**Project Bloom: A Quest for Home**

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# Game Overview

### Target Learning Objective (LO)

* MS-ESS2.D-1
* [MS-ESS2.D-1 Concept Document](https://drive.google.com/file/d/1p5Yk3JNJUejWAimRI4LFcppuIQZPLdJZ/view)

### Demographics - Target Audience

* Ages 11-14 (Middle School)

### Genre / Theme / Setting

* Village Management Sim – The player is tasked to maintain a healthy environment for a few frogs within an area.
* Frogs – Due to their subtle role of maintaining the environment’s equilibrium. They also indicate the health of an ecosystem: where there are frogs, the natural balance is sustained. Frogs are also known to have a social structure, which fits into the game’s genre.
* Planet Earth – The game will take place across Earth. This will help students associate the various attributes of the climates in some real sense.

### Core Gameplay Summary

* Summarize with bullet points the gameplay, flow, and goals for the game
* Indicate the gameplay mechanic
* Please also summarize how the **learning ties into the gameplay itself**

### Look and Feel

* Simplified map of Earth – Emphasis on land outlines, ocean currents, and mountain heights.
* Earth Map Overlays – The game will simulate the overlay view of the Earth’s attributes. These will be simplified to make it clearer for the students on how they function (e.g., wind motions will mostly follow the prevailing winds).
* Backgrounds – Silhouette/shape of the topography/biome of the region, allow for change of color based on weather condition. Also show the sun/moon for each cycle.
* Weather – The game will show just enough details to indicate the current weather: rain, clouds, fog, etc.
* Structures – Each structure will have a symbol on them to indicate their functionality: energy, water, house. Along with the symbol, any form of state/vitality will also be shown (e.g., water amount, population count).
* Frogs – The frogs will have a palette based on their preferred climate (e.g., green = temperate, tan = desert). To distinguish their role, they will be wearing a hat specific to their work (e.g., engineer = hard hat). Though not very frog-like, they will stand upright to show their actions more clearly. However, they will still do their hopping as they move about.

### Target Platform(s)

* WebGL with iPad support – Since the game is completely mouse driven, there should be no issue with playing the game in any platform that supports mouse or touch input.

# Game Flow

## Part 1 - [Name of this Portion of the Game]

### L.O. Concept(s) Covered

* List the concept(s) covered during this part of the game.

### Summary

Questions to consider:

* Indicate the gameplay goals. This is supposed to be fun, after all!
* What is the flow of the gameplay?
* What is the flow of the academic content?
* How will students/players be held accountable for understanding the academic content?
* Note: it is okay if the game becomes progressively more difficult from a gameplay/academic standpoint. It’s good to challenge the student, as long as it is at the appropriate level for the target age!

### Mechanics

* What are the controls for these physical movements?
* What are the physics of the movement through the game?
* What “skills” will the player need to play this game?
  + Examples: puzzle solving; manage resources; strategy; memory; drag and drop; tap on screen; rearranging pieces; platform jumping; etc.

### Losing Gameplay / Incorrect Concept Understanding

* What happens if a student loses a level or fails a mission / puzzle?
* How do they learn from their mistake(s)?
* If the student loses due to not understanding the academic content, how will the game help them learn from their mistakes?

### Mockups

* Show images of this part of gameplay here. Important items to show would be gameplay with the academic concepts integrated; the “losing gameplay” where students learn from their mistakes; and a good view of the mechanics

## Part 2 - [Name of this Portion of the Game]

### L.O. Concept(s) Covered

### Summary

### Mechanics

### Losing Gameplay / Incorrect Concept Understanding

### Mockups

## Part 3 - [Name of this Portion of the Game]

………

## Etc.

# LO Concept Coverage

### Academic Concepts

* List the concepts from the LO Concept Document that will be addressed in this game.
  + Ask yourself, will the game adequately teach the student this concept? Will the student leave the game with a better understanding of this concept?
  + NOTE: games MUST include at least 5 or ⅔ of the total concepts, whichever is higher. If there are 6 concepts, the game must include 5. If there are 4 concepts, the game must include all 4. If there are 14 concepts, the game must include at least 9.
  + You can just copy and paste the concepts directly from the LO Concept Document
  + Highlight the ones you believe you are covering.

# Legends of Learning Required Content Practices

### Checklist Overview

[Google Doc Reference](https://docs.google.com/document/d/10yED8ZwFXOWjwvroqZxaHn1A6utMDncaFwmyc8dqc-g/edit?usp=sharing)

|  |  |
| --- | --- |
| **ITEM** | **COVERED** |
| Players should learn and be held accountable through gameplay-based problem solving and experience. Players should not be learning primarily through text-based instruction or assessment items. |  |
| Game does not include multiple choice assessment items. |  |
| All instruction is scientifically and mathematically correct. |  |
| Confirm that the game is linked to 2/3 or 5 main concepts of the total, whichever is greater. Confirm that the linked main concepts are correctly covered in the game. |  |
| All on-screen words spelled correctly and grammatically correct. |  |
| Vocabulary and reading level appropriate for the lowest grade level within the target audience and grade band. |  |
| Game does not include material that is inappropriate for school. This includes, but is not limited to: violence, firearms, bombs, knives, daggers, blood, gore, smoking, vaping, drug use, any mind-altering substances, alcohol, harm to human-looking characters, harm to animals, insinuating killing or death, ideally they’re always chased away rather than eliminated. If there is conflict with an enemy in game, they are chased away rather than eliminated or killed. (There can be death if it is in the context of the learning objective – ex. The food chain) If you have any questions about this policy and your game, please ask us. |  |
| Game avoids any stereotypic presentation of gender, race, region, or culture. |  |
| Characters are diverse in gender, race, culture, and ability. |  |
| Players cannot simply click through and complete the game without learning. Players should be prompted to re-learn and re-do portions of the game where they had poor results due to less understanding of the academic material. Avoid the word “FAIL” if the student incorrectly understands academic material. |  |
| Academic problems are not consistently repeated. Players are presented with different problems to solve. |  |
| Gameplay mechanic reinforces the academic material, rather than being completely separate from instruction. I.e, there is a focus on academic reasoning rather than concept / question repetition. |  |
| Gameplay is intuitive and a player in the target age range can navigate the game and beat it with enough effort. |  |
| Games should be fun and interesting, designed as non-educational games are designed, with design to encourage players to keep playing. |  |
| Game is between 5 and 25 minutes in duration. |  |
| All text must be large, clear and concise with font sizes that can be read on a small Chromebook screen. |  |

### Connection Between Gameplay and Learning

* Expand on how the concepts are learned *as part of the gameplay mechanic.*
* Show mockups.

### Role of Text in Learning

* Describe the role of text in learning the academic material
  + NOTE FOR DEV: Stop yourself and rethink gameplay if the answer is that text is the primary mode the student absorbs information about the academic material.

### Characters - Diversity

* Frogs – The frogs will come with various colors to indicate their preferred climate. This is merely used as a way to ascertain where to bring these frogs on Earth.
* The ever-reassuring robot will be wearing a frog headdress to fit in with the rest of the cast.

# Technical

### Development Hardware/Software

* All development will be done in Windows 10.
* iPad 6 for tablet testing.
* Browsers: Firefox, Edge, Chrome, and Safari (via iPad 6)
* Game Engine: Unity 2020.4.40f1+

### Asset Summary

* Earth map – derive from a satellite image, simplify to reduce the noise and add clarity. Each overlay will use a specific sample from a real-world data (also simplified for clarity).
* Some of the assets will be generated within Unity (via model editor or sprite shape) to minimize the project’s file size.
* The game will be delivered via WebGL (targeting desktops and touchpads).

### Music and Sounds

* Branching out to another source of public domain music: [Dova-Syndrome](https://dova-s.jp/EN/)
* All sound effects will be acquired via our collection which is comprised of various licenses: purchased or public.

# Art Style

### Mockups

* Show a few examples

# Schedule for Development + Delivery [Optional, but Encouraged]

* You may link to another document / spreadsheet if you like
  + If you do, just make sure viewing permissions are available :)

# Story / Narrative

### Back Story

Space frogs exiled from a far away galaxy, looking for a new home.

### Plot Elements

* Blah