

# GRADUATION PROJECT

## APPLICATION OF GAME META & ECONOMY IN GAME SYSTEMS

Analysis supported by an original game design, Fiore



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# **ACKNOWLEDGEMENT & THANKS**







# Agenda

1.	What and Why?
2.	Overview
3.	Design & Creation Process
4.	Core Gameplay
5.	System & Economy Design
5.	Visuals & Assets
6.	Prototype
7.	Final reflections

# WHAT IS GAME META & ECONOMY?

- Game Meta: The long-term progression layer beyond core play.
- Game Economy: The resource and reward systems shaping player behavior.

## WHY?

- They keep players emotionally and strategically invested in the game beyond immediate gameplay.
- It transforms isolated actions into meaningful journeys by sustaining engagement, shaping motivation, and giving narrative purpose to mechanics.

## HOW?

- Using meta and economy to tell the story
- Using economy to turn systemic progression into narrative expression
- Designed **Fiore**, as analogy/analysis of game economy and meta.



Fiore



# OVERVIEW

- Origin of the Idea
- Project Vision & Mission
- Inspiration & Research
- Abstract

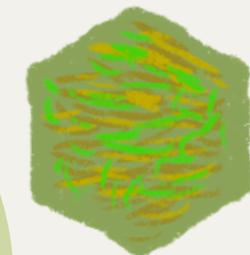
# ORIGIN OF THE IDEA

- Inspired by love for plants and flowers.
- Wanted to explore care, patience, and renewal through puzzle gameplay.
- Subtle storytelling as a medium of emotional connection
- Designed **Fiore** as a world where systems tell stories



# PROJECT VISION & MISSION

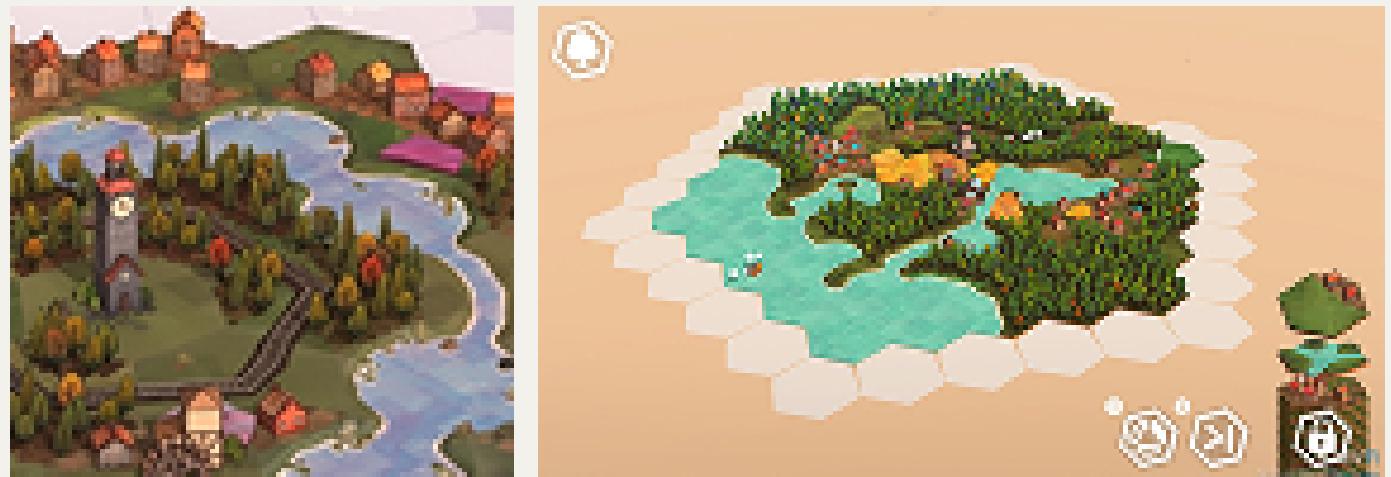
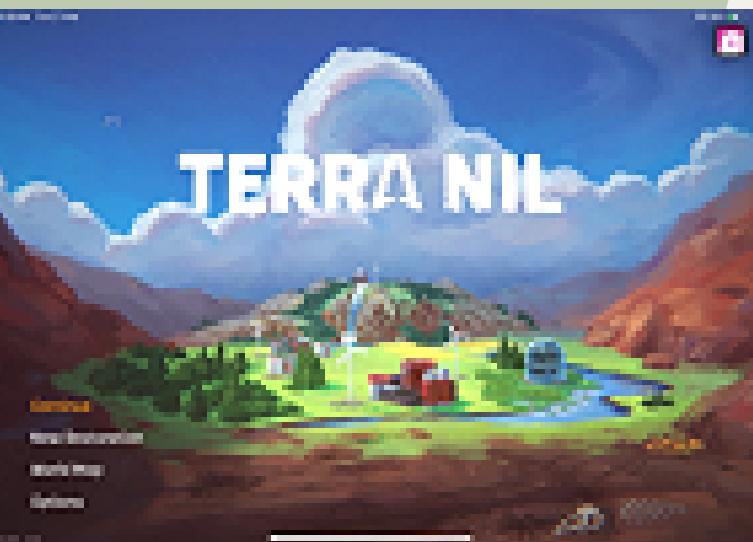
- To create a gameplay with a focus on tile mechanics
- Designed to be intuitive yet challenging, encouraging players to think critically about their moves.
- To attach a narrative that will serve as a driving force, guiding players through various levels and challenges.
- To introduce a meta loop that binds the systems together, incentivising regular play and progression.



- To create a **single-player 2D puzzle** game with hexagonal tiles using Unity's Hex tilemaps.
- To combine narrative and meta experiences.
- Hence, **Fiore** is a single-player puzzle narrative game that invites players to restore a forgotten world.
- It combines strategic tile mechanics, emotionally resonant storytelling, and a gentle meta progression loop, offering a deeply immersive and mindful experience

# INSPIRATION & RESEARCH

- Studied games like Botanicula, Hoa, Dorfromantik and Terra Nil
- The visual language with cozy animations, and subtle responses from the environment are all crafted to elicit delight and empathy.



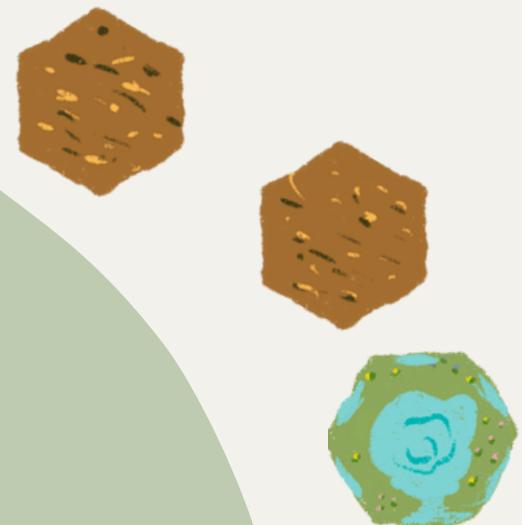
## WHAT IS FIORE?

- Fiore is a 2D Puzzle narrative game made with mainly hand-drawn elements. It is rooted in exploration and strategy.
- It uses Hexagonal Tile system available for Unity 2D, tilemaps, and rulesets.



## WHY HEXAGONS?

- Hexagonal grids mimic natural patterns found in beehives, plant cells, and landscapes.
- Fiore is about reviving nature and fostering growth; the hex grid reinforces the organic, non-linear feel of the world.
- Hex grids offer more flexible pattern possibilities than square grids. Diagonal and radial patterns are easier to form and recognize.
- In a hex grid, each tile has six neighbors instead of four, which allows for richer and more strategic placement decisions.



fiorè



# ABSTRACT

Game Title: Fiorè  
Translation of fiore - Italian-English dictionary (Cambridge Dictionary)  
Fiore - noun [ masculine ]  
/ˈfjɔːre/  
(organo riproduttivo): flower , blossom

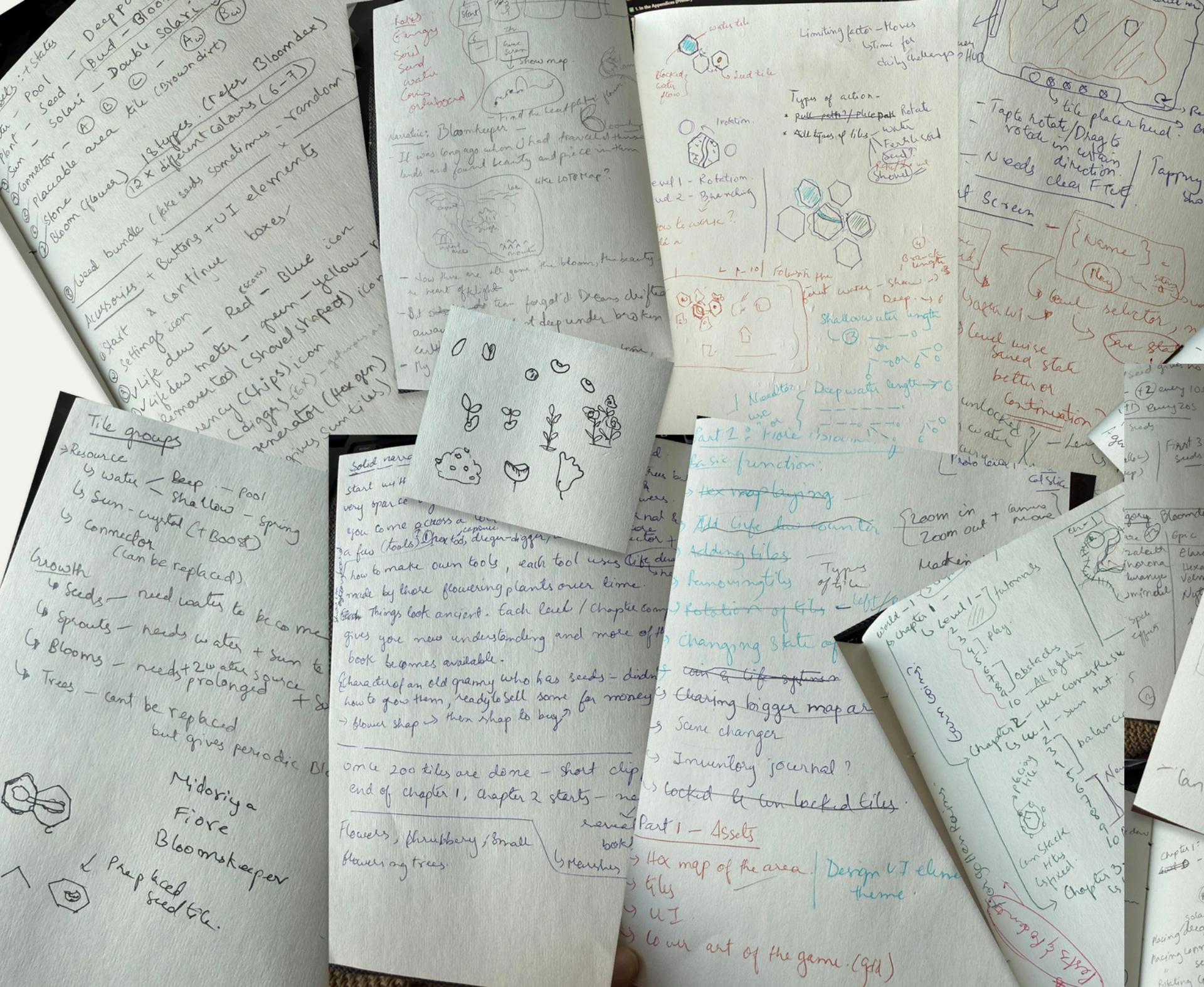
- Genre: Narrative Puzzle Simulation
- Style: 2D tile based
- Platform: Mobile (Android & iOS)
- Target Audience: Casual players, plant lovers, cozy game fans (ages 10+)
- Game Engine: Unity 2D

# **DESIGN & CREATION PROCESS**

- Notes
- Creation Process

## NOTE

## MORE NOTE



# MORE NOTES

what we have?  
Plant-based mechanics  
2D game  
tile based  
Core loop  
Meta loop  
Narrative structure  
Skill vs Engagement  
In-game currency  
Level progression.

Game title: Fiore / Bloomkeeper.

Energy - Lifespan

Water

Seed

Water also fixed

Fixed

Cell changes

Game Behaviour:

Water, Sun, Seeds, fertilize.

Inventory systems.

Connectors

Hex tile grids

Defining goal: Main objective is to revive a forgotten garden by reviving plants; light, balance water one bloom at a time.

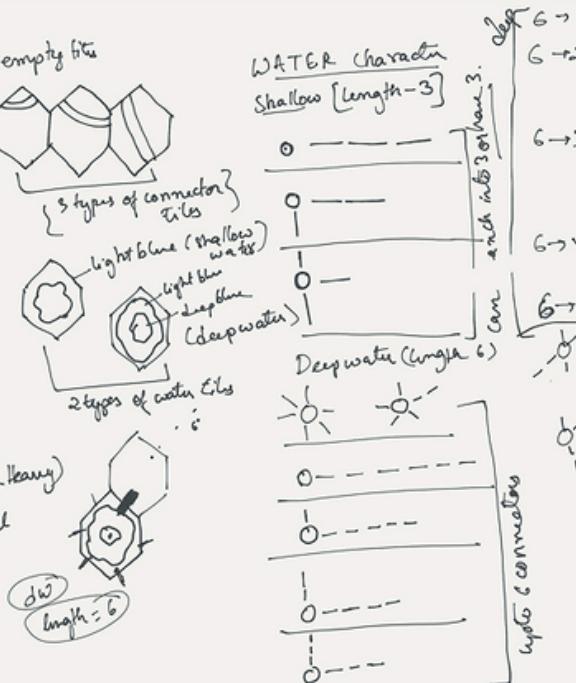
Core behaviours

- Rotate tiles
- Move
- Place
- Stack
- Remove

Core elements :

- ① Water tile ✓
- ② Connector tile ✓
- ③ Seed tile
- ④ Sun tile
- ⑤ Rakes
- ⑥ Shovels
- ⑦ Obstacle tiles

Le Stone Cliffs



Seed tile: Base game

Seed + 1 Water → Sprout

Sprout + Sun → Bloom bud

Sprout + 1 water → Plant leaf

Sprout + 1 sun + 1 water → Plant Bloom

↳ green tile

Solar tile: {  }

- emits a small glow around it?

- can be stacked?

Crystal embedded in marsh stone

Sun crystal 

Stone tile / Rock tile 

can break through  
has to bend

Connection tiles

↳ place with shovel - takes more energy

↳ rotate - less energy

if a tile is a connection tile,  
they can't be any other tile unless  
you use a shovel to cover it  
↓  
more life days

↳ becomes next state plan  
at next level.

The diagram illustrates a game map titled "War of the machines beat the drought". The map features several locations and paths:

- Story | Gameplay | Includes |**
- Big fountain**: Located near the top center.
- Water**: A path or stream leading towards the fountain.
- Call rabbit helper**: A speech bubble containing this text.
- Find fire**: Another speech bubble.
- an ancient tree**: A speech bubble containing this text.
- and see that**: A speech bubble containing this text.
- with growing blossom**: A speech bubble containing this text.
- your grandparents have**: A speech bubble containing this text.
- a message saying**: A speech bubble containing this text.
- they will help you**: A speech bubble containing this text.
- the world**: A speech bubble containing this text.
- you**: A label pointing to a path.
- digger**: A label pointing to a path.
- double digger**: A label pointing to a path.
- Seed (first and all)**: A label pointing to a path.
- Elder Trick**: A label pointing to a path.
- 1:** A small number at the top left.
- building: open lands**: A label at the top left.
- character: Visual Journal soil**: A label at the top left.
- Dirt and sleek**: A label at the top left.

Math for dark water tiles:

calculate when might hit:

$dx = 0$

$x_1 = x + dx (di)$

$y_1 = y - dy (di)$

Defining Core loop:

```

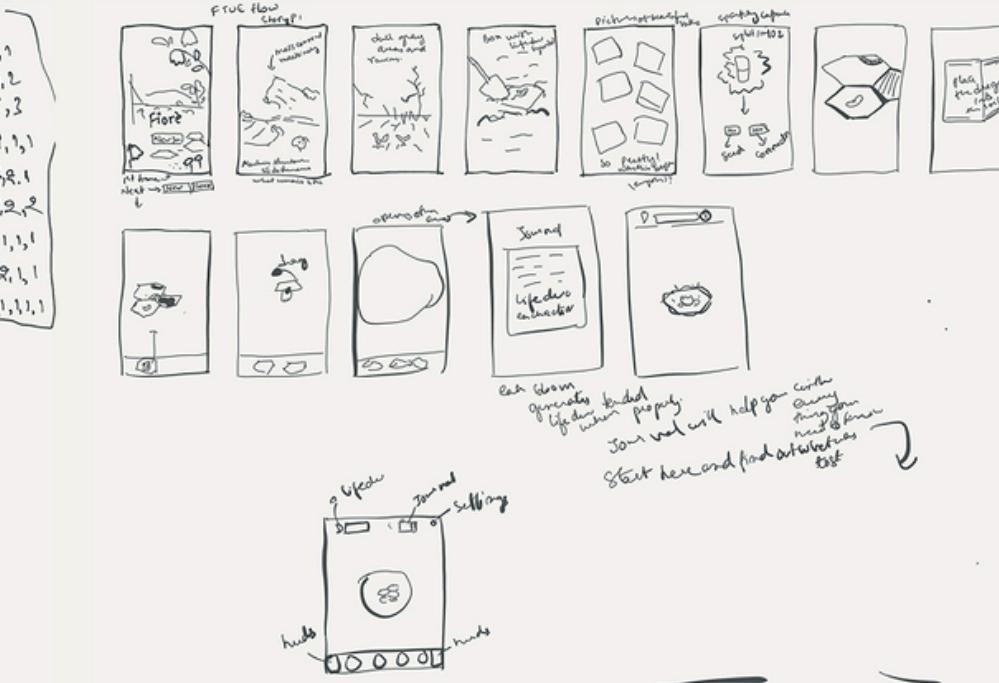
graph TD
    Start((Start LifeDew at ②5)) --> GetBuffs[Get Buffs]
    GetBuffs --> NewChapters[New Chapters]
    NewChapters --> BuySeeds[Buy more seeds]
    BuySeeds --> BuyBetterFlowers[Buy better flowers]
    BuyBetterFlowers --> MoreFlowers[More flowers = More life dew]
    MoreFlowers --> UnlockAreas[Unlock more areas]
    UnlockAreas --> Revive[Revive Seeds/flower beds and forests]
    Revive --> Rotate[Rotate, Place, Remove]
    Rotate --> GetBuffs
    
```

**Start LifeDew at ②5**

- ↳ G) infertile soil
- ↳ G) Pest
- ↳ G) Rodents
- ↳ G) Murky water
- ↳ G) Root rotting - overwatering
- ↳ G) Plant burns - over sun

gem↑  
to buy special items

Each bloom gives (+1)  
over 3 mins



# CREATION PROCESS

## Concept and Planning



- Define core loop, game pillars
- Narrative themes, tone

## Art and Assets



- Style guide, moodboard
- Sketch UI wireframe
- World map sketches
- Iconography, UI kit
- Title Screen

## Iterative Prototyping

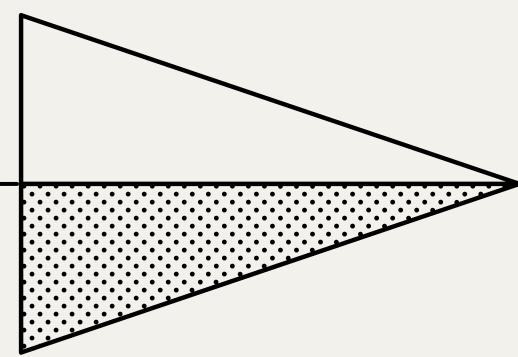


- Mapping out growth systems
- Charting out numbers for smooth gameplay
- Creating a solid meta loop and core loop

## Design Final



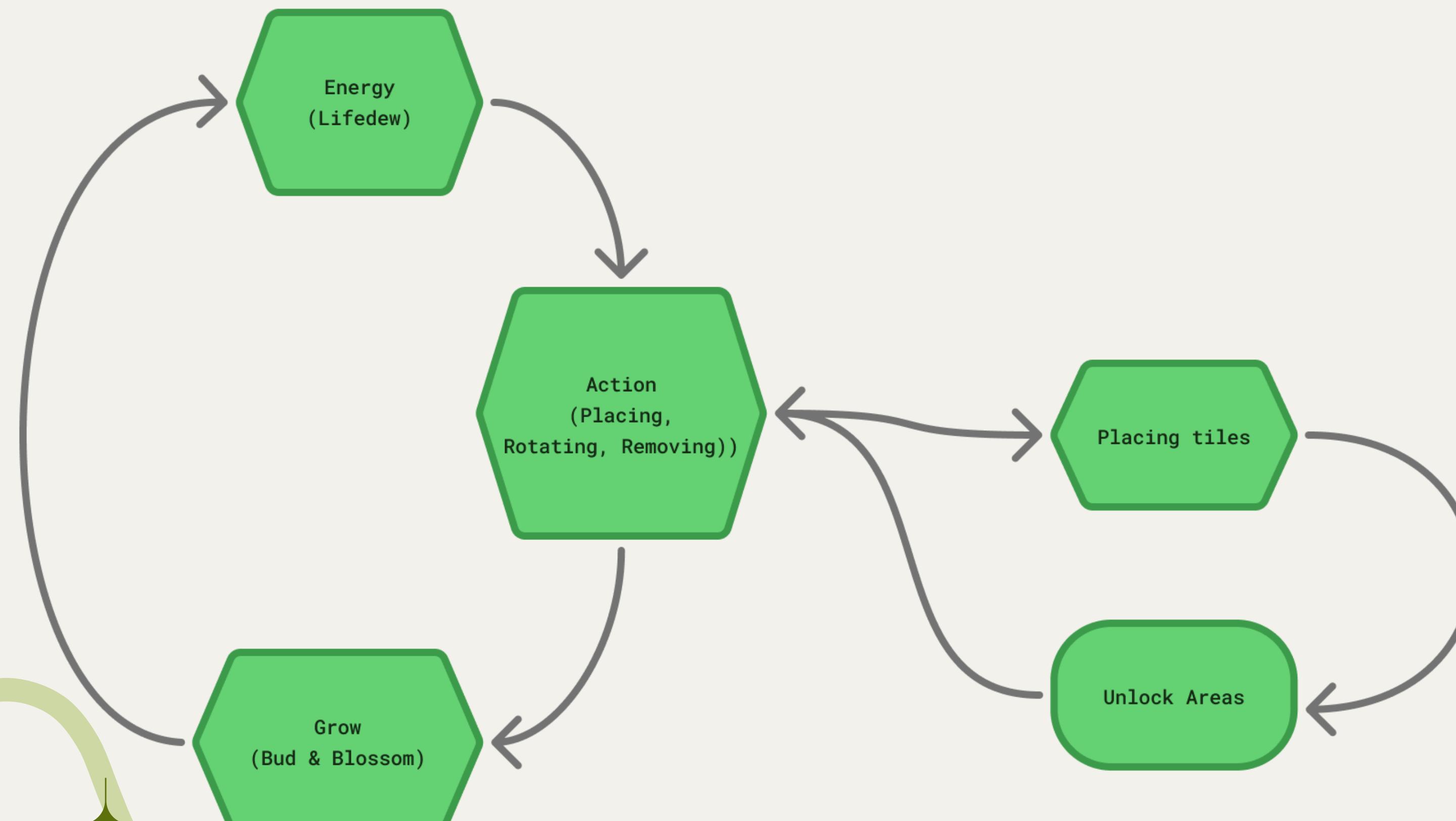
- Write full GDD
- Map Game flow
- Small unity prototype



# CORE GAMEPLAY

- Simplified Game Loop
- Game Narrative
- Storyboarding
- Core Game Elements
- Game Mechanics

# SIMPLIFIED GAME LOOP



# GAME NARRATIVE

The world is set in a peaceful post-conflict era where machines and humanoids coexist, but nature has faded, making everything dull and grey. The world, once vibrant, now lies hushed. Its soil bears the scars of an age long past - of machines that once roared, of people who vanished into memory.

Now, only the most functional remains: coarse grass, gnarled trees, and a brittle silence. You are one of the few who stayed. You live in a small place called Brindleford. The land is stubborn, but you cultivate it, more out of routine than hope.

Until one day, your tools strike something buried deep beneath the earth. A box, locked, ancient, and pulsing faintly with warmth. Inside: faded photographs of meadows in bloom, forests thick with colour, people laughing among petals.



# GAME NARRATIVE

You discover a guidebook filled with notes, drawings, and strange tools, alongside a sealed capsule. The book reveals tools like Shallow Pool tiles and solari cores, each requiring a rare essence called Life-dew. As you use these tools, flowers bloom, generating more Life-dew.

With each chapter, more pages unlock. The book reveals secrets. New tools, more complex designs. The land responds. Patches of beauty return. But so do challenges: decay, pests, rot, and imbalance.

Then, one day, she arrives.

An old woman, cradling seeds she cannot name.

She brings more than just seeds; she brings questions. Trade. Connection.

And so, you begin not just to restore, but to rebuild.

A flower shop blooms. Villagers return. The land hums once more.

This is your purpose now:

To revive what was lost,

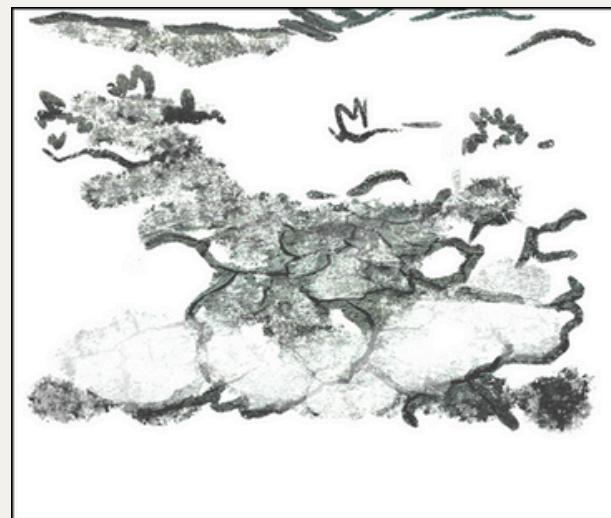
To bloom what was forgotten,

And bring it back to life.

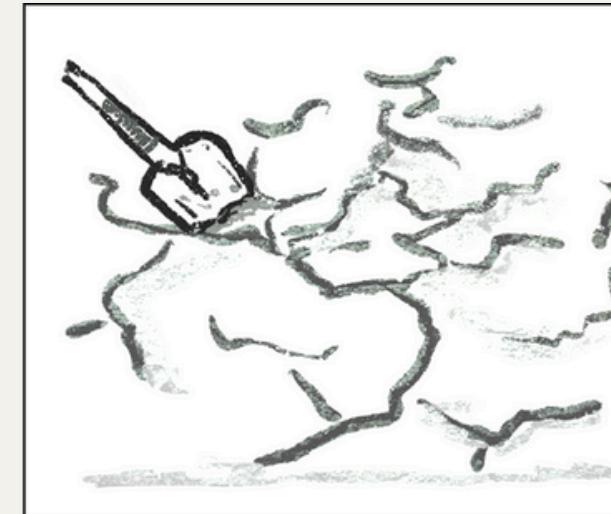


# STORY BOARDING

## Chapter 1: Beneath the Soil



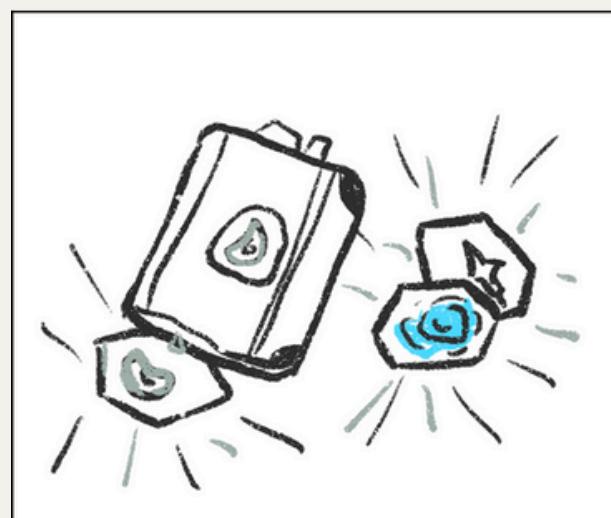
Grey and gnarly earth, with almost no colour except for machine oils and sparse vegetation.



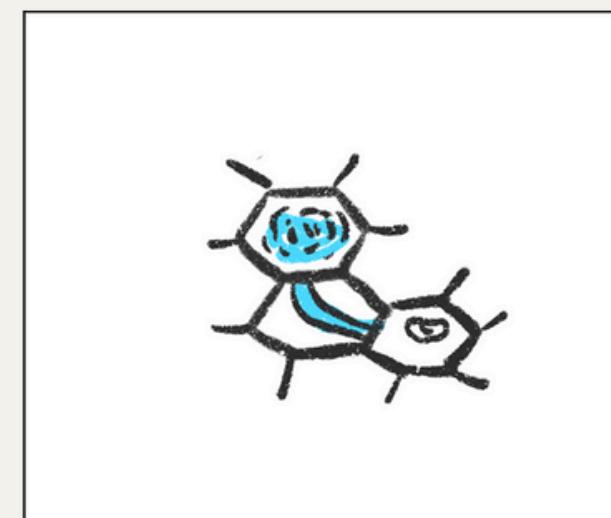
Your tool strikes something beneath the earth



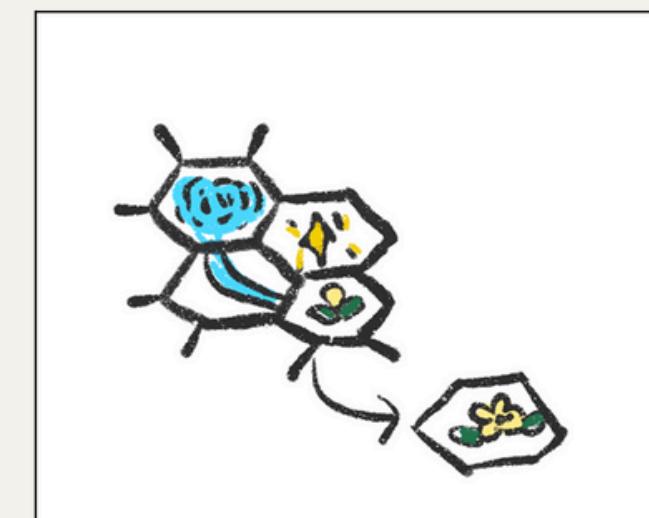
You find a locked box and open it



A riveting journal flips open with a few capsules, hex-tiles fall to the ground.



A pool is formed and journal guides you to place connector and explains how it works



It teaches you about solari and other tiles slowly, in chapters

# STORY BOARDING

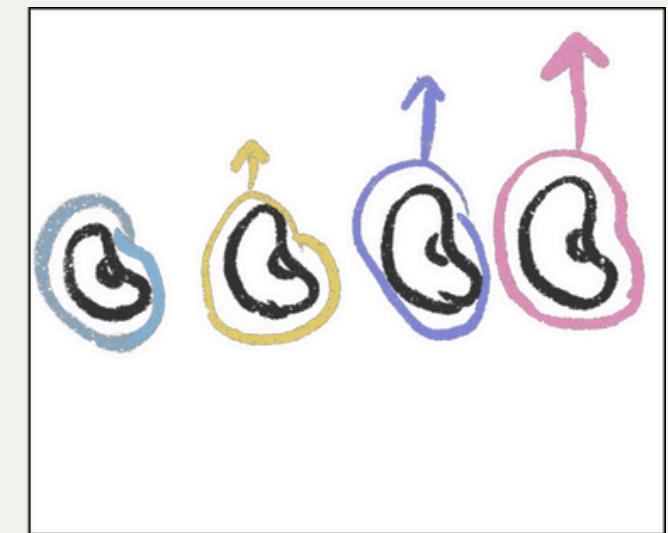
## Chapter 2: Learning the Land



An old woman approaches you once you've gotten the hang of things

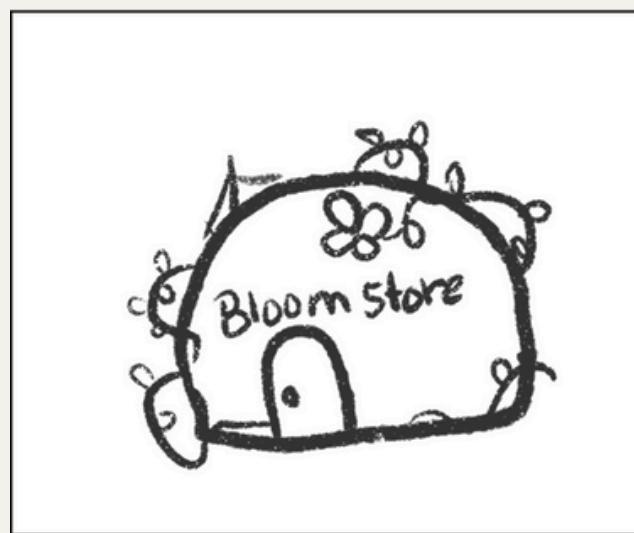


Tells you some seeds are worth more, in chips and in dew. She can't remember which, so it's a lucky draw, everytime

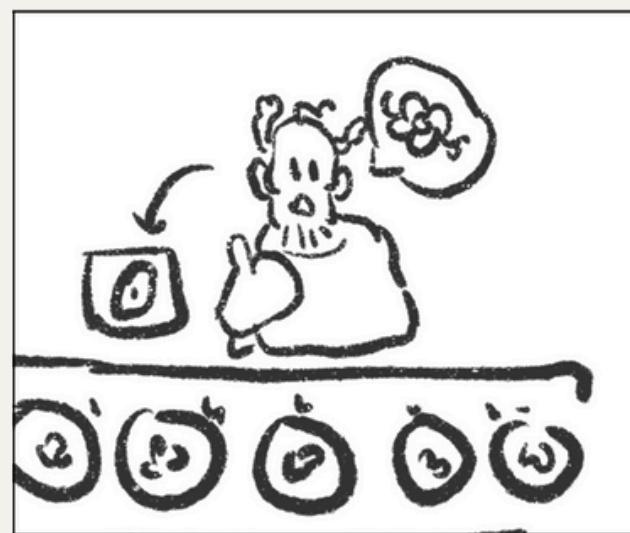


Common, Uncommon, rare and epic, these seeds give beautiful different blooms. Each with its own perks

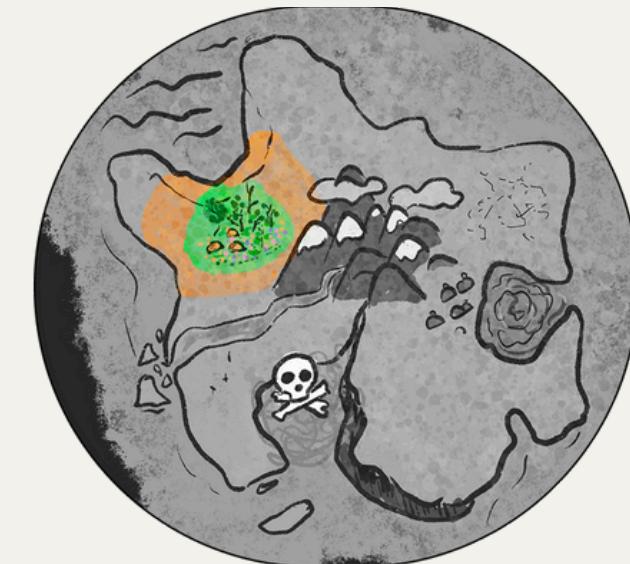
## Chapter 2: Learning the Trade



Soon you have more blooms, more colour and villagers want to beautify their lands as well



So, you open a Bloom Store and sell blooms for chips



Once all your area is full, you decide it is time to move to new terrains and thus your journey begins to unlock new lands.. marshes, hills etc

# CORE GAME ELEMENTS

## Lifedew

- Life-dew is the core energy resource in Fiorè. Every action, placing, rotating, removing, consumes Life-dew. It is gained through natural growth: blossoming plants.



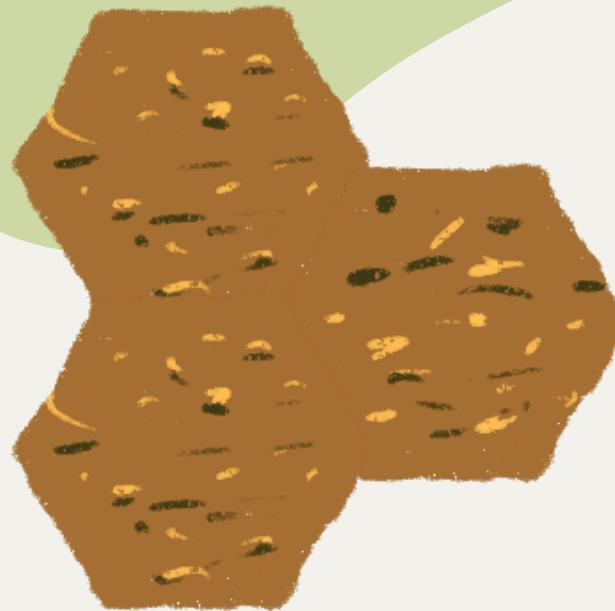
- Starting amount: 25
- Cost varies per tile/action (e.g., placing Pools: -5)
- Regenerates passively through:
  - Buds: low replenish rate
  - Blooms: high replenish rate

Lifedew indicator  
turns Green to  
Red depending  
on how much is  
left.

# CORE GAME ELEMENTS

## Empty Tiles

- These are where a player can choose to place tiles.
- They unlock as players keep placing tiles.
- Starts with 3 unlocked.



Shallow Pool



Deep Pool

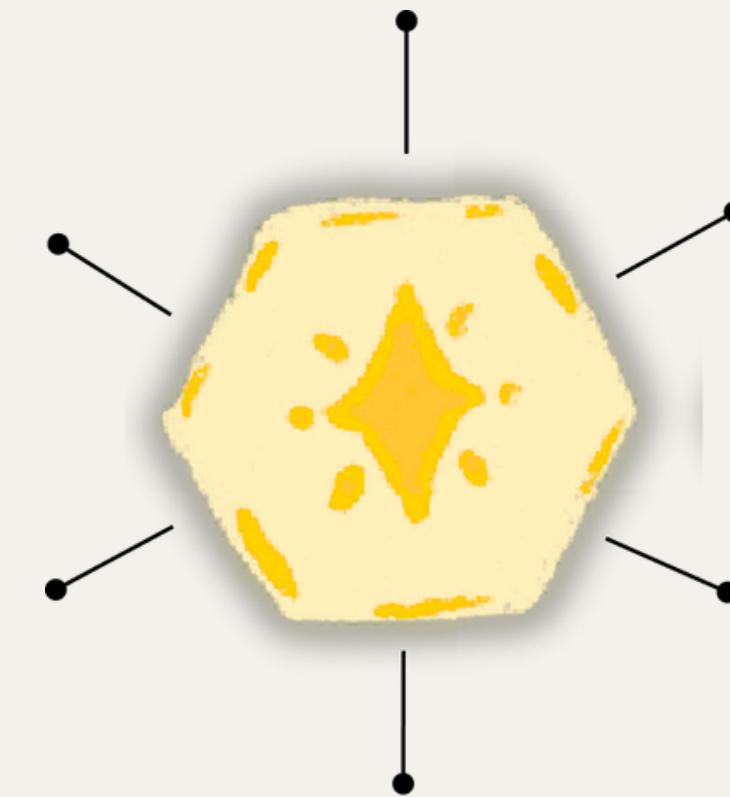
## Pool(s)

- Pool tiles represent shallow water and deep waters placed on the land.
- Connects via Connector tiles
- Too close to seeds can cause rot
- 2+ stacked pool tiles together form a Deep Pool
- Shallow Pools can have 6 connections: either via straight connections or on all sides (total connections cannot exceed 6)
- Deep Pools can have up to 12 connections.

# CORE GAME ELEMENTS

## Solari

- Solari tiles are placed light sources that activate Buds and allow them to become full Blooms.
- Solari do not drain energy, but are required for full blossom growth.
- Placed manually using Lifedew
- Solari's warmth extends to the adjacent one hex tile in all directions.
- Required to transform Bud → Bloom
- Required in combination with Pool for full bloom state
- Double solari can be unlocked in future



Warmth on six sides



Warmth on 6 sides +1 tile

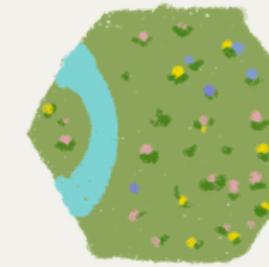
# CORE GAME ELEMENTS

## Connectors

- Connector tiles carry Pool from their sources to other tiles (could be blossom or other connectors). They are vital for routing resources, and can be rotated for optimal configuration.
- Cost: 2 Life-dew (rotation: 1)
- Transmits Pool from source to destination
- Can only connect in the direction of open channels
- Comes in three specific path shapes



Empty Connectors



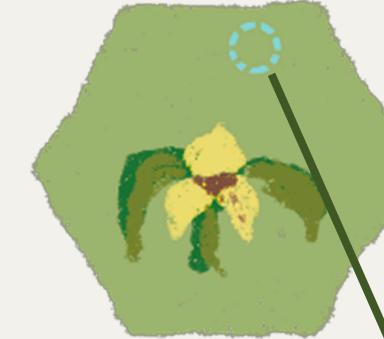
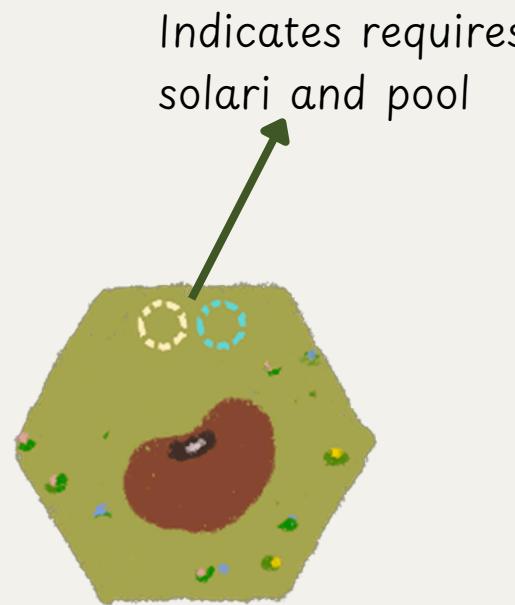
Pool Connected



# CORE GAME ELEMENTS

## Blossom (Seed → Bud → Bloom)

- Seeds are the first stage, Bud is the next. When seed is connected to pool, bud arrives. When both pool and solari are connected to seeds, Blooms take its place.
- They emit a steady stream of Life-dew, and are sometimes required for journal quests.



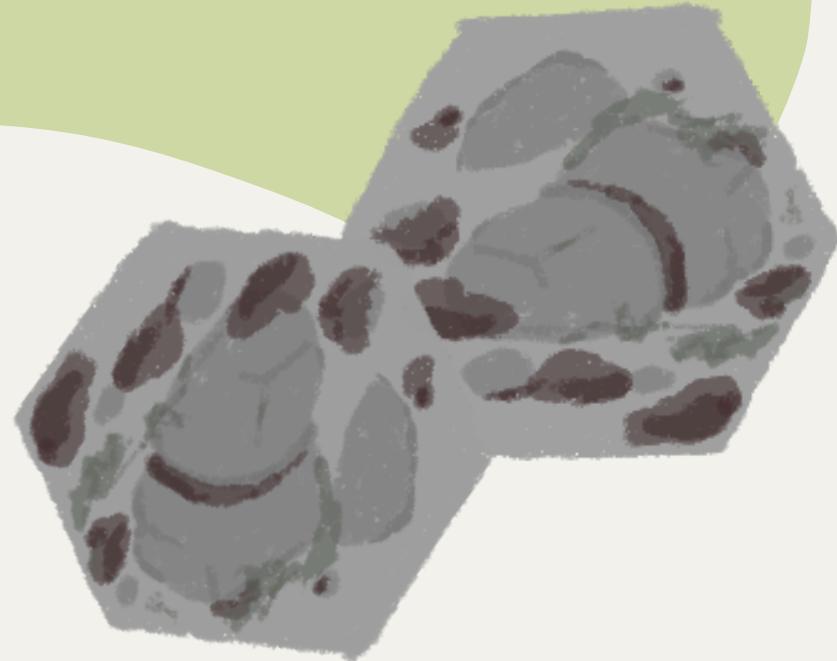
Indicates requires  
solari and pool

- Seeds + connecter + Pool → Bud
- Bud + Solari → Bloom
- Bloom - Pool → Dried up
- Blooms planted very close to Pool source → Rot
- Both bud and bloom produces lifedew.
- Come in different rarities (Common → Epic)

# CORE GAME ELEMENTS

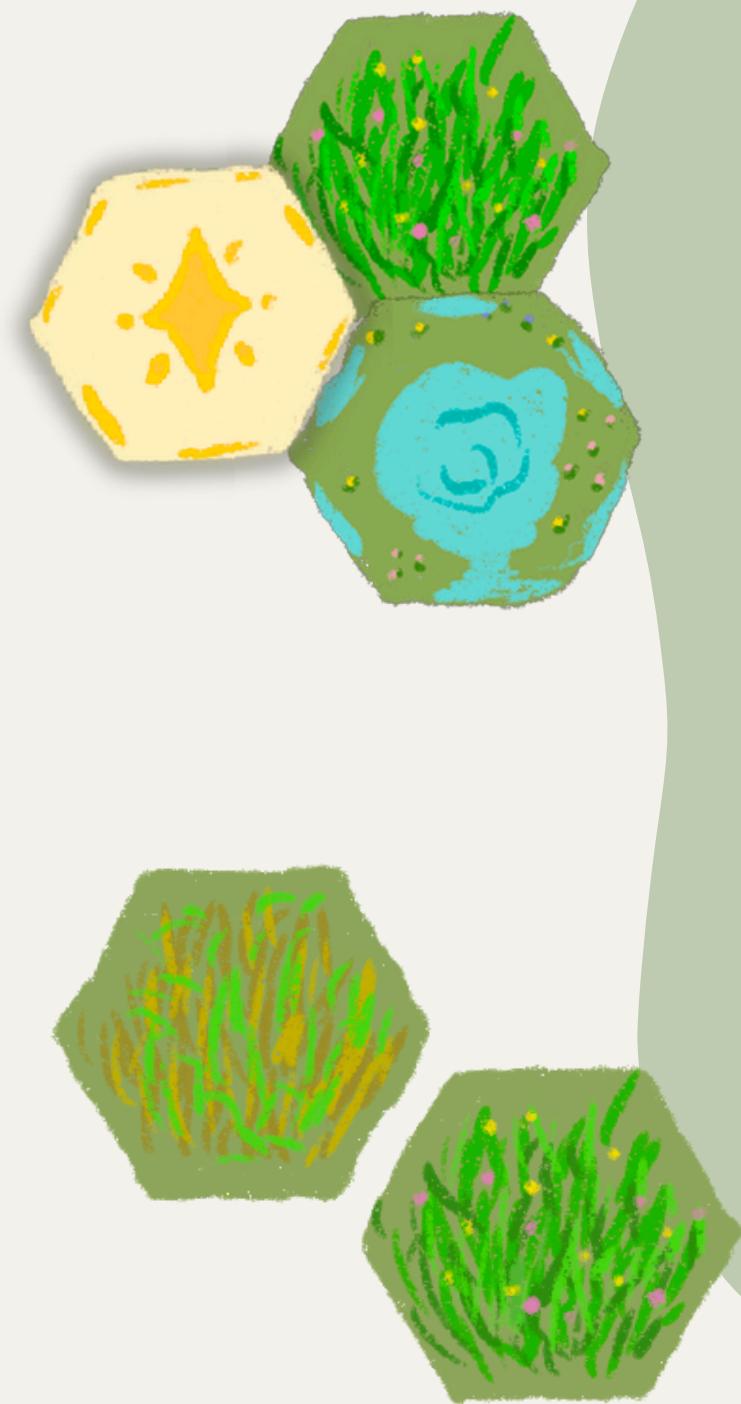
## Boulder

- Boulder or Stone tiles are inert obstacles that block placement or connections.
- Cannot be built on or passed through
- Adds puzzle challenge to growth path planning

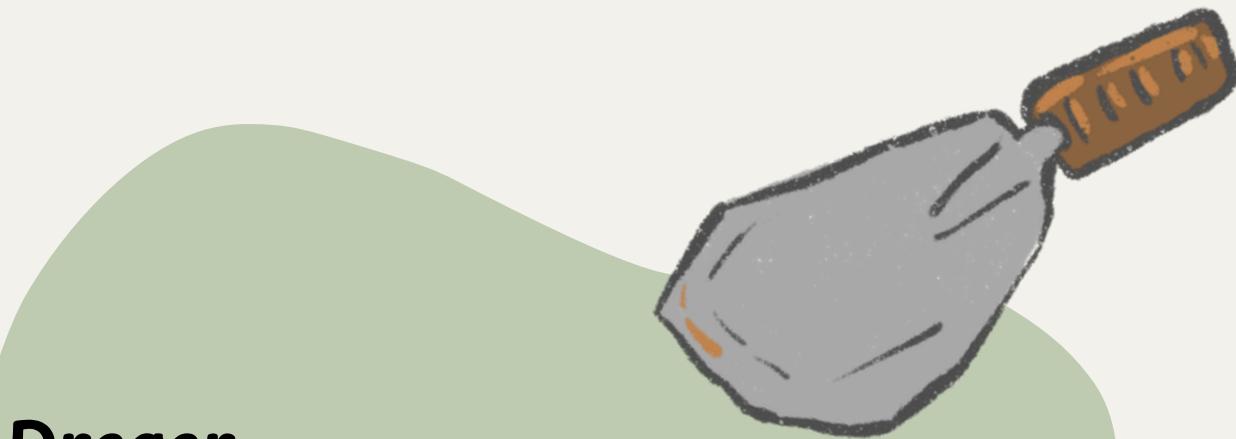


## Verda

- Verda tiles are overgrowth or invasive weeds that randomly spread and block connection paths.
- It grows when an unlocked tile is left empty for a while that has both access to pool and solari.
- They can be used as decorations but carefully.
- Can be removed easily- costs lifedew
- Adds puzzle challenge to growth path planning
- Too many verda absorbs lifedew over time.



# CORE GAME ELEMENTS



## Dreger

- The Dreger is a tool or interface action used to clear existing tiles, cleanse rot, and remove weeds.
- Clears a tile (resets it to unlocked state)



## Chips

- Chips are the main in-game currency earned through harvesting Blooms and interacting with villagers.
- Spent on: Buying seed packs, Purchasing tools (e.g., Extra Connector Hex, Remover charges)
- Temporary boosts (e.g., faster growth, double solari)
- Not consumed during core tile placement—that's Life-dew's domain
- Chips are dropped by blooms occasionally.

# CORE GAME ELEMENTS

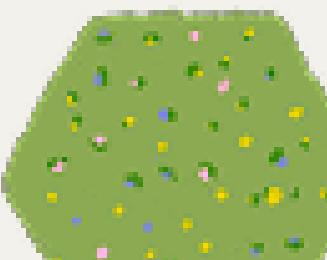
## Journal

- The Journal serves as your quest tracker, lore archive, and level progression system.
- Shows sketches, diagrams, story entries
- Can be accessed on the main screen
- Has tabs for settings, bloomdex, chapters etc (will be revealed later)

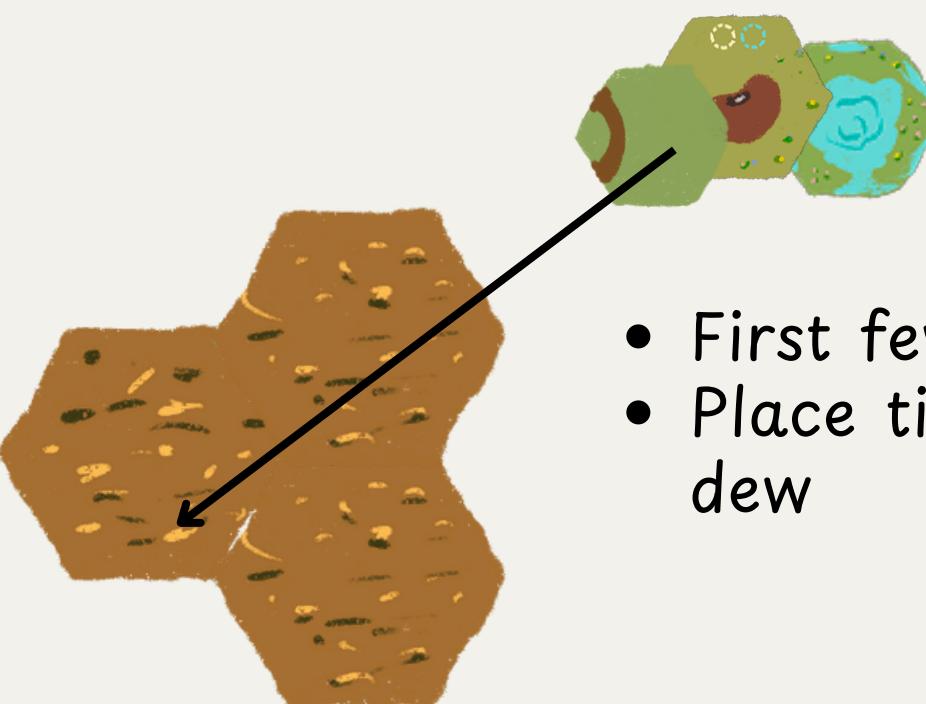


## Bloom Store

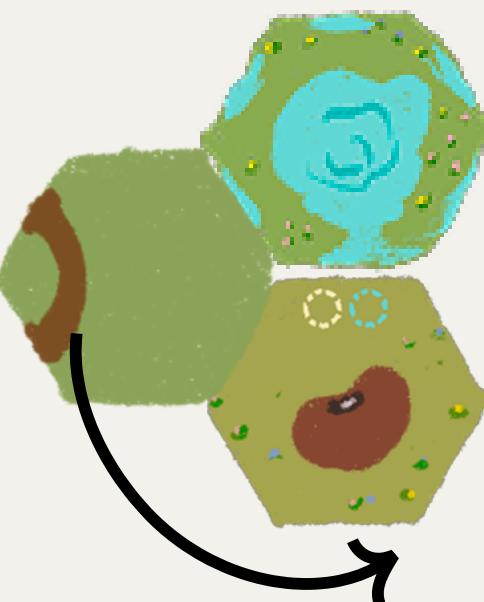
- It serves as a store access where villagers can place their requests for blooms.
- Chips are spent here to buy better bloom seeds.



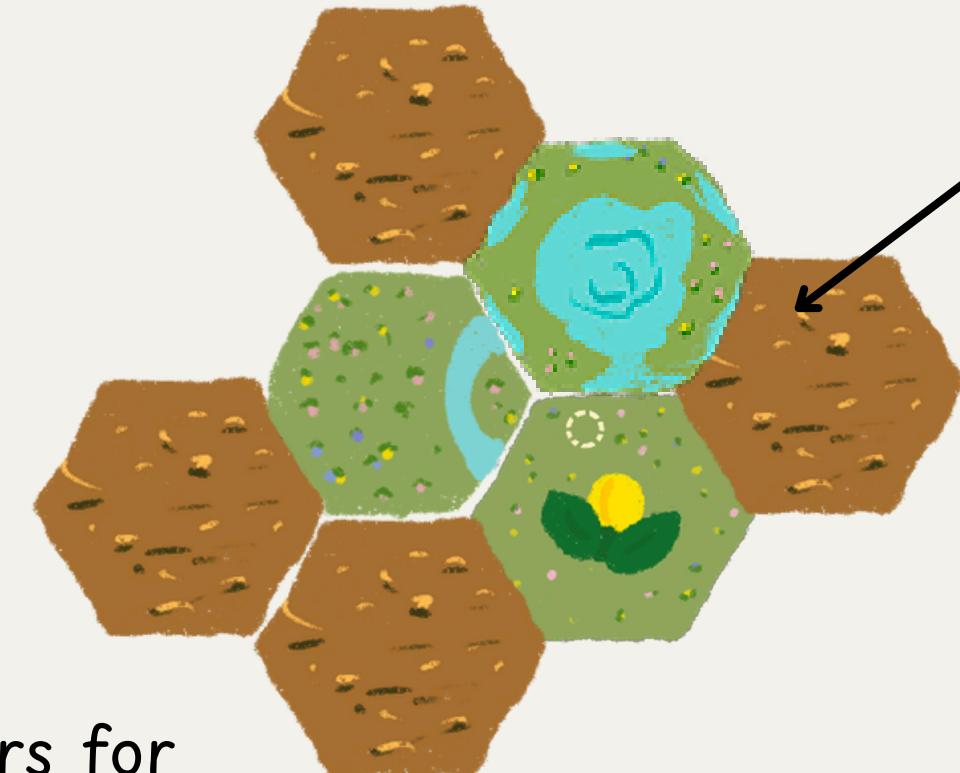
# GAME MECHANICS



- First few unlocked tiles
- Place tiles using life dew



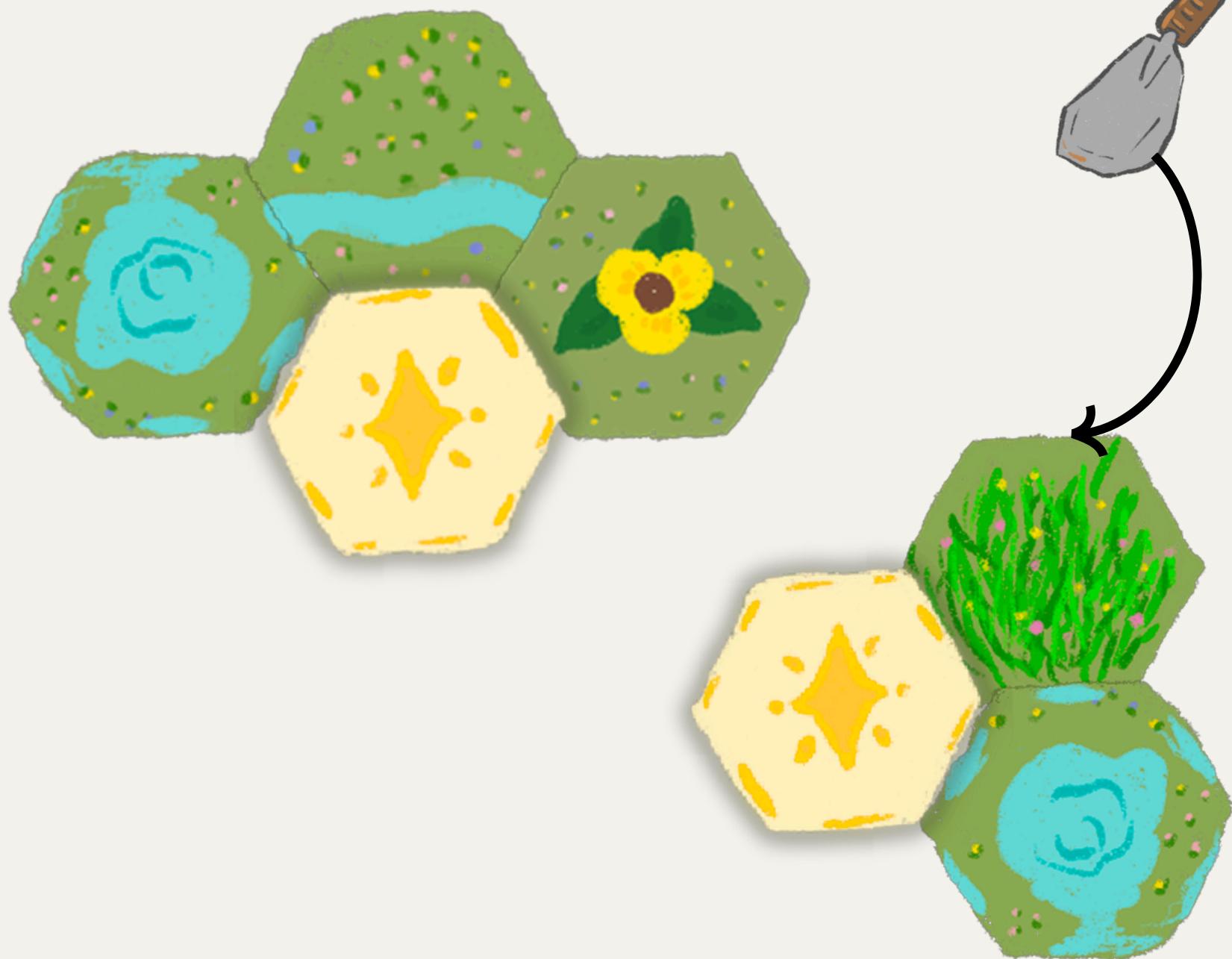
- Rotate connectors for desired outcome



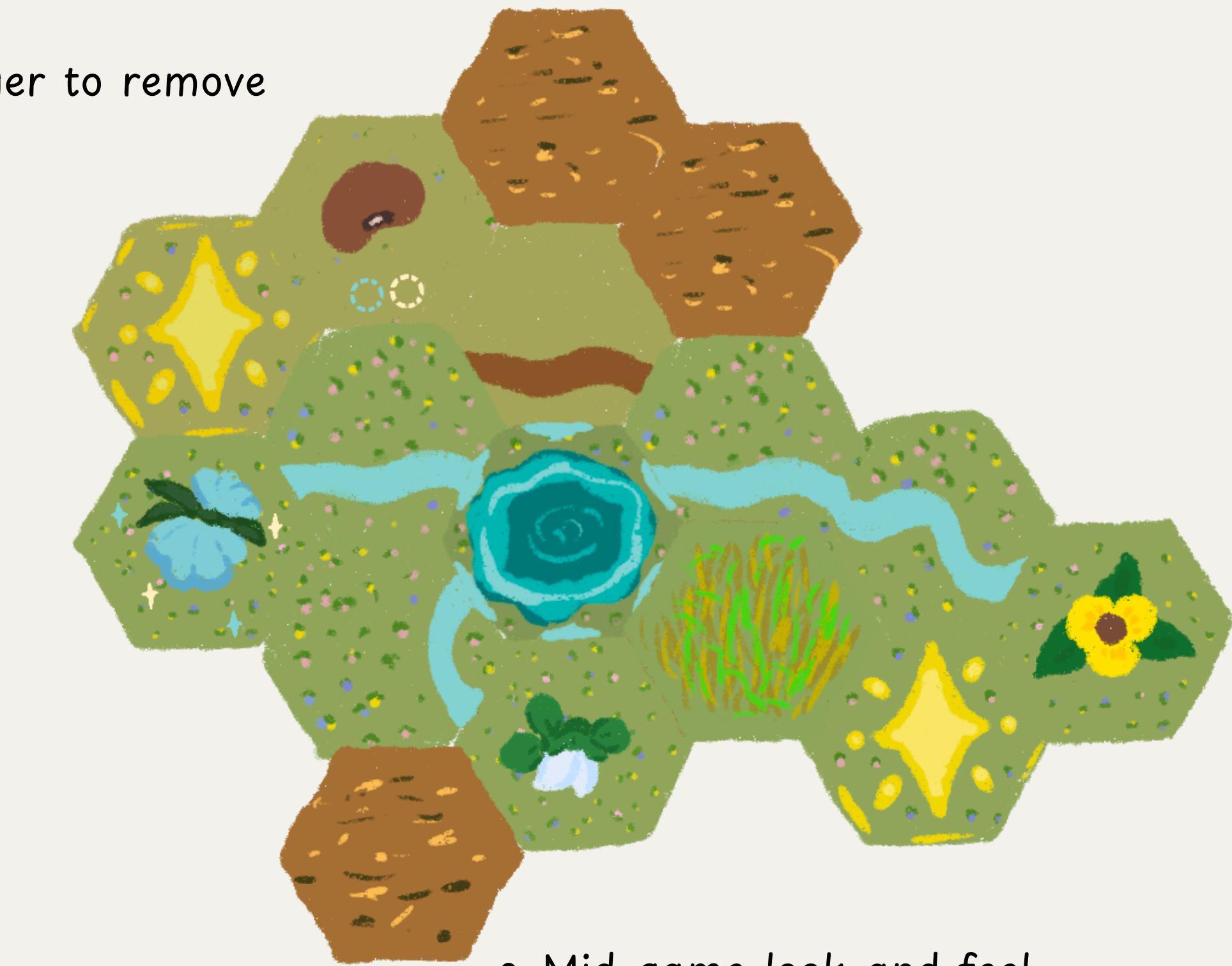
- Place solari to get a full bloom



# GAME MECHANICS



- Verda growing on unoccupied area



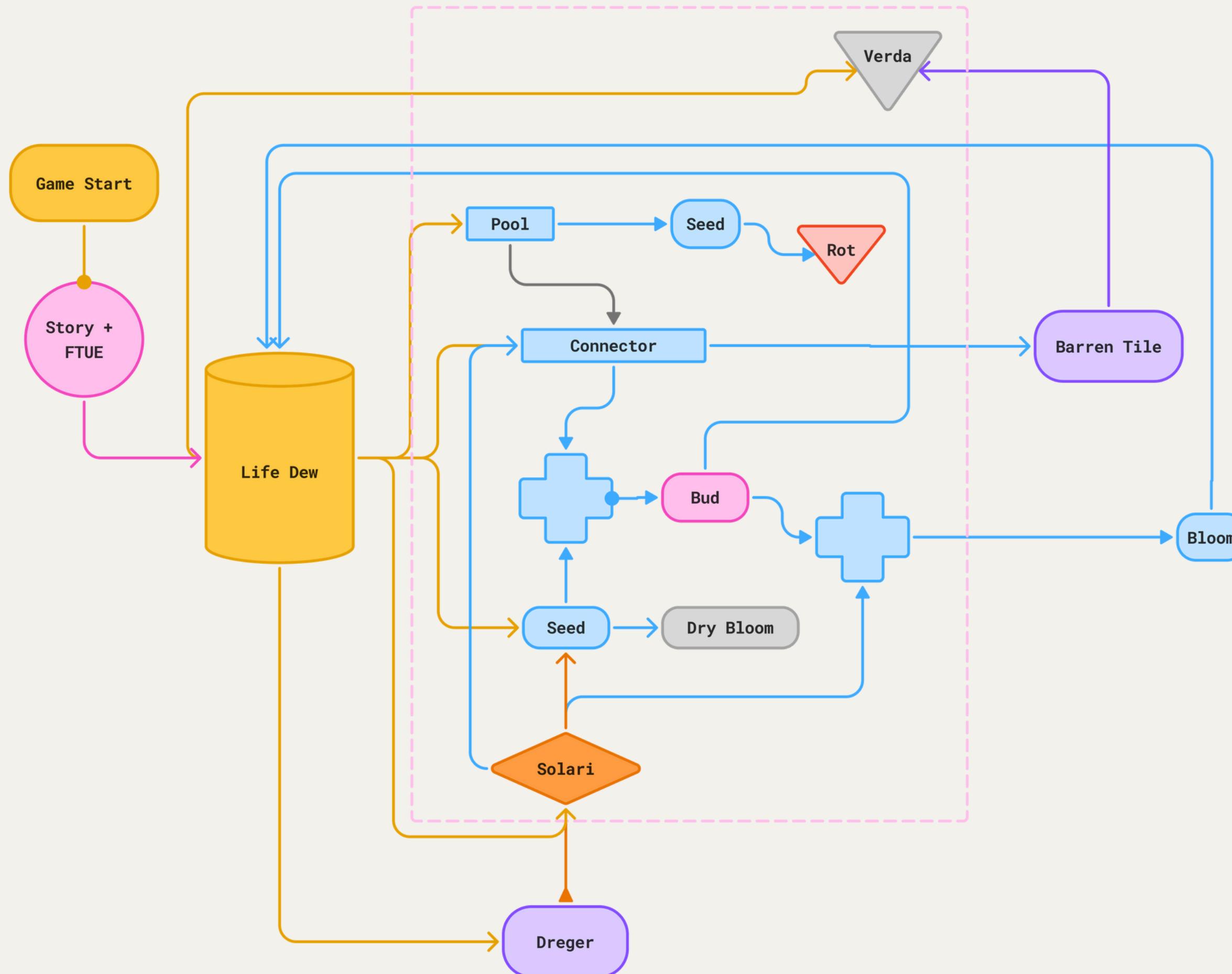
- Mid-game look and feel

- Use dreger to remove

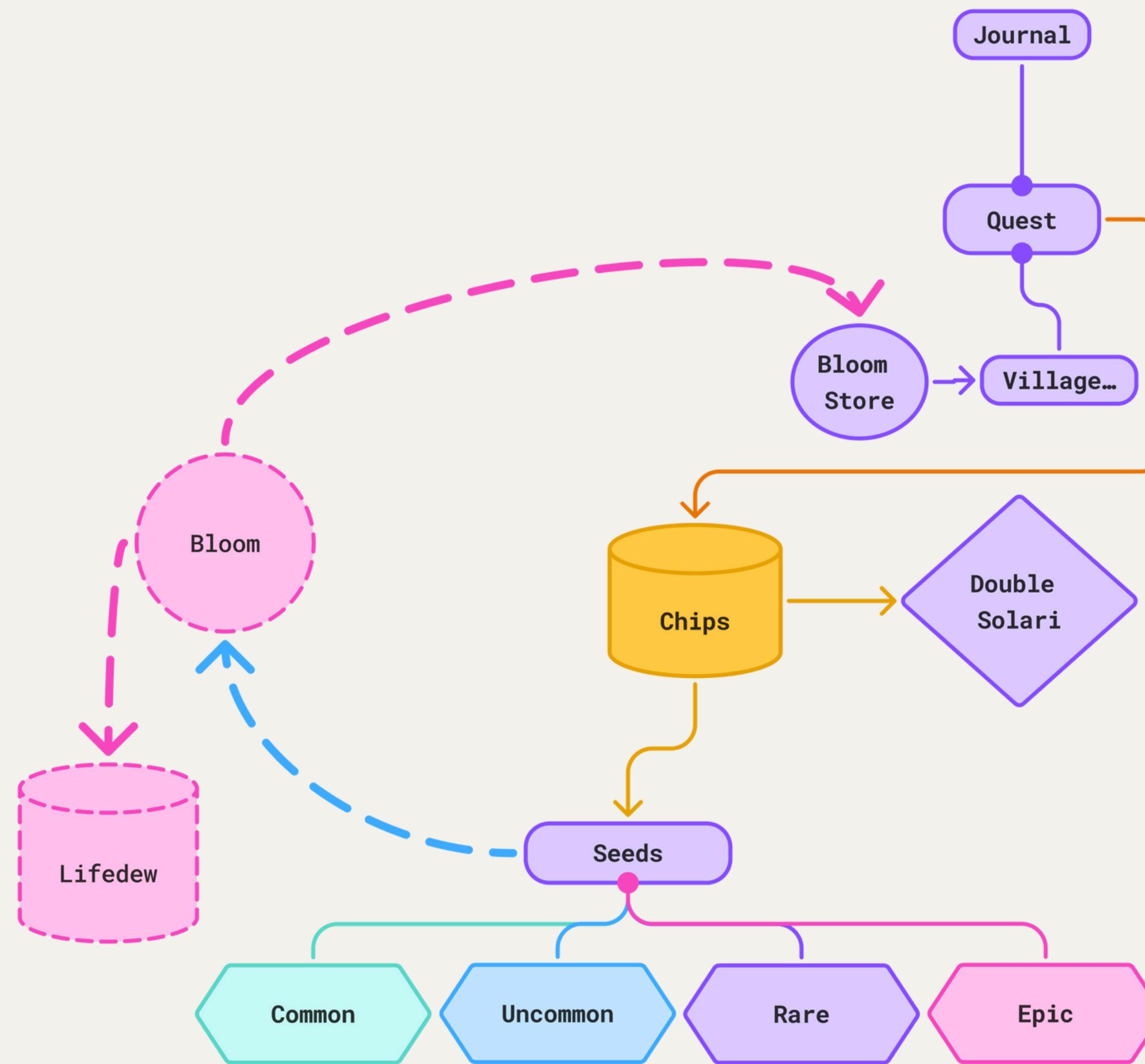
# **SYSTEM & ECOMONY DESIGN**

- Core System Design
- Meta System Design
- Tile Unlock System
- Lifedew Economy
- Chips Economy
- Game Beat Chart

# CORE SYSTEM DESIGN



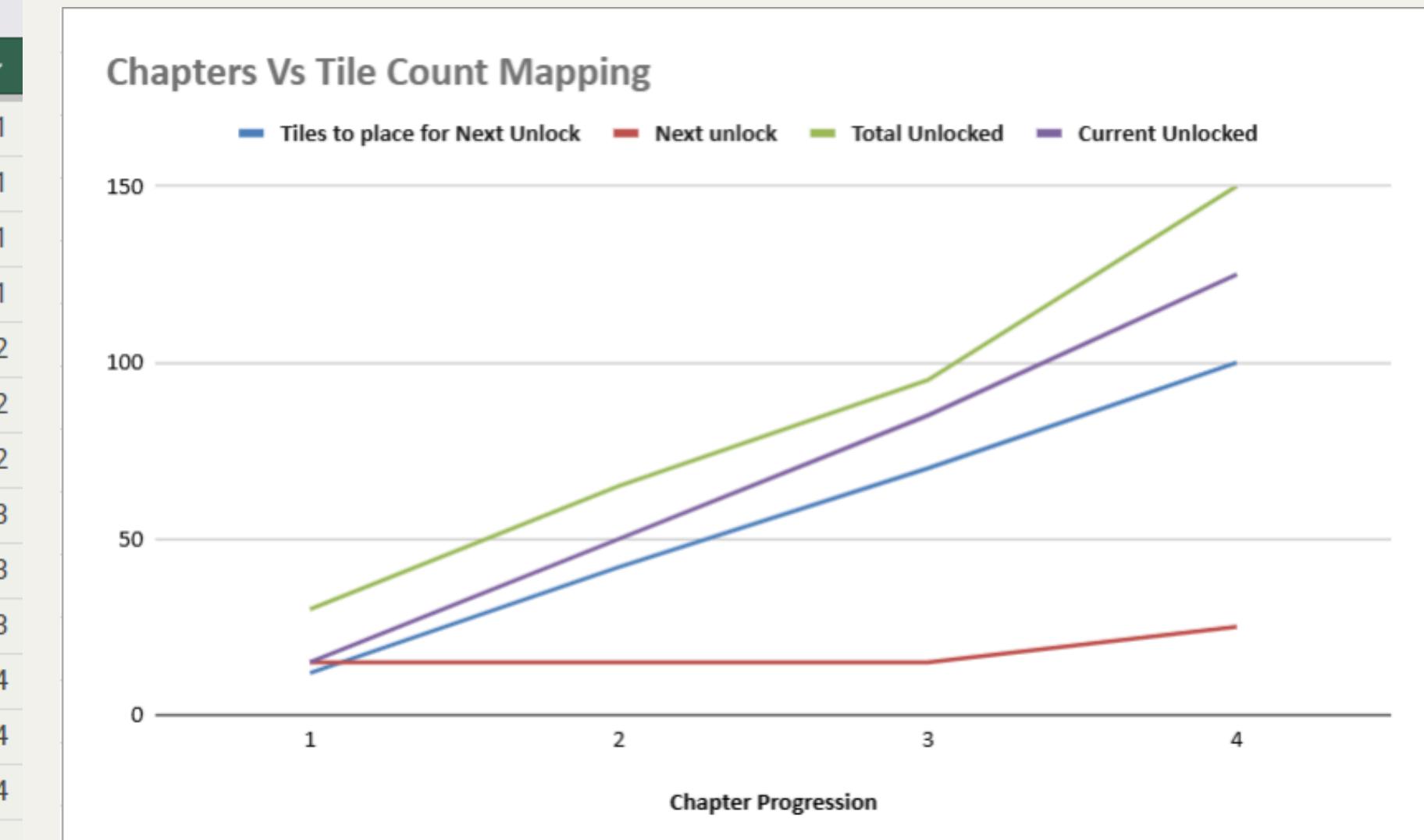
# META SYSTEM DESIGN



# TILE UNLOCK SYSTEM

Tile System ▾ ⤒

Current Unlocked	Tiles to place for Next Unlock	Next unlock	Total Unlocked	Chapters
3	3	2	5	1
5	5	5	10	1
10	8	5	15	1
15	12	15	30	1
30	24	12	42	2
42	35	8	50	2
50	42	15	65	2
65	55	5	70	3
70	62	15	85	3
85	70	10	95	3
95	80	15	110	4
110	92	15	125	4
125	100	25	150	4
150	150	-	-	



# LIFEDEW ECONOMY

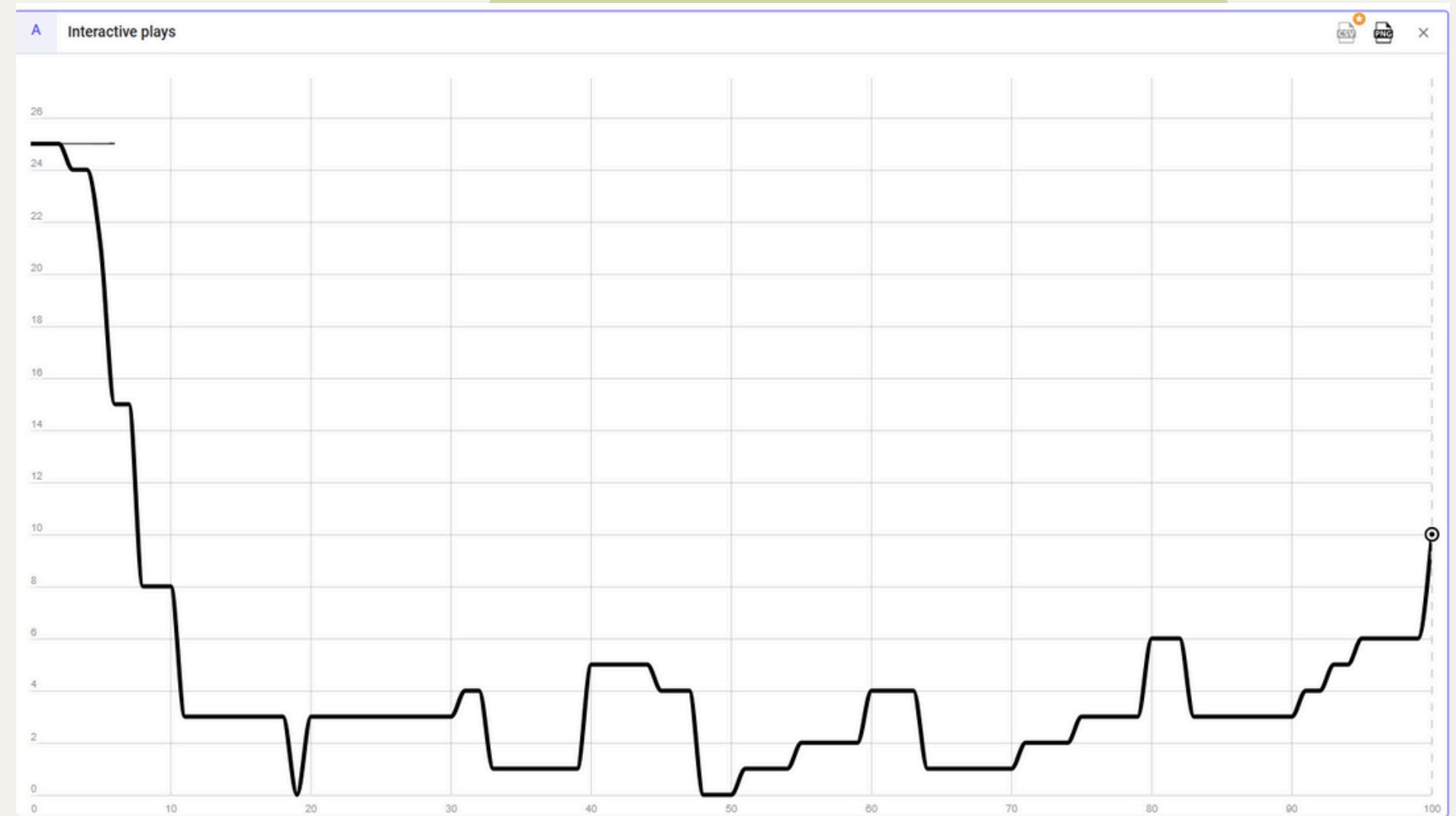
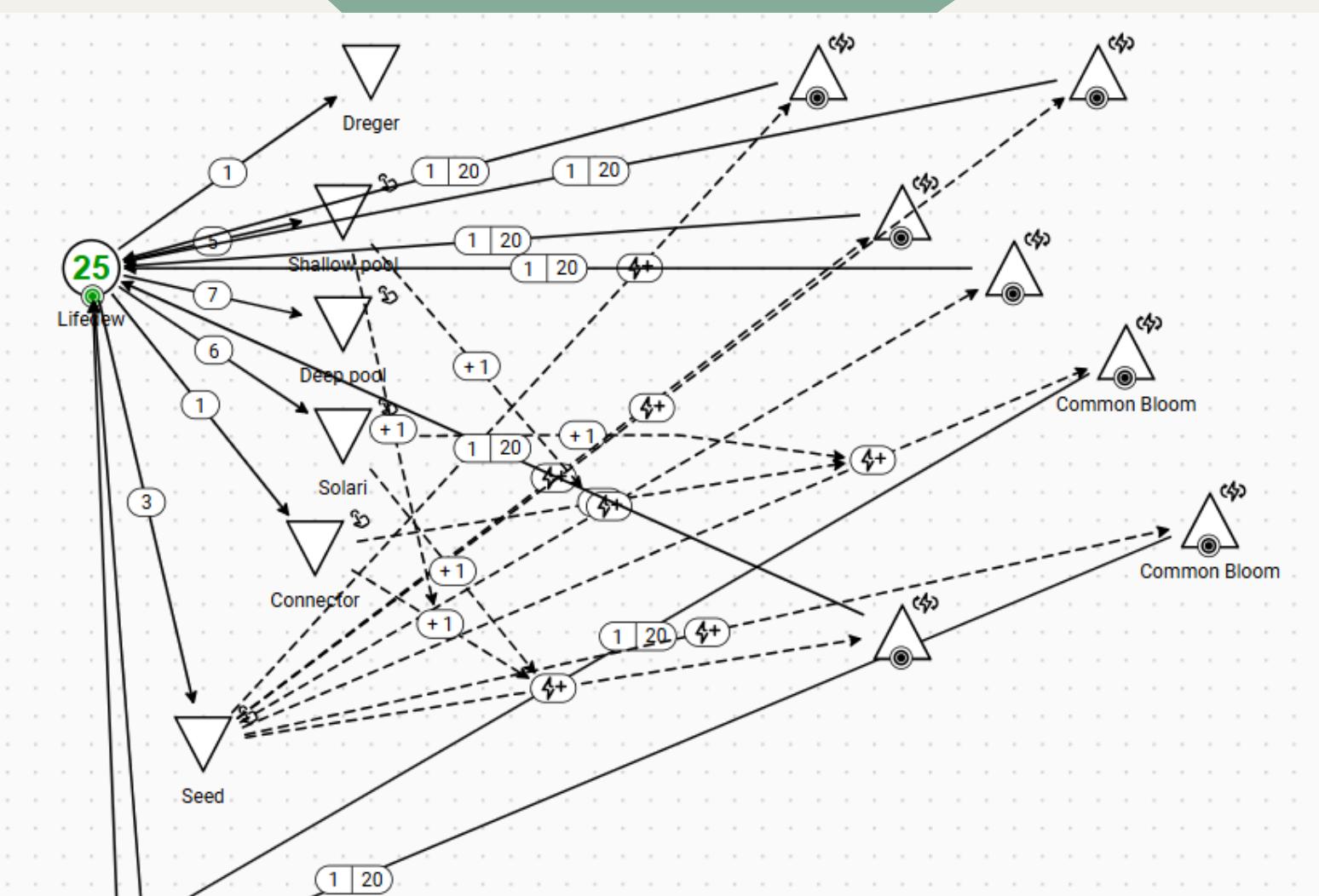
Main Action	Action Element	Lifedew (+/-):25	Over Time
Placing	Shallow Pool	-5	
	Deep Pool	-7	
	Solari	-6	
	Connector	-1	
	Seed	-3	
Rotating	Connector	-1	
	Shallow Pool	-3	
	Deep Pool	-5	
	Solari	-3	
	Connector	-1	
Removing (using Dreger)	Seed	-1	
	Bud	-2	
	Bloom	-4	
	Rot	(+1)	
	Verda	-2	
	Dry Bloom	-2	
	Verda count > Bloom count + 2	-1 x Verda count	20s
	Rot	-2	40s
	Bud(any)	(+1)	20s
	Bloom (Common)	(+2)	30s
Passive	Bloom (Uncommon)	(+3)	30s
	Bloom (Rare)	(+4)	35s
	Bloom (Epic)	(+5)	30s
	Journal Quest x5	(+10)	
	Journal Quest x10	(+12)	
	Journal Quest x15	(+15)	
Quest	End of Chapter	Lifedew Max + 5	

# CHIPS ECONOMY

<b>Source</b>	<b>Condition</b>	<b>Chips Earned</b>	<b>Notes</b>
Common Bloom	Standard Blooms	2-3 Chips	Random drop every 4-5 mins
Uncommon Bloom	Uncommon or Better Blooms	2-3 Chips	Random drop every 3-4 mins
Rare Bloom	Good Bloom	4-6 Chips	Random drop every 3-4 mins
Epic Bloom	Best Blooms	7-10 Chips	Random drop every 2 mins
Journal Milestone	E.g., "Grow 5 Buds" or "First Trade"	5-15 Chips	
Villager Quest Completion	Seed delivery or special task	8-15 Chips	
<b>Bloom Shop Item / Upgrade</b>	<b>Type</b>	<b>Cost (Chips)</b>	<b>Notes</b>
Seed Pack – Common x3	Consumable	6 Chips	Random draw
Seed Pack – Uncommon x2	Consumable	10 Chips	Slightly better yield
Seed Pack – Rare x2	Consumable	20 Chips	Slightly better yield
Epic Seed Pack	Consumable	20 Chips	Amazing Yield
Connector Hex Blueprint	Tool Unlock	15 Chips	Place free connectors for 1 min
Double Solari	Upgrade	12 Chips	Doubles Solari effect radius for 1 min

# GAME BEAT CHART

Used machination to play through one time of resource management

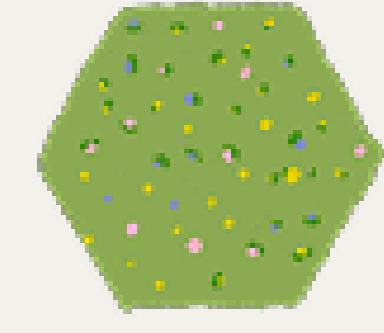
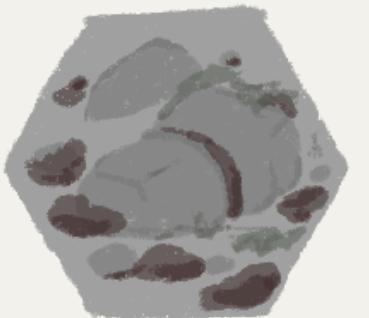
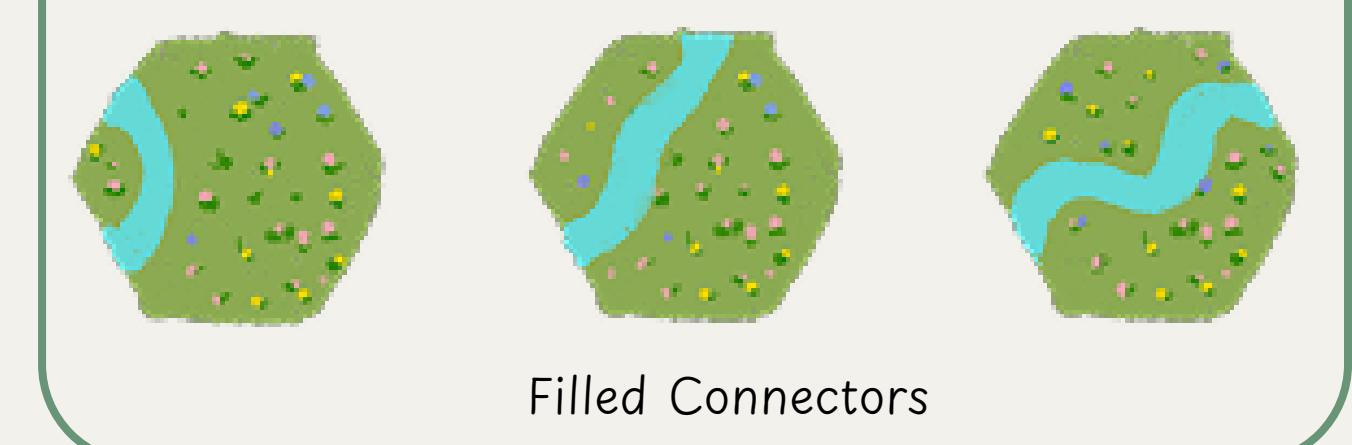
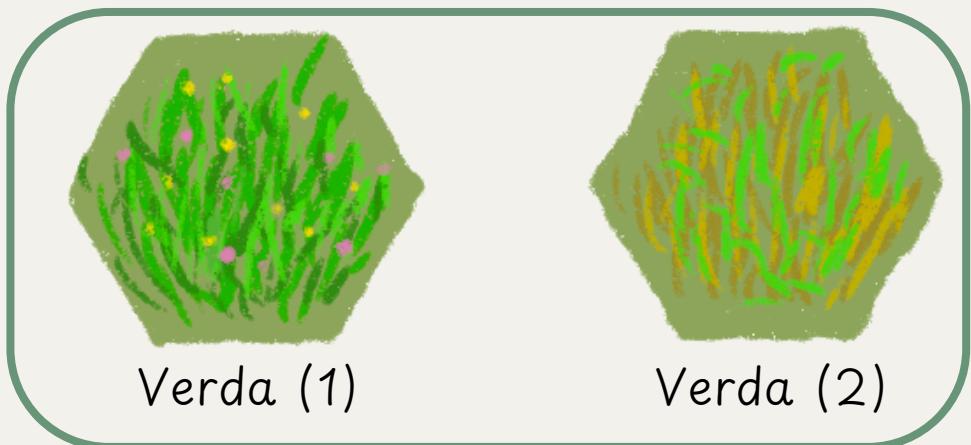
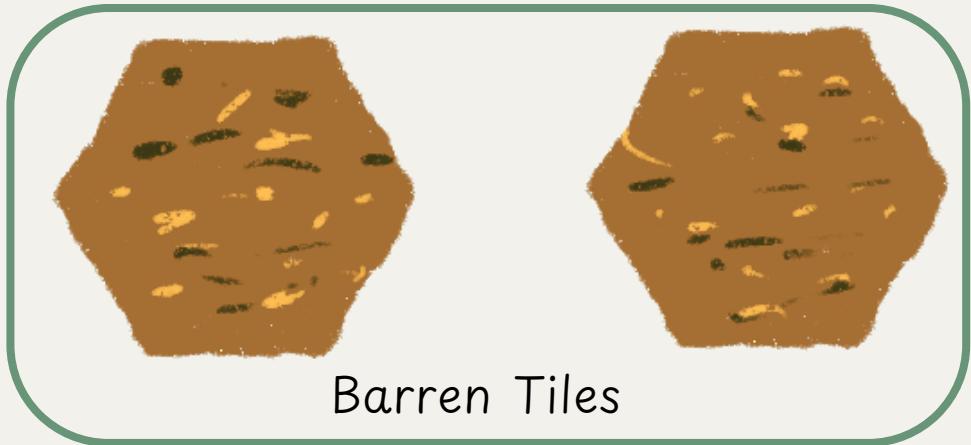


Game chart showing an initial dip in resources, then a steady balance with small increments as time and bloom amount increase.

## VISUAL ASSETS

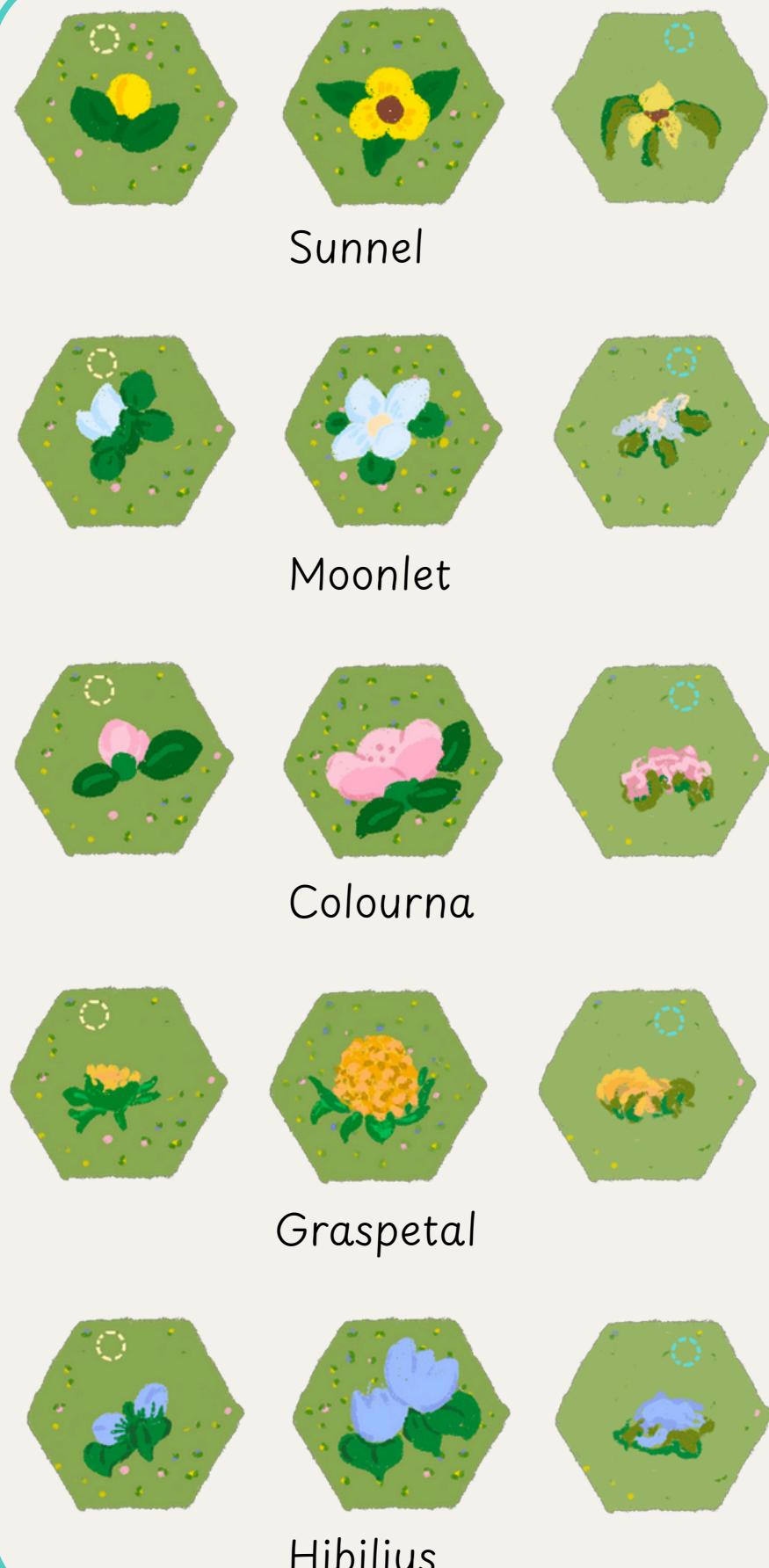
- In-Game tile Assets
- Bloom Assets (By Rarity)
- UI/UX

# IN-GAME TILE ASSETS

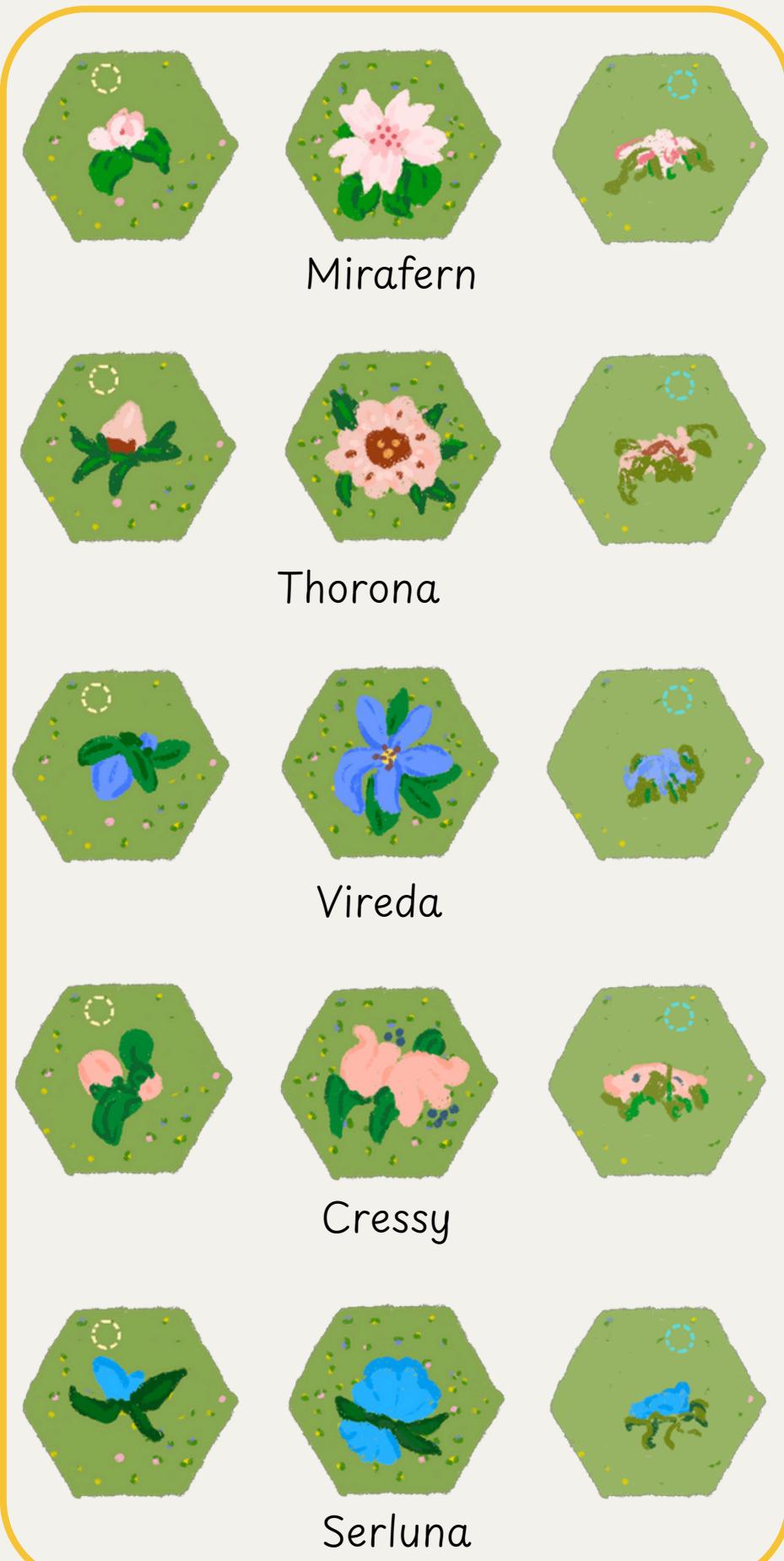


# BLOOM ASSETS (BY RARITY)

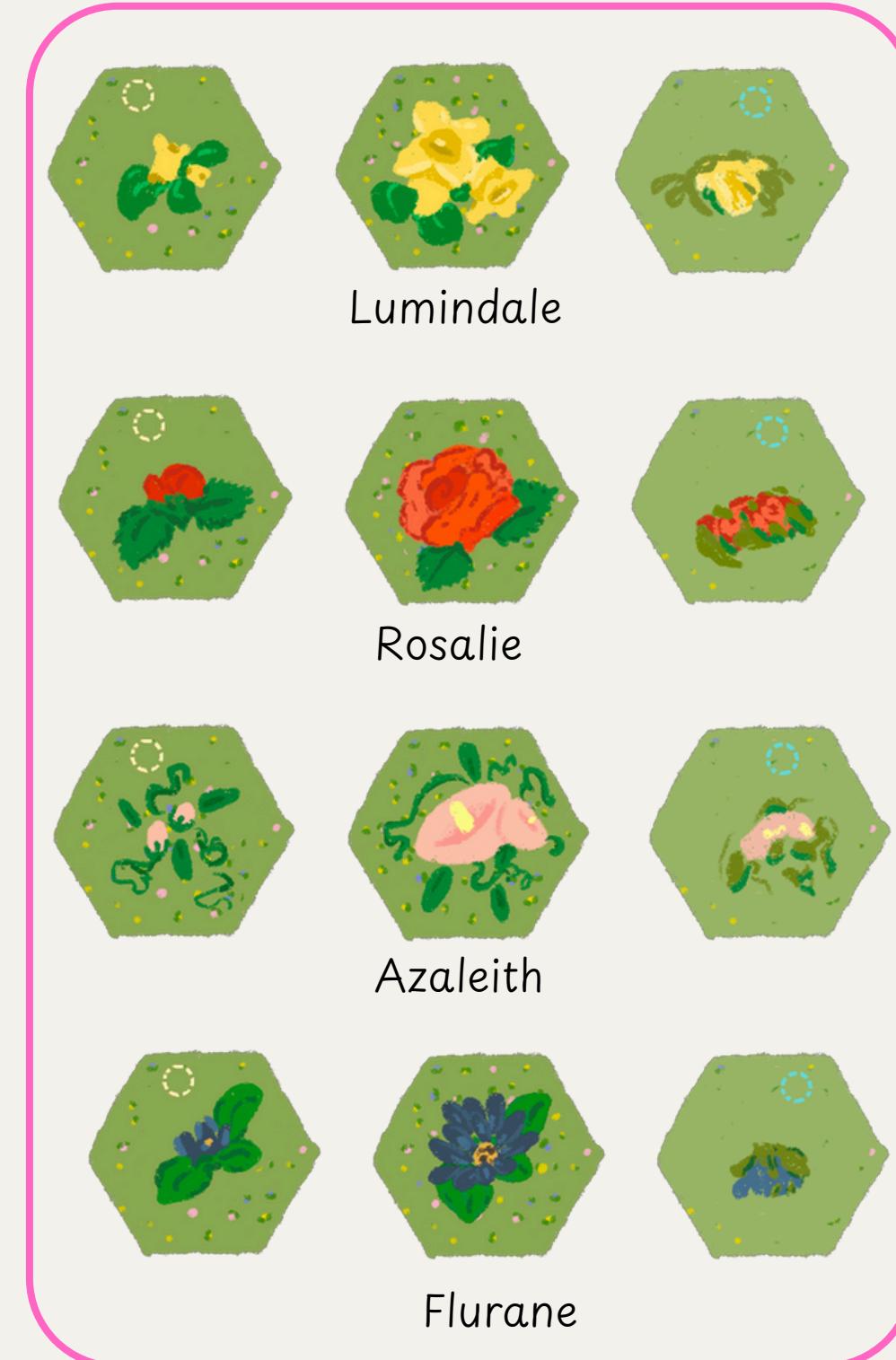
**COMMON**



**UNCOMMON**



**RARE**

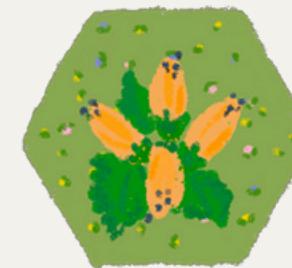


# BLOOM ASSETS (BY RARITY)

**EPIC**



Nytheria



Velmora



Elarosa



Hexalune

## Blooms (Rare)

- Each bloom generated a certain amount of lifedew by rarity.

Bud(any)	(+1)	20s
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Bloom (Common)	(+2)	30s
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Bloom (Uncommon)	(+3)	30s
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Bloom (Rare)	(+4)	35s
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Bloom (Epic)	(+5)	30s
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# UI/UX



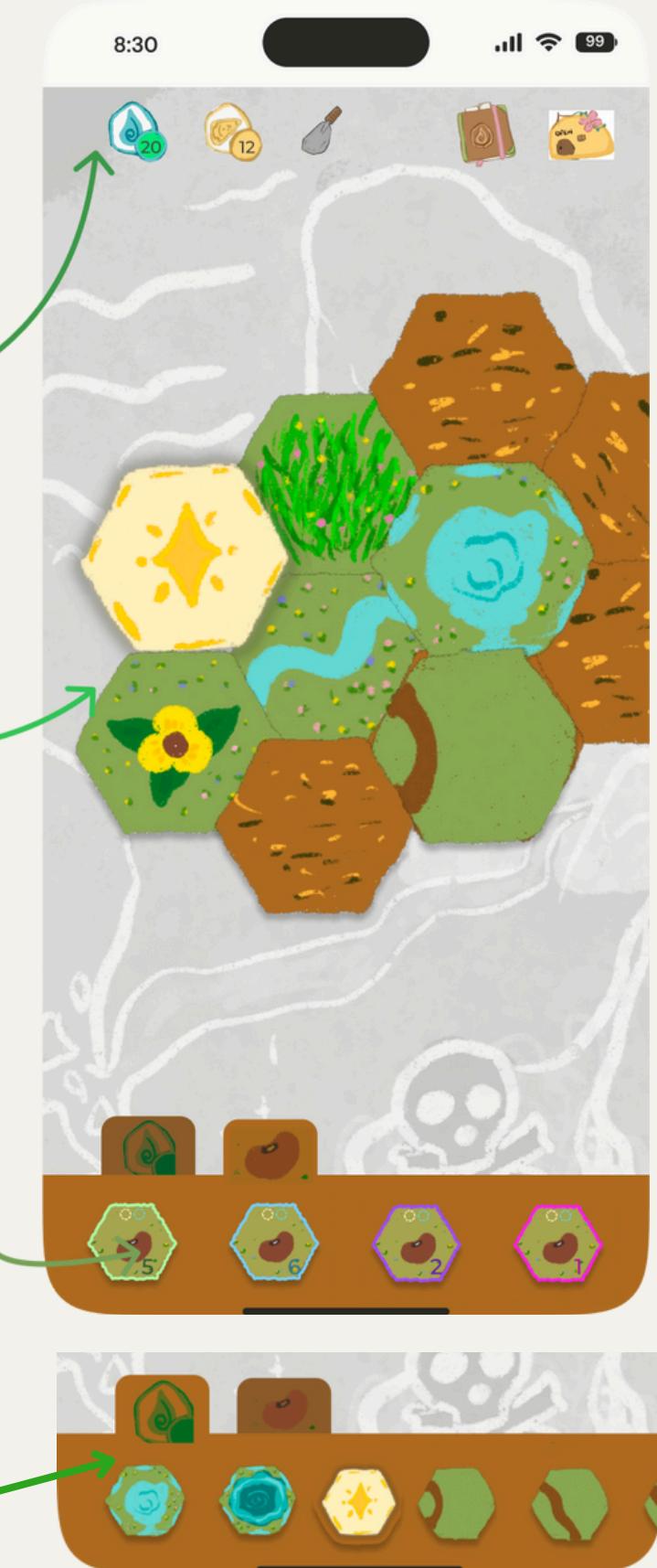
Fiore is designed to guide the player into a calm, emotionally rewarding flow state, where every action feels satisfying and meaningful.

Low cognitive load: Visual clarity, minimal menus, and consistent iconography

Positive reinforcement: Every bloom, no matter how small, gives visual affirmation  
Ambient storytelling: UI interruptions are minimised; story unfolds softly through world elements

Intuitive interactions:  
Drag-and-drop tile placement with gentle feedback

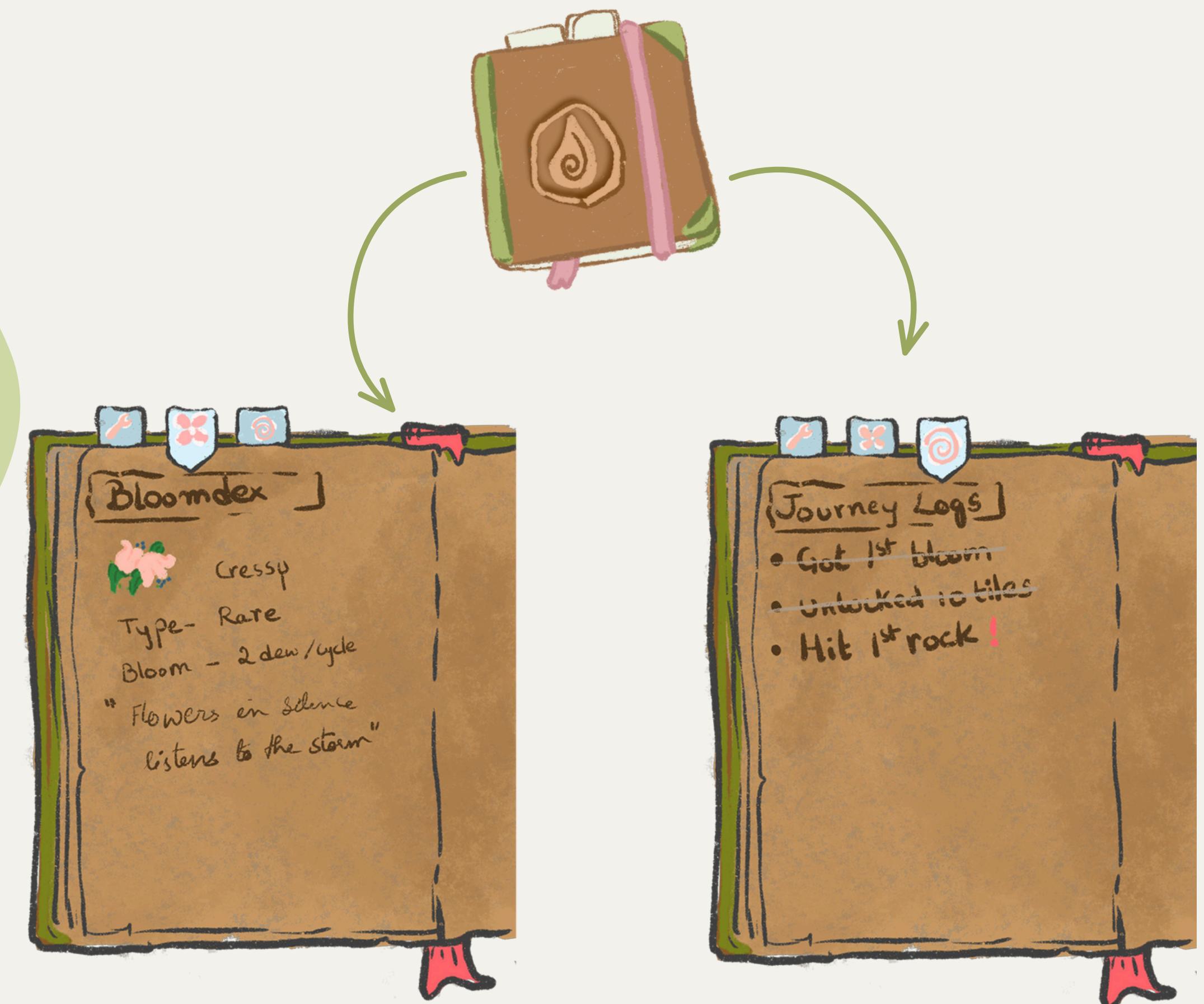
Non-linear exploration: Players are free to experiment and strategise without punishment

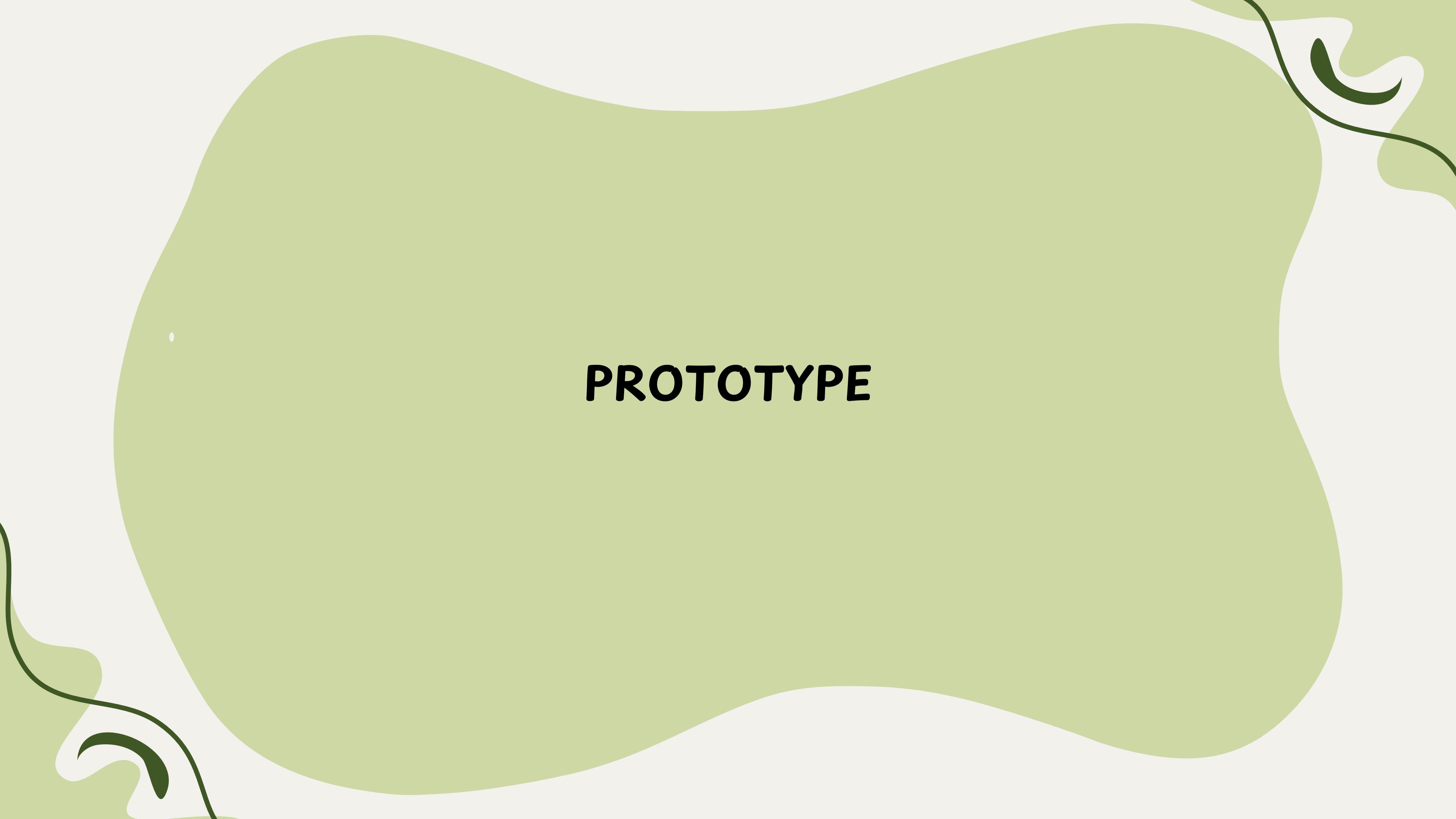


# JOURNAL UI

The journal has three main sections:

- Settings - having all the settings menu
- Bloomdex - with info for discovered Blooms
- Journey Logs - This is where quests appear and gets done

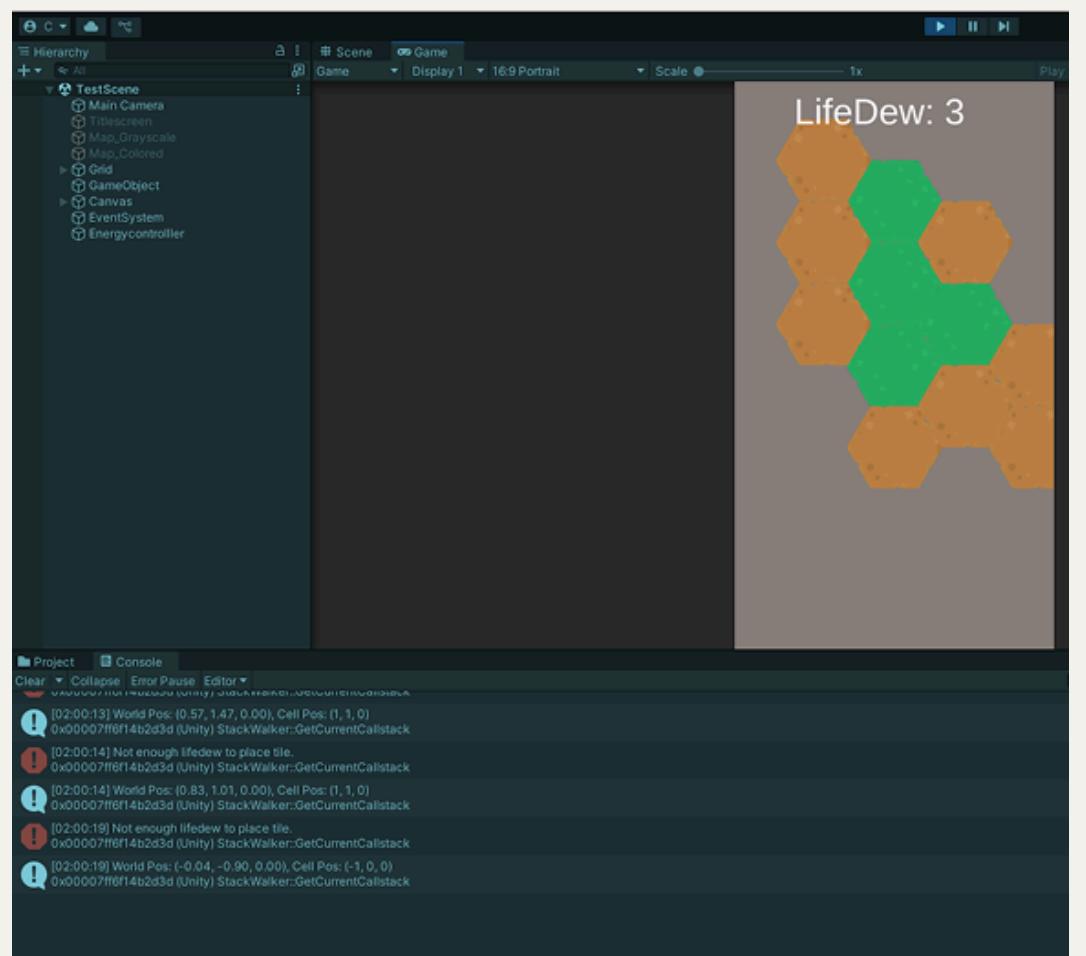
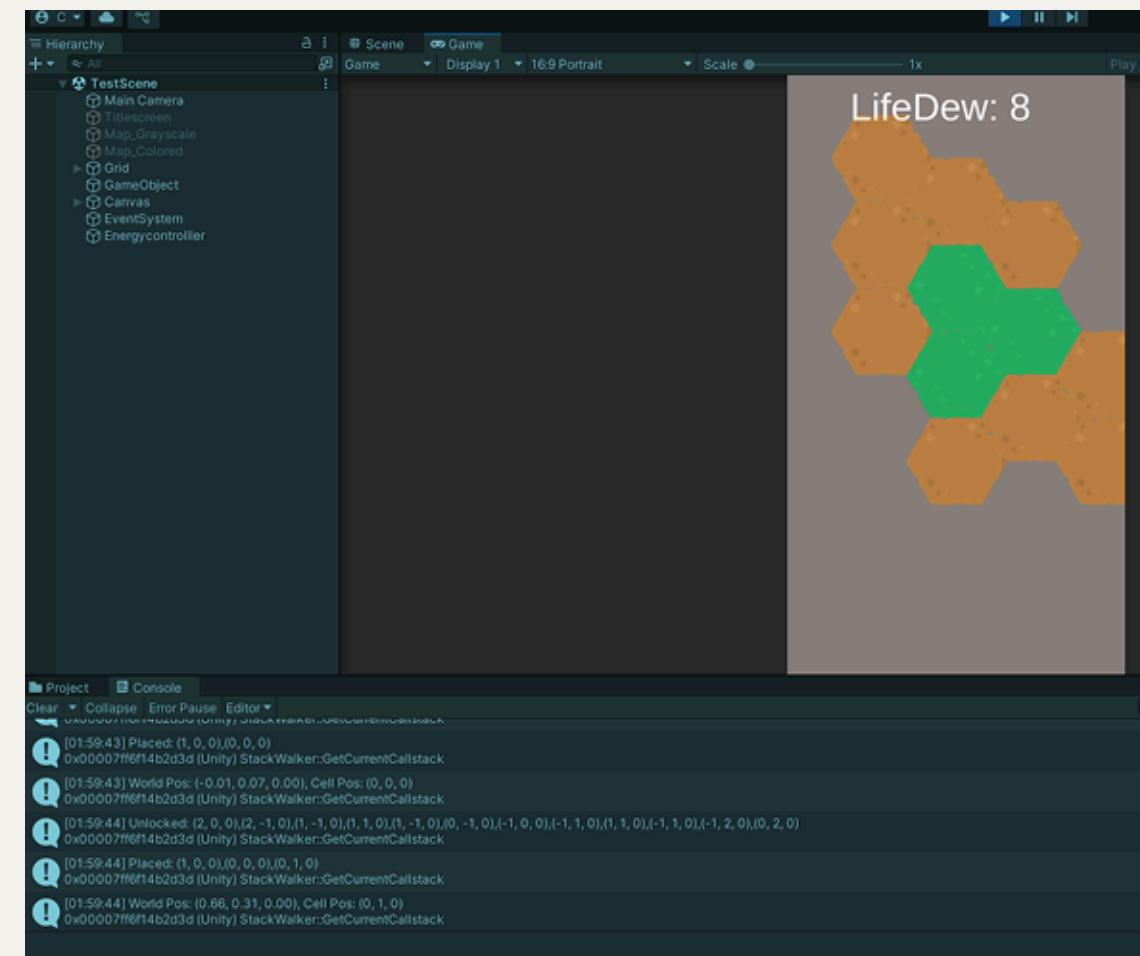
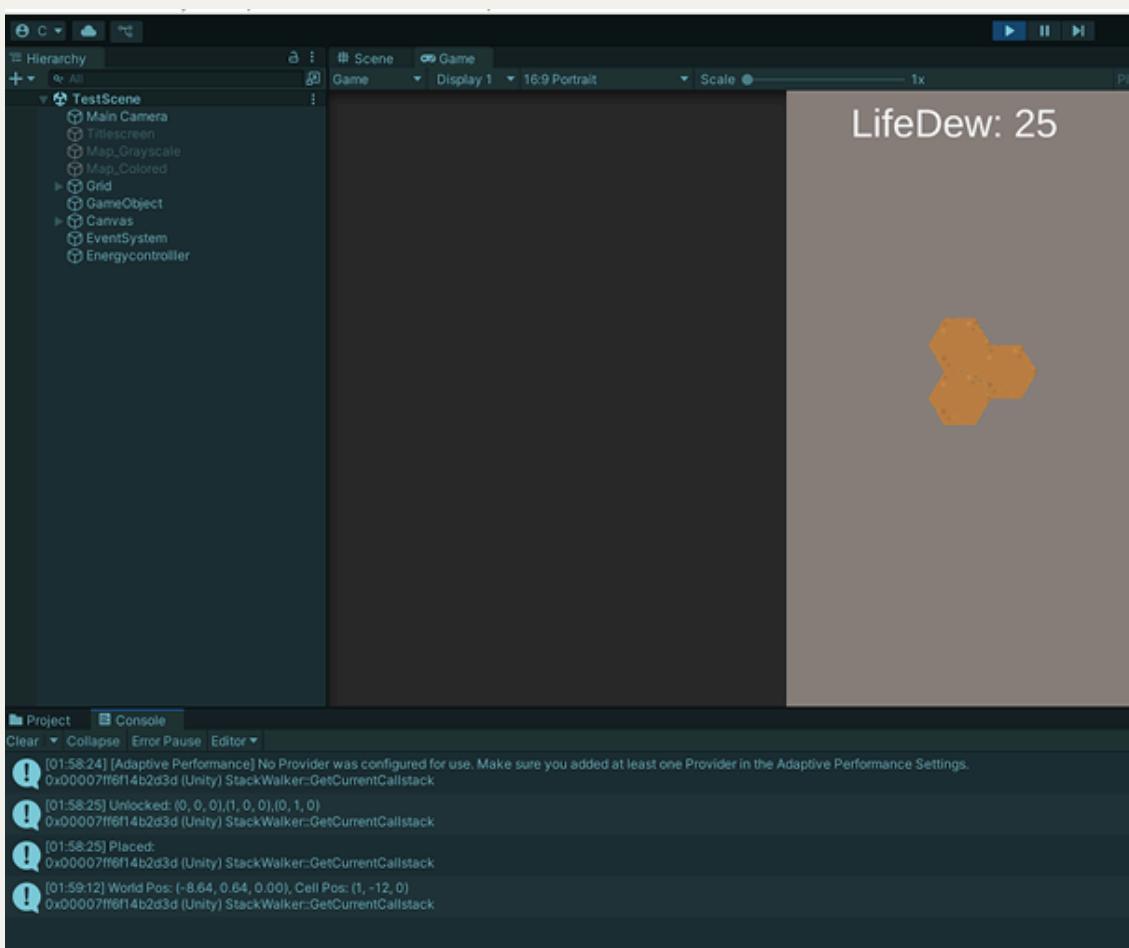
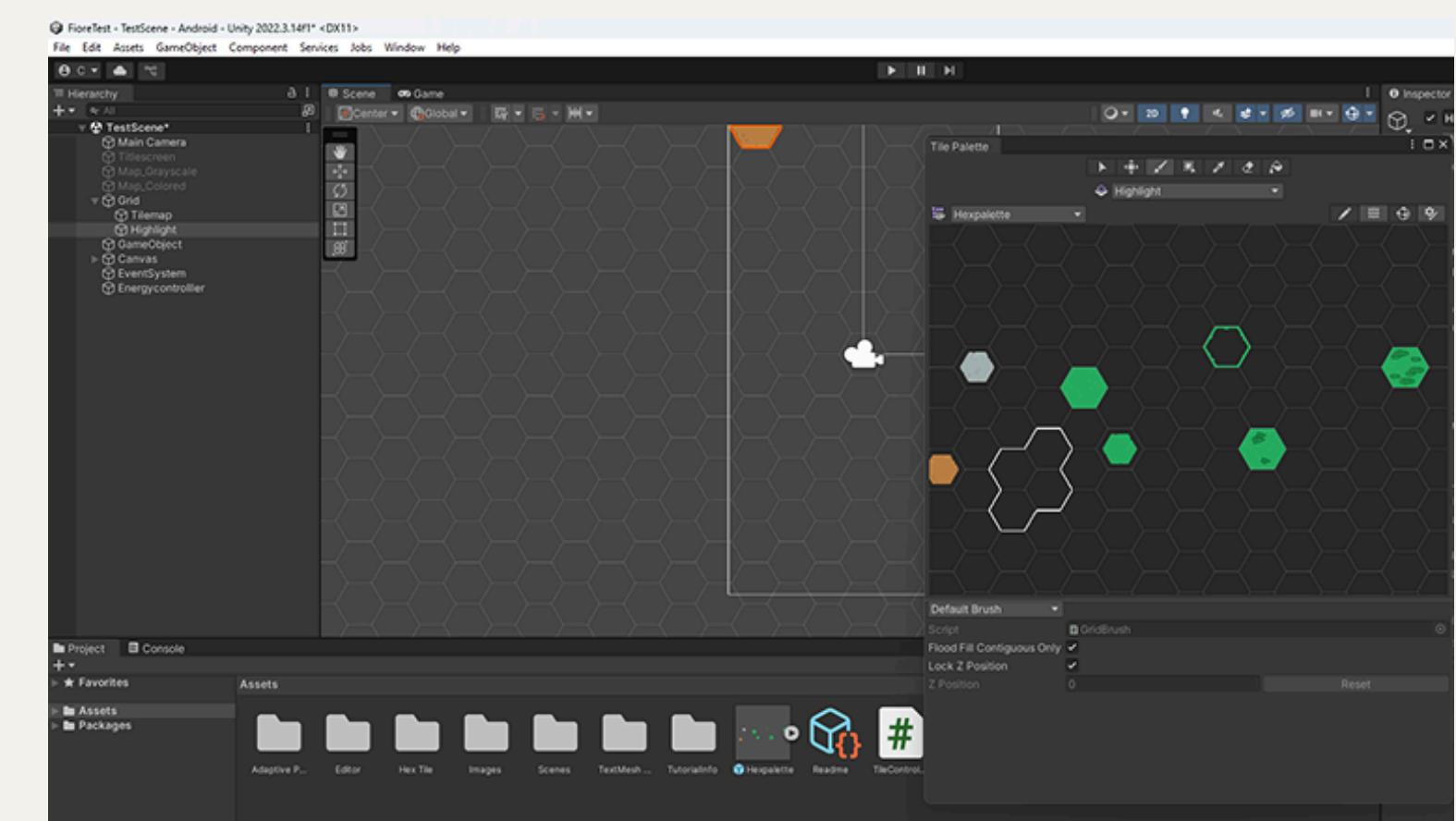




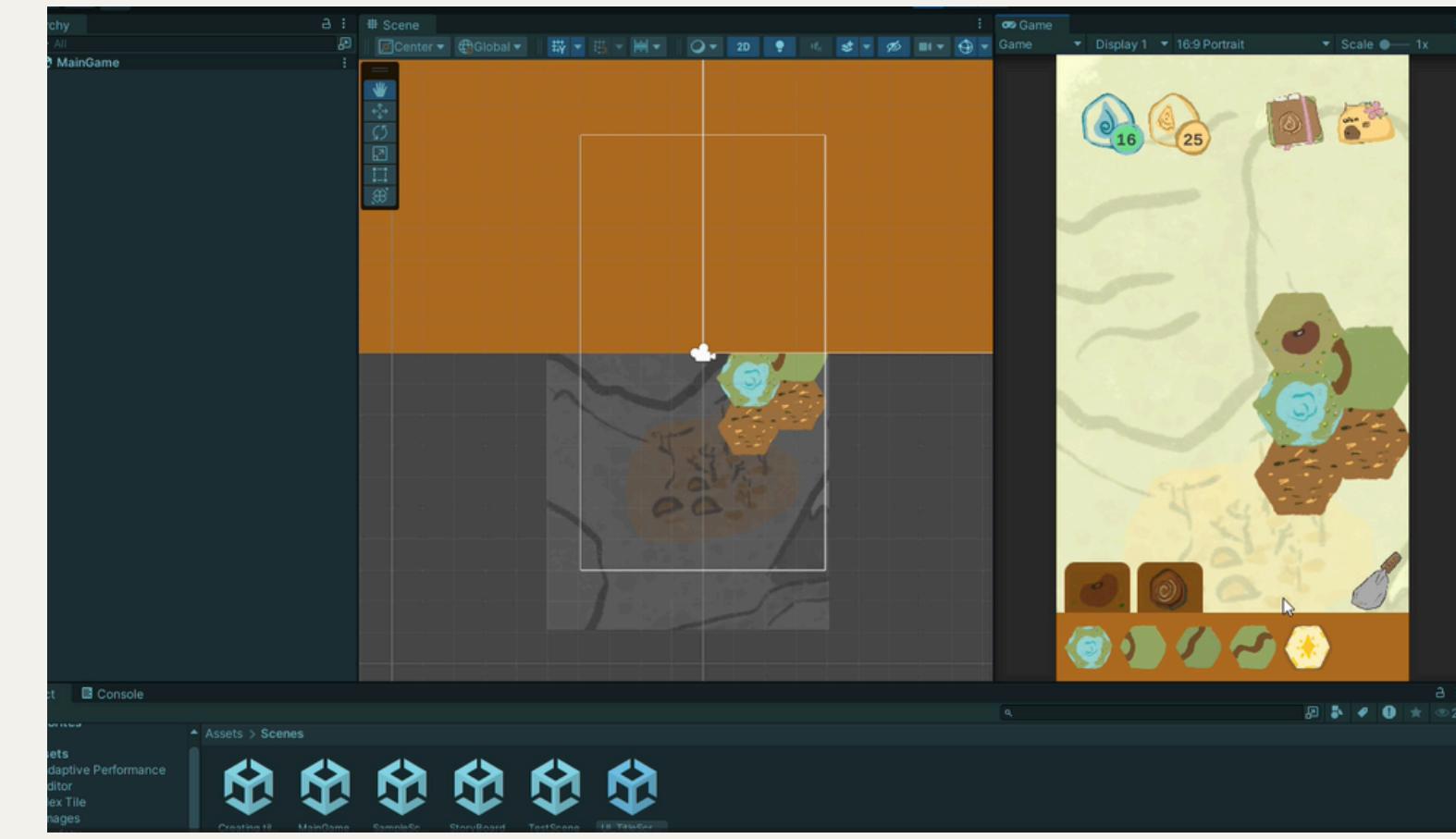
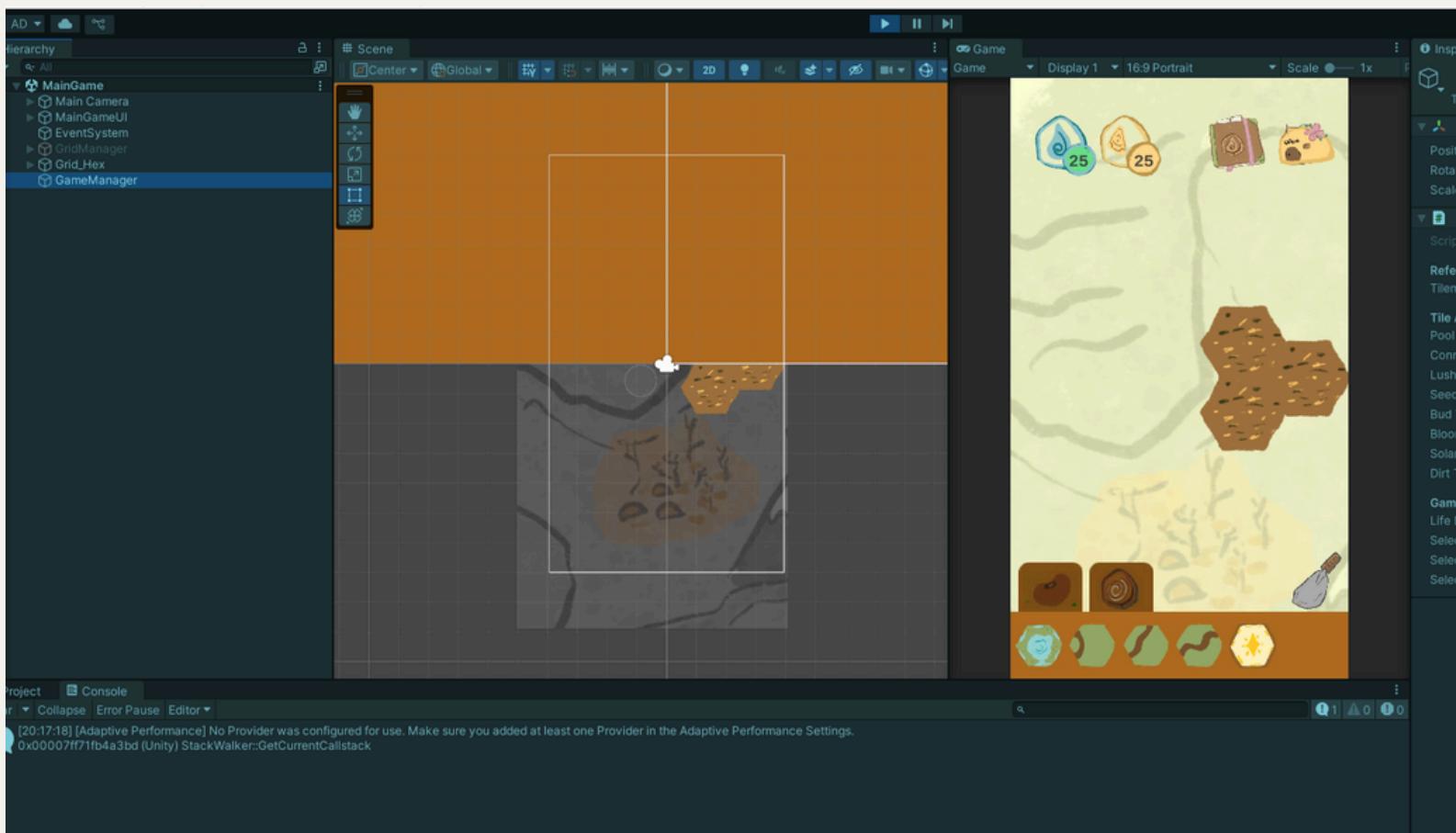
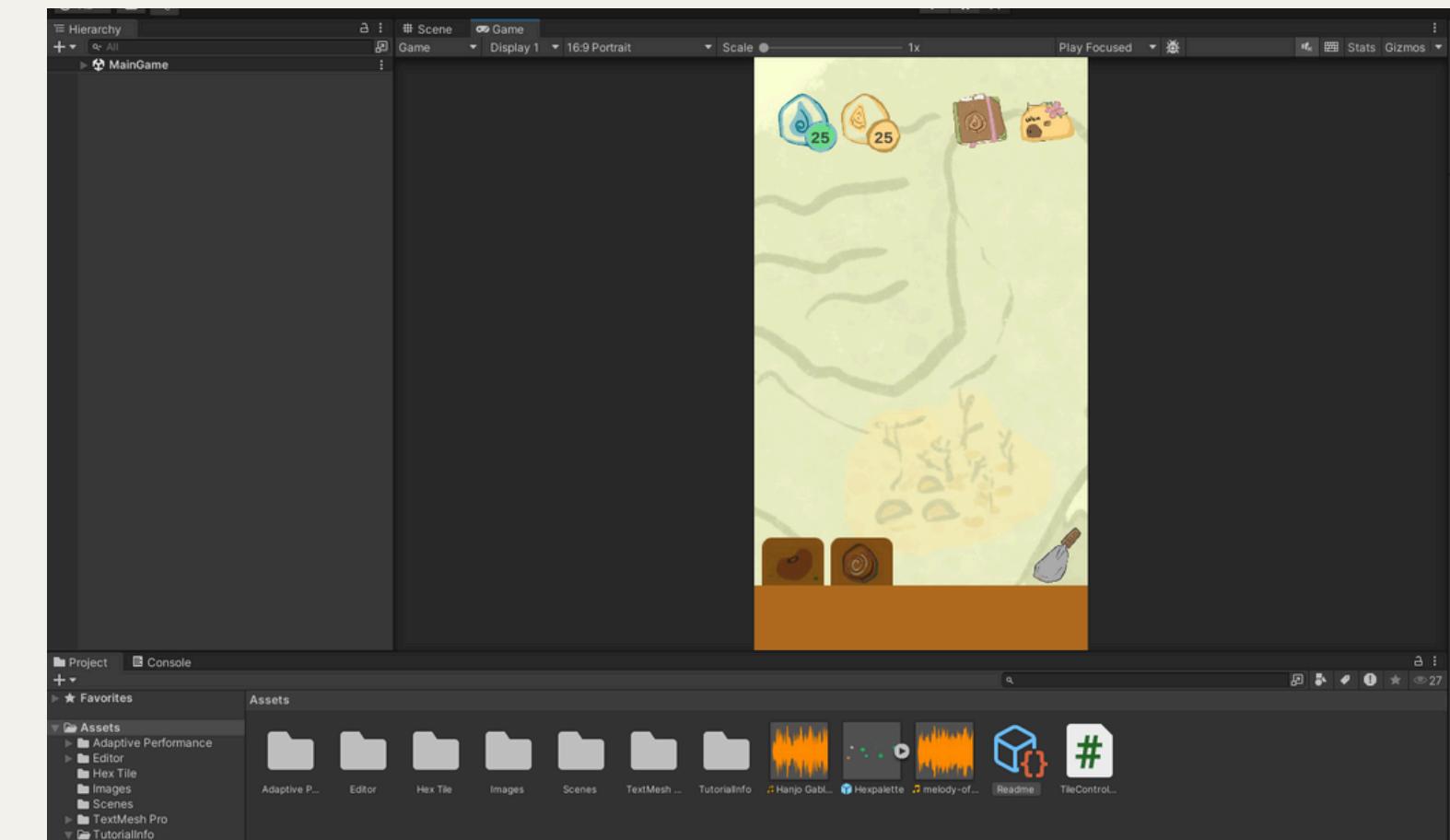
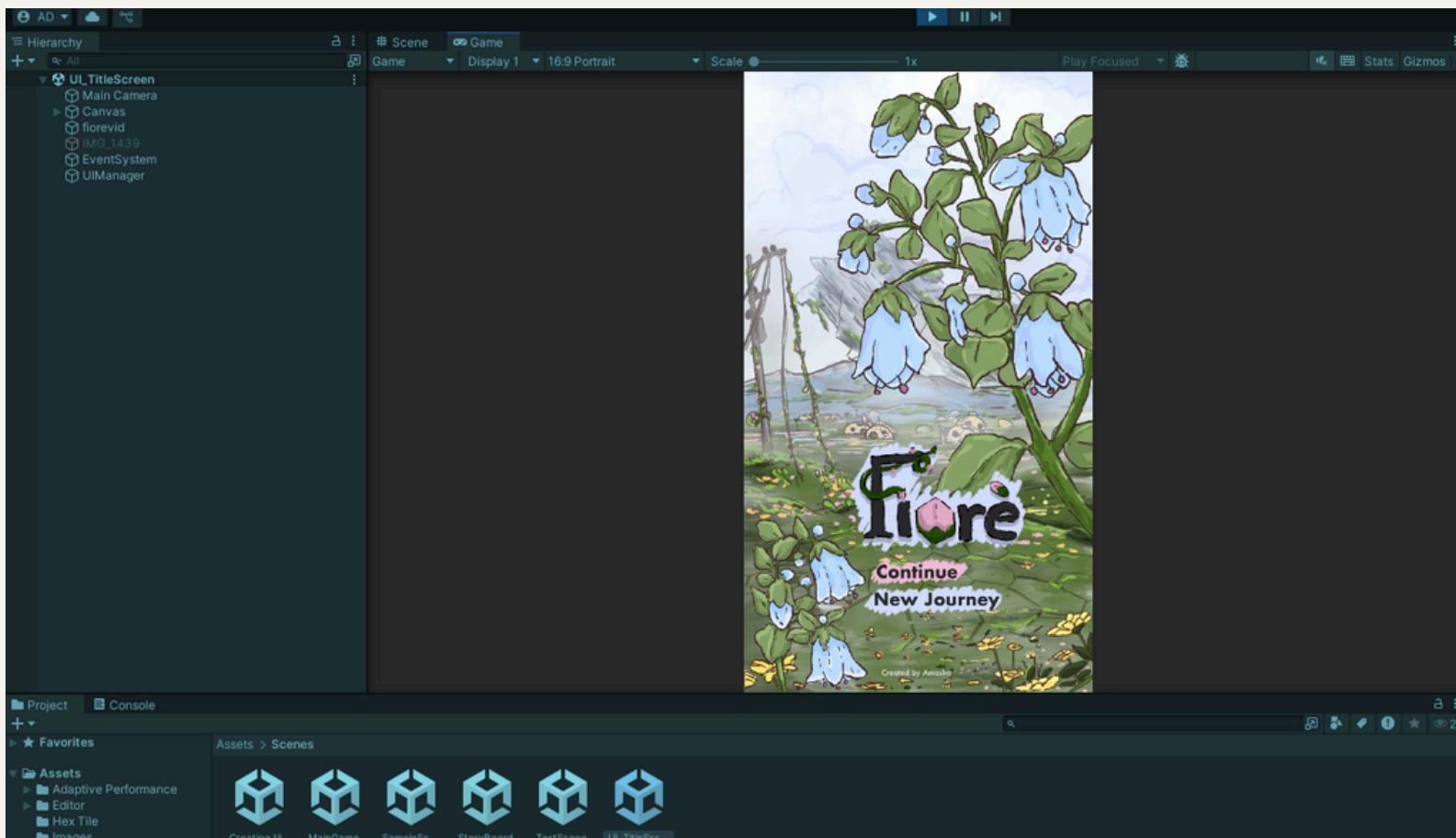
**PROTOTYPE**

# UNITY PROTOTYPE

- Prototyped use of Hex tilemaps in unity
- Lifedew consumption and tile unlock mechanic



# UNITY PROTOTYPE



# **FINAL REFLECTIONS**

## **Observations highlight key design challenges:**

- Systems-first design necessitated regular checks for meaningful narrative integration.
- Gradual world discovery through a journal enhanced immersion compared to traditional level selection.
- Life-dew was designed with both functional and thematic value, anchoring mechanics effectively.
- Maintaining readable yet expressive tile states was a visual challenge, particularly with whimsical art. Balancing slow-paced gameplay while providing meaningful progression required careful tuning of economy and unlock timing.

## **Key insights:**

- Embedding progression in narrative artifacts for a cleaner UI and emotional engagement.
- Using a modular system to allow organic expansion without changing core rules.
- Teaching through consequences to foster player intuition instead of forced tutorials.
- Creating multi-purpose elements to enhance interconnectedness and purpose.

Designing with restraint increases player anticipation and perceived rewards.





“Thank you for reviewing Fiorè.  
I hope it left a gentle mark.”

QUESTIONS?



fiorè