

Black Eden Program

Black Eden Program

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Table of contents

1. [Introduction](#)
 - 1.1. [Scope of the document](#)
 - 1.2. [Elevator pitch](#)
2. [Game overview](#)
 - 2.1. [Game concept](#)
 - 2.2. [Audience](#)
 - 2.3. [Genre](#)
 - 2.4. [Setting](#)
 - 2.5. [Game structure](#)
 - 2.6. [Player](#)
 - 2.7. [Game flow summary](#)
 - 2.8. [Look & Feel](#)
3. [Gameplay](#)
 - 3.1. [Objectives](#)
 - 3.2. [Progression](#)
 - 3.2.1. [Challenge structure](#)
 - 3.3. [Play flow](#)
 - 3.4. [Difficulty](#)
4. [Mechanics](#)
 - 4.1. [Rules](#)
 - 4.2. [Game universe](#)
 - 4.3. [Physics](#)
 - 4.4. [Economy](#)
 - 4.5. [Character movement](#)
 - 4.6. [Player interaction](#)
 - 4.6.1. [Game menus](#)
 - 4.6.2. [Saving](#)
 - 4.6.3. [Game options](#)
 - 4.7. [Assets](#)
5. [Graphics and audio](#)
 - 5.1. [Visual system](#)
 - 5.1.1. [Player camera](#)
 - 5.1.2. [Landscape](#)
 - 5.2. [Interface](#)
 - 5.3. [Audio system](#)
 - 5.3.1. [Game music](#)
 - 5.3.2. [Audio look & feel](#)
6. [Story and narrative](#)
 - 6.1. [Backstory](#)
 - 6.2. [Main plot](#)
 - 6.2.1. [Plot progression](#)
 - 6.3. [Cutscenes](#)
7. [Characters](#)
 - 7.1. [Main characters](#)
 - 7.1.1. [Backstory](#)
 - 7.1.2. [Personality](#)

- 7.1.3. [Appearance](#)
 - 7.1.4. [Abilities](#)
 - 7.1.5. [Relationships](#)
 - 7.2. [Supporting characters](#)
 - 7.3. [Enemies](#)
- 8. [Game world](#)
 - 8.1. [Look & Feel of the world](#)
 - 8.2. [Locations](#)
 - 8.2.1. [Connection to the plot](#)
 - 8.3. [Levels](#)
 - 8.3.1. [Tutorial level](#)
 - 8.3.2. [Main levels](#)
 - 8.3.3. [Optional levels](#)

1. Introduction

1.1. Scope of the document

This Game Design Document (GDD) serves as the central blueprint for the development of Black Eden Program. It outlines the vision, gameplay systems, narrative themes, art direction, technical requirements, and overall structure of the game.

1.2. Elevator pitch

Black Eden Program is a **dystopian sci-fi roguelike** where you awaken in the heart of a ruined research facility, ground zero of a failed genetic experiment meant to save humanity from radiation. Instead, it birthed a world overrun by grotesque mutants, biomechanical horrors, and a planet now hostile to human life.

As a forgotten test subject, your only goal is to **escape**. But as you fight through waves of monstrous creations and explore twisted biomes, you begin to uncover the true purpose of the Black Eden Program and your role in it.

2. Game Overview

2.1. Game concept

Black Eden Program combines **procedural exploration, strategic survival, and risk-reward mutation mechanics** in a tense, immersive roguelike experience.

-**Explore** procedurally generated environments like decaying research hubs, overgrown biotech ruins, and irradiated cityscapes.

-**Scavenge** tools and augmentations from corrupted tech, living biomass, and forgotten relics.

-**Fight** waves of grotesque mutants and rogue AI guardians, with combat that favors careful resource use and smart decisions.

-**Mutate** your body with evolving traits—each with unique abilities and side effects—customizing your run and narrative path.

-**Die and Learn**—every failure uncovers lore and unlocks meta-progression for future attempts.

Objective of the Game

Survive. Escape. Discover.

Your journey takes you through the decaying world outside, each step revealing deeper layers of the Black Eden Program's secrets. The deeper you go, the more the line between salvation and corruption begins to blur.

Will you escape intact—or will you embrace what the world has become?

Emotional Experience – What We Want Players to Feel

- Panic & Tension – Enemies are relentless, resources are scarce, and survival is never guaranteed.
- Curiosity – You *need* to know what happened—and why you're still alive.
- Empowerment & Corruption – With each mutation, you grow stronger... and stranger.
- Loneliness & Dread – The world is dead. You might be the last thing still trying to live.

What Will Players Enjoy?

- Fast, challenging combat with dynamic enemy encounters
- Replayability through procedural level design and evolving AI enemies
- A rich, atmospheric world dripping with horror and mystery
- The thrill of adapting your body with powerful—but unsettling—mutations
- Deep lore hidden behind every run and location

2.2. Audience

- **Fans of hardcore, atmospheric roguelikes and roguelites**
Players who enjoy high-stakes runs, permadeath, and adapting on the fly. Think *Dead Cells*, *Returnal*, or *Darkest Dungeon* players.
- **Survival Horror Enthusiasts**
Those drawn to tension, limited resources, and unsettling worlds (*Resident Evil*, *S.T.A.L.K.E.R.*, *The Callisto Protocol*, *Signalis*).
- **Sci-fi & Body Horror Fans**
Players who love dark science fiction, dystopian futures, and themes of mutation and identity. Audiences into *Scorn*, *Soma*, *The Thing*, or *Akira* will resonate with Black Eden's tone.

2.3. Genre

"Post-Apocalyptic Bullet Hell Roguelike Survivor"

- Auto-attacking or semi-automated combat
- Wave-based survival gameplay
- Roguelike progression with procedural biomes
- Mutation-driven upgrades with a dark sci-fi twist
- Grim, atmospheric tone more akin to horror/sci-fi

2.4. Setting

The game is set in the aftermath of a scientific catastrophe, deep within the **quarantined Exclusion Zones** of a failed global experiment known as the Black Eden Program. What was once a sprawling research complex is now a decaying hellscape—mutated ecosystems, crumbling labs, and overrun industrial zones lost to time and contamination.

You awaken in the **depths of a biotech facility**, a half-dead test subject—alone, weaponless, and surrounded by bio-engineered horrors. Your only choice is to push outward through the **ruins of a broken world**, piecing together what happened and fighting to escape... or evolve.

2.5. World structure

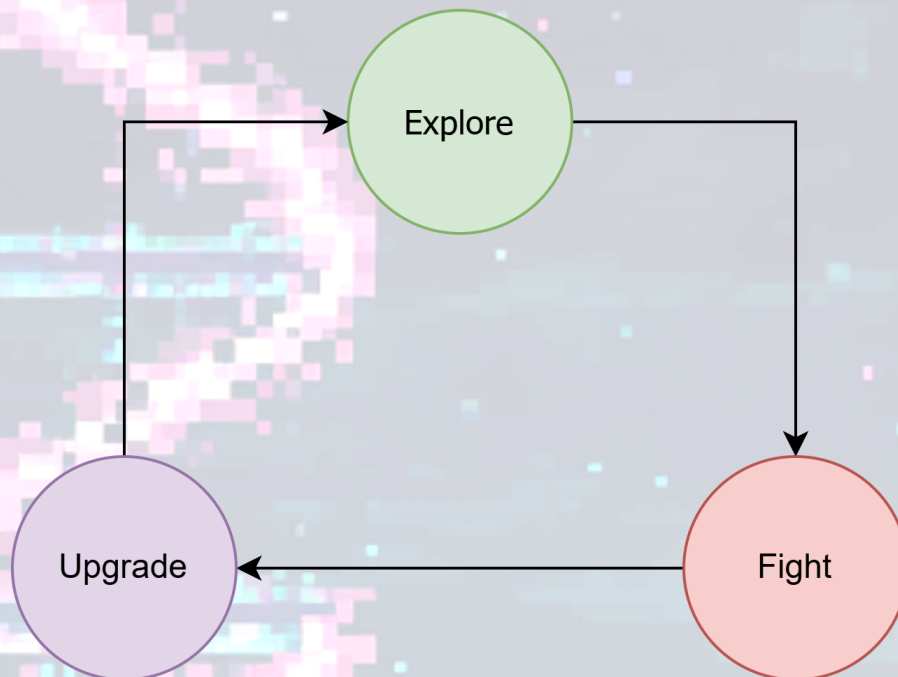
Semi-Linear Biome Progression with Randomization

The game is not open world, but instead follows a **biome-to-biome structure** with **procedurally generated levels**. Each run starts in a specific zone (e.g., the lab where you awaken), and you progress through increasingly hostile environments—each with their own monsters, hazards, and visual themes.

2.6. Player

In this single player experience you are a **biotech experiment** designed to survive the radiation that has turned the world into a wasteland. However, the experiment failed, leading to horrific mutations in both you and the world around you.

2.7. Core loop



2.8. Look & Feel

Atmospheric & Dystopian Visuals

- **Gritty, Industrial** – The world is a harsh, decaying reflection of human ambition. Think **weathered concrete**, **rusted metal**, and **flickering fluorescent lights**. Spaces feel oppressive, claustrophobic, and decayed.
- **Dark Sci-Fi Horror** – Much like *Metro 2033* and *S.T.A.L.K.E.R.*, the setting blends **sci-fi horror** and **biological horror**. The technology feels worn and broken down, while mutated flora and fauna make everything seem foreign and threatening.
- **Muted, Desaturated Colors** – The color palette is grim, focusing on **earthy tones**, **greys**, and **dirty browns**, with occasional harsh contrasts from glowing lights or bioluminescent mutations.
 - **Neon Green or Sickly Blue Accents** for radioactive zones, mutation effects, or glowing bio-tech.

3. Gameplay

3.1. Objectives

Your primary objective is to survive and adapt to an increasingly hostile, mutated world. As you progress, you're constantly battling against waves of enemies, managing resources, and making strategic decisions on whether to fight, flee, or evolve. Every run is about managing your survival, with elements of permadeath, procedural generation, and permanent progression.

While the ultimate goal is survival, the game also intertwines a mystery-driven narrative where you uncover the dark secrets of the Black Eden Program.

3.2. Progression

Leveling Up: Defeating enemies and completing objectives grants XP. On level-up, you choose from randomized upgrade options:

New abilities (e.g., Acid Spit, Telekinetic Slam)

Passive boosts (e.g., +15% movement speed, ammo drops heal you)

Mutation choices that affect your playstyle and physical form

Loot Drops: Weapons, gadgets, and resources are found in the world or dropped by enemies. Some gear is temporary (lost on death), while others are extracted and kept permanently (see below).

Biomes = Checkpoints: Completing certain biomes may allow limited extraction—letting you bank loot, resources, or lore to advance meta progression.

3.3. Difficulty

Difficulty increases the farther you go into the game and the longer the round time is.

4. Mechanics

Combat Mechanics

1. Auto-Attack System

Weapons fire automatically, each with unique attack patterns and intervals.

Players don't directly aim—success comes from movement, positioning, and weapon synergies.

Example weapons:

Electric Mutation: Attacks left and right at regular intervals. "Lightning"

Molotov: Thrown outwards and leaves a burning ground spot for X amount of seconds.

Throwing Knife: Flies in an outward circle.

Gas: Emits a damaging aura around the player.

2. Passive and Active Items

Each run, players collect weapons (active) and passive items that improve them.

Passive items affect stats (attack speed, cooldown, damage radius, etc.)

3. Enemy Waves & Scaling

Enemies spawn in escalating waves, increasing in number, type, and strength over time.

Each run has time-based progression, with mini-bosses, elite enemies, and eventual death if you survive too long.

4. Hitboxes & Damage

Enemies damage you by touching your hitbox.

Players typically have limited HP, and healing is rare unless specifically built into a run.

Most weapons are area-of-effect or pattern-based, making movement and spacing essential.

4.1. Economy

Primary currency is "XXXXX"

XXXXX Acquisition:

You earn XXXXX by defeating enemies, collecting XXXXX bags, and completing stages.

Certain character abilities can also increase XXXXX income.

Some biomes and locations offer bonuses to XXXXX gain.

What XXXXX is Used For:

Unlocking Starter Mutation Characters: New characters require gold to unlock, and some characters can be quite expensive.

Upgrading Weapons: You can use XXXXX to upgrade your weapons to increase their power and effectiveness.

Purchasing Items: XXXXX can be used to purchase items like potions, charms, and other consumables that can aid you in your runs.

Unlocking Secrets: Some special rogue humans try to transverse and survive the wasteland just like you and will offer unique items/upgrades.

4.2. Character movement

Left Stick / WASD / Arrow Keys / – Move your character

The character is in constant motion; this is your main input.

4.3. Player interaction

The player interacts with the world in that they are trying to kill whatever enemy they see.

Picking up dropped XP and loot is how a player progresses. At times there will be quest dialog a player interacts with as well as random vendors in the game world.

4.3.1. Game menus

5 Main Selections on Home Screen

Start Button

Character Selection

Single Run Based Powerups

Permanent Upgrades

Settings

4.3.2. Saving

Progress is made through playing multiple times, XXXXX currency is accumulated to be used on upgrades and quest progression will be left off from the furthest you have made it on any previous run. This basically means the game auto saves as you play.

4.3.3. Game options

Character Selection, Weapon Selection, Permanent Upgrades, Game Settings

5. Graphics and audio

5.1. Visual system

2D 16-Bit Visuals

5.1.1. Player camera

Top-down (bird's-eye view): The player is seen from directly above.

Centered follow camera: The camera follows the player and stays centered on them at all times.

The surrounding world scrolls infinitely (or very large) as the player moves around.

5.1.2. Landscape

Biomes change in the background as the player moves around.

5.2. Interface

Interface will be minimal and show vital info.

Life, Upgrades, XXXXX amount, time in round

5.3. Audio system

Game Music, Power Up/Level Up

Sound Ambient tracks laced with dread: distant breathing, wet squelches, hums of failed machines.

Sudden shrieks, distortion warps, Geiger counter crackles.

Music ramps up only during boss encounters or major narrative reveals.

5.3.1. Game music

Similar to DOOM have a nice actiony soundtrack to where you are just killing enemies, and have suspenseful moments throughout downtime

6. Story and narrative

6.1. Backstory

Black Eden Program Inception, nuclear war imminent wanted to create humans immune to its fallout effects

6.2. Main plot

In the aftermath of a global nuclear catastrophe, the remnants of humanity pinned their hopes on the Black Eden Program—a secretive initiative aimed at engineering humans who could survive extreme radiation and rebuild civilization. But something went horribly wrong.

You awaken alone in the ruins of Facility 9, a sprawling underground research complex. Your memory is fractured. You don't know who you are—only that the world above has turned into a mutated hellscape, and the facility below is crawling with abominations. Something happened here. Something unnatural.

As you fight to survive and escape, you begin to uncover the truth: Black Eden was never about survival—it was about control, evolution, and sacrifice.

6.2.1. Plot progression

As you progress throughout the world you uncover the real reason for the Black Eden Program and how you are specifically involved in all of it.

7. Characters

7.1. Main characters

Will have multiple characters in the game. Each with a different backstory and different starting stats

7.2. Supporting characters

Will have several rogue characters you run along into on the way to figure out what happened. Some will provide quests, others good offers to level up/power up skills/abilities.

7.3. Enemies

Mutants, rogue scientists, and cults obsessed with the program's "divine evolution."

8. Game world

8.1. Look & Feel of the world

Tone:

Grim, oppressive, decayed—everything is coated in the aftermath of humanity's failure. A world that's trying to heal, but all that's growing is twisted. Players should feel like they're trespassing in a place that should have stayed buried.

Palette:

Muted earth tones, rusted metal, moldy greens, desaturated reds. Punctuated by harsh synthetic lighting—fluorescent flickers, red emergency strobes, glowing radiation pools. Bioluminescence in later stages—alien but beautiful, like a corrupted version of nature trying to reclaim the land.

Effects & Filters:

Volumetric fog, low ambient lighting. CRT-like overlays, scanlines, static distortion, maybe even VHS burn-ins for storytelling moments. Subtle film grain, weathered UI elements, and glitchy effects when mutation levels increase.

8.2. Locations

1. Facility 9 (Starting Biome)

- Industrial labs, shattered observation rooms, blood-smeared test pods.
- Loose cables sparking, terminals glowing with corrupted logs.
- Echoing screams from faraway corridors.

2. The Sprawl (Surface Ruins)

- Abandoned city blocks under ash clouds.
- Burned-out vehicles, collapsed buildings turned into enemy hives.
- Mutant graffiti, propaganda posters warning against “deviation.”

3. The Garden (Bio-Dome)

- Once a controlled habitat—now overgrown with mutated flora.
- Plant life is *too alive*—pulsing, watching.
- Colors are hyper-saturated and wrong.

4. The Core (Final Biome)

- Cyber-organic blend—cold steel twisted with flesh.
- Giant organic processors, whispering in dead languages.
- Reality breaks down here—gravity bends, glitches flicker.