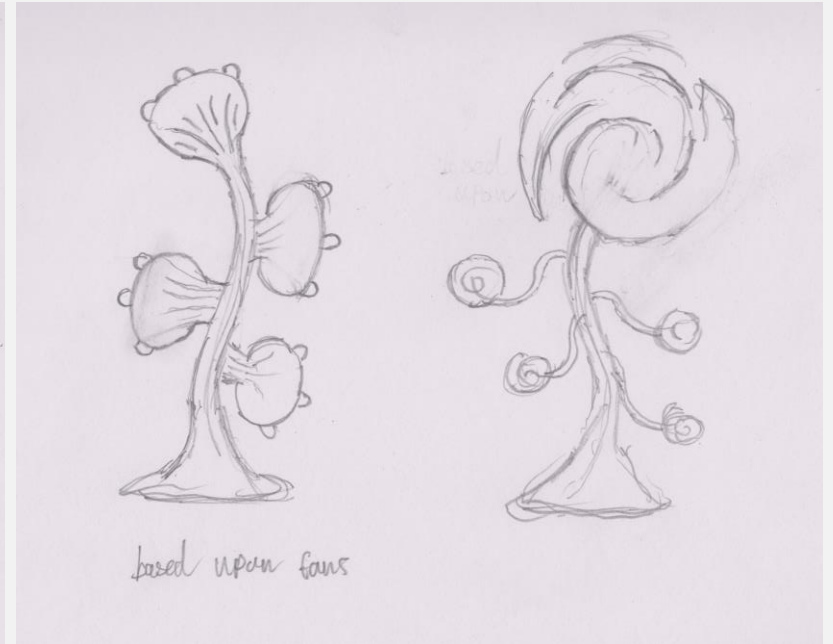
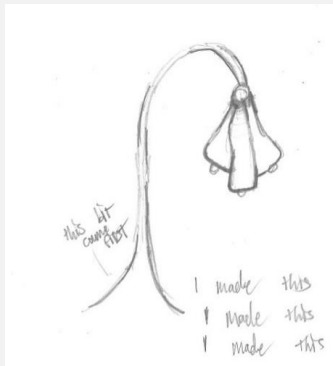


To help influence the overall design, the client provided children's drawings of fantasy plants that he acquired during his own research.

From this, initial designs were conceptualised, as shown below.

Inspiration for designs should come from visually intriguing, unnatural looking things. Examples include;

- Mohawks
- Thistles
- Fire Extinguishers

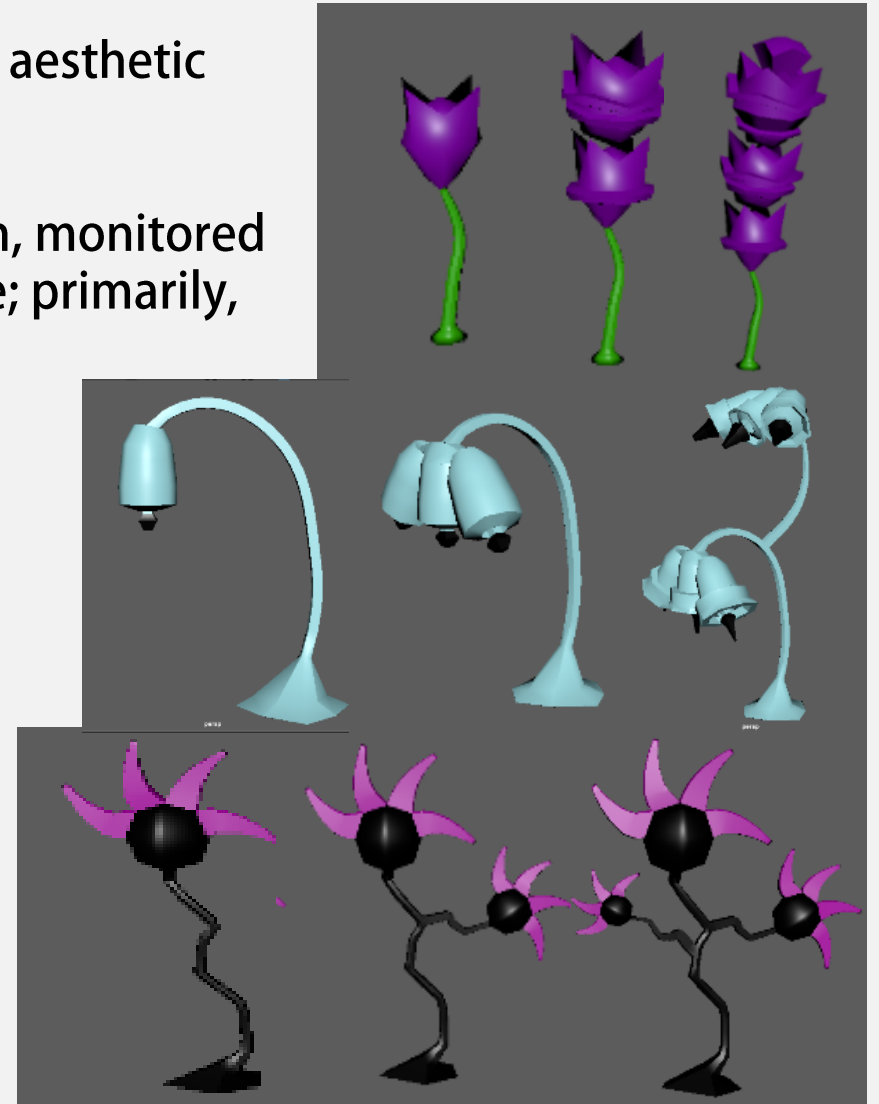


Plant models retain a cartoon, low-poly style. This fits into our overall aesthetic and also allows for less complication when animating.

Plants use an evolution system to correlate with real-life plant growth, monitored by the Table Farm technology. Evolution lines should clearly correlate; primarily, growth should consist of sectional duplication to create a more complex final result.

Plants should have a dual tone primary colour scheme, pulling a main focal colour from the colour palette provided.

Topology should be more complex than the low-poly style appears as though it should be due to increased edge-loops for fluid animation. Animation should be seamless and not appear disjointed due to the low-poly nature of the models.



Plant rigs should be reasonably complex with detailed loops to create a natural, fluid motion.

Each step of the evolution chain should have animative movements that are harmonious with the other stages to create a unified concept of growth.

Bell Plant

Small: https://youtu.be/mga_jbz5mfg

Medium: https://youtu.be/ow_uggUCpLU

Large: <https://youtu.be/6gzCGAq7BPI>

Mohawk Plant

Small: <https://youtu.be/1QnMLRZMIZg>

Medium: <https://youtu.be/vhoZKi1R5ro>

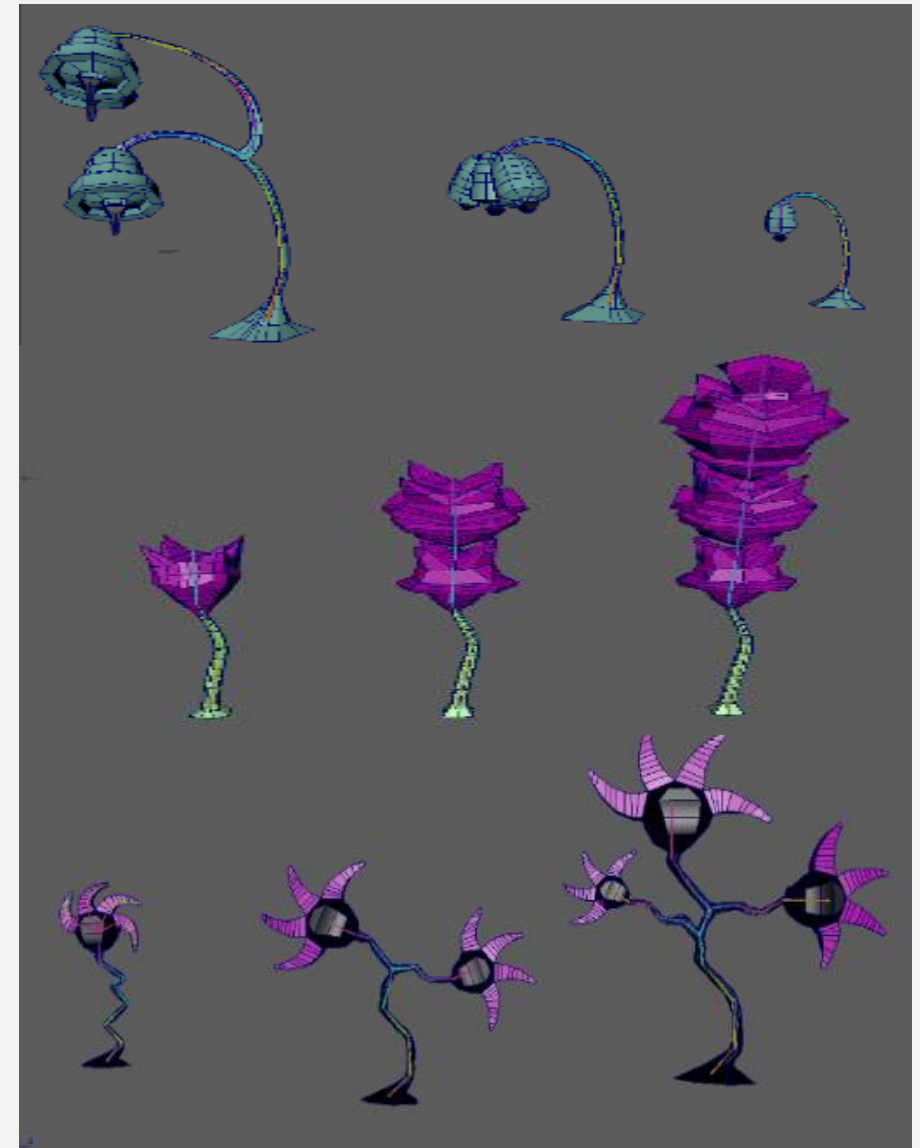
Large: <https://youtu.be/Uk0uJTmBUqo>

Valve Plant

Small: <https://youtu.be/LW4PShsOFmo>

Medium: <https://youtu.be/OCF6DPJcfzQ>

Large: <https://youtu.be/ITTdmeOc5iw>



User Interface



Transparency for buttons on main screen should be at 75%. Allows for readability without being distracting.

Transparency for background overlays should be at 60%. Allows background to still be visually interesting at the backmost layer, without distracting from the menu systems.

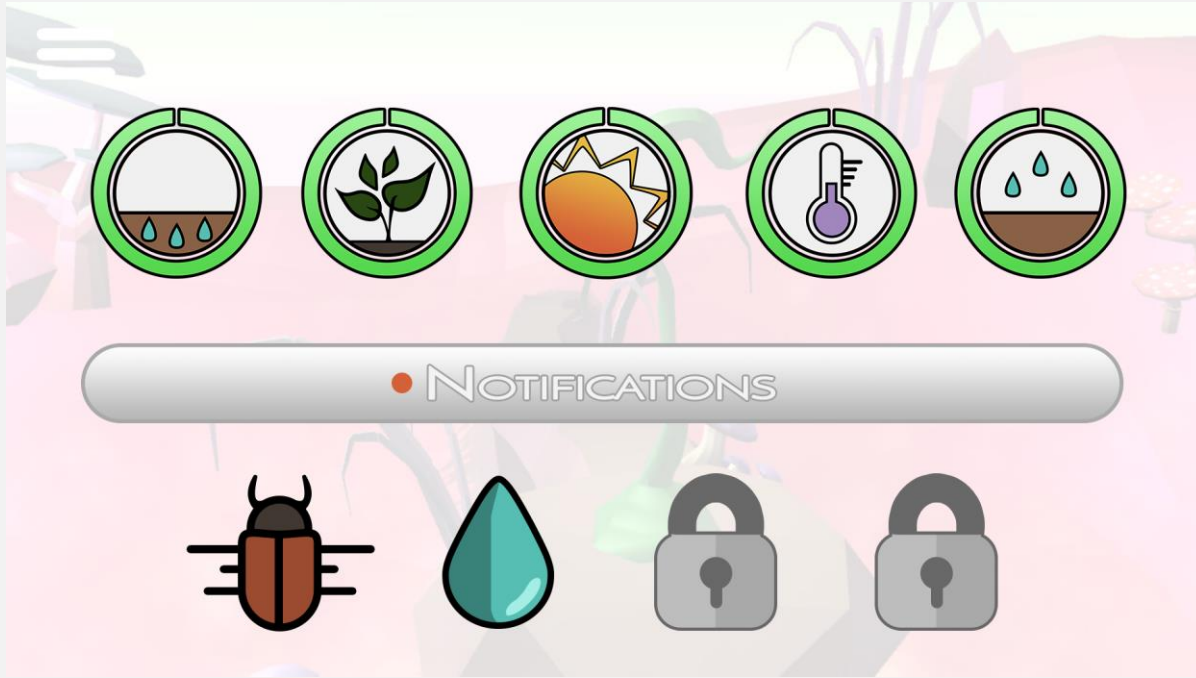
Black outlines should be kept to key icons only; Stat bars, mini-game icons.
White or grey outlines should be used for other iconography.

Font; Josephin Sans Regular

- Clean, rounded, sans-serif font to allow easy readability for younger audience but still retain a modern and minimalistic overall appearance.
- Font should only be used in grey or black. Only exception is for the notification button; this is make it more neutral and not be a focus pull.
- Standard titles should be done in small caps format to draw attention.
- Mini-game and stat-page titles should be done in lower case only. This is to focus attention towards the educational information included in these sections.
- At no point should text be bolded, italicised or underlines throughout.

Josephin Sans Regular

13



Minimalist design featuring a transparent white overlay and clean, simple icons to give a modern feel. Minimal shading and simple, sans-serif font.

Button layout should form a flower to tie into the plant theme.

Pages should feature clean, minimalist design with lots of white space and clear headings with black focal lines to draw attention and break up space.

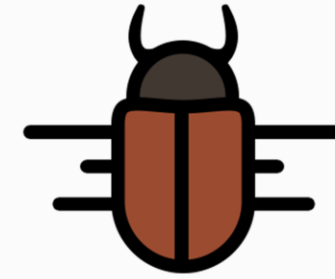
Information should be both educational and light-hearted – inform the user about plant life in small bites of information, while also ensuring to remind them to interact with the device itself.



temperature

Different plants need exposure to different temperatures depending on whether they are warm or cool season crops. Providing the right climate can be the difference between your plant withering or thriving.

Is your stat bar too high or too low? Extreme temperatures in either direction could damage your plant - be careful!



aphid attack

Aphids, also known as plant lice, are small sap-sucking insects that can cause plants to have distorted growth and end up looking dull or badly developed.

Your virtual plant is under attack! Tap on the aphids as they appear to remove them and protect your plants growth. Remember to check your real plant too!

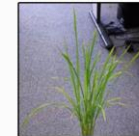
CREDITS

 TABLE FARM - URBAN FARMING COMPANY

 HEDERA GAMES - ABERTAY UNIVERSITY


Dewdrop Fantasy Kevin MacLeod (incompetech.com)
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PHOTOS




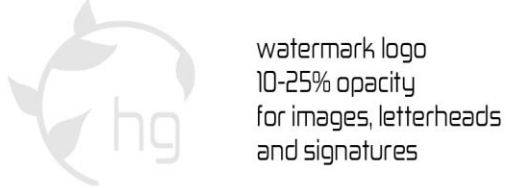
Hedera Games logo instructions, colours and examples.



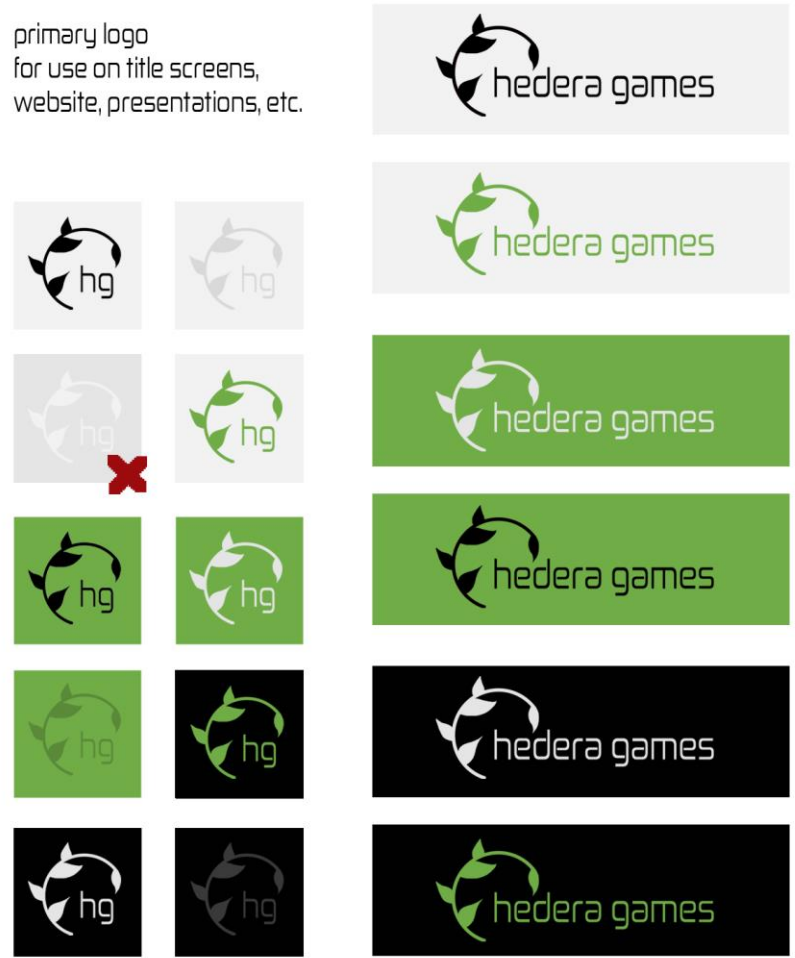



primary logo
for use on title screens,
website, presentations, etc.


icon logo
for use on social media
icons, buttons, etc


watermark logo
10-25% opacity
for images, letterheads
and signatures

font - zekton
royalty free, commercial use font
lower case lettering only



guide showing acceptable colour uses and transparency examples for each logo
also includes option showing incorrect inversion of greys

Team Logo

1. Moya, Silvia (2015) Pamper your plants with the Parrot Flower Power [online] Available at: <https://iq.intel.co.uk/pamper-your-plants-with-the-parrot-flower-power/> [Accessed 06/12/2016]
2. Cult Business (2015) Parrot Flower Power: Easy Gardening! [online] Available at: <http://www.cultbusiness.com/parrot-flower-power-easy-gardening/> [Accessed 06/12/2016]
3. Fourdesire (2014) Plant Nanny – Water Reminder with Cute Plants [online] Available at: <https://itunes.apple.com/gb/app/plant-nanny-water-reminder/id590216134?mt=8> [Accessed 06/12/2016]
4. Ice Water Games (2015) Viridi [online] Available at: <http://store.steampowered.com/app/375950/> [Accessed 06/12/2016]
5. Urban Farming Company (2016) – Image provided by client
6. Mood Board – includes following imagery; The Lorax, No Mans Sky, The Islands, Fantasy Life, Alice in Wonderland, Rayman
7. Mood Board – includes following imagery; PigArt Blender Tutorial (Forest Assets), 3D Plant by Nispo on 3DOcean, UnbelievableSynonyms on Reddit, Ahbikreationz on Vecteezy, Mountains on Wallup.net, Low-Poly tree by Brian Sarr on Vimeo, landscape by gMcAnimations
8. Mood Board – includes following imagery; No Man’s Sky, realivingartist on tumblr, low poly tree pack 1 by razrushitel34 on cgtrader, low poly tree in grass by Adam127 on 3dexport, Cartoon Trees Low Poly by C4Dart, low poly trees by utahwithak on stackoverflow, low poly river between mountains by Fisilva on Imgur, low poly words by Calaelen on nerd-time, daytime wonderland by Ateneu Popular
9. Urban Farming Company (2016) – Image Provided by client
10. Librarianguish (2007) BEST MOHAWK EVA!!!!!! [online] Available at: <http://slodive.com/inspiration/mohawk-hairstyles/> [Accessed 25/02/2017]
11. fir0002 (2007) Milk thistle flowerhead [online] Available at: <https://en.wikipedia.org/wiki/Thistle> [Accessed 25/02/2017]
12. Fireprotectiononline.co.uk (2017) Fire Extinguishers [online] Available at: <http://www.fireprotectiononline.co.uk/co2-fire-extinguishers/> [Accessed 28/02/17]
13. Typemade (2010) Josefin Sans Regular [online] Available at: <https://www.fontsquirrel.com/fonts/josefin-sans> [Accessed 20/04/2017]