Re:Build Nature

"Re:Build Nature" is a cooperative board game where players work together to restore a post-apocalyptic world. In this cozy and hopeful setting, players, through the power of friendship, transmute garbage into beautiful ecosystems. The game emphasizes ecosystem building and positive action, making sure optimism affects all the core gameplay mechanics. The goal is to have fun as a group and create a unique map as a reward for the players to look back upon.

1. High Concept Document

1.1. Key Details

A brief overview of the game

1.1.1. Game Title

Re:Build Nature

1.1.2. Author

Herschel Pawar

1.1.3. Target Hardware

Board Game (requirement)

1.1.4. Genre

Cooperative Board Game, Three Player Game

1.1.5. Theme

Nature restoration and optimism

1.1.5.1. Optimism

How's optimism used in the game?

Optimism is an important part of the gameplay; it influences nearly every game mechanic, and it's not merely a goal the players need to complete to 100%. The decisions made in the game are reflected in the real world, as the players need to draw on the map to perform actions. This acts as physical evidence for the time they spent together, and hopefully, in dire times, they will look back at the map they created and get hope.

1.1.6. Core Gameplay Idea

Three players come together to transform the garbage-filled map into scenic beauty by physically drawing on the map. They roll to gain action points, and the number of action points is determined by the current optimism level.

1.2. High Concept/Synopsis

Short statement about the game

"Re:Build Nature" is a cozy cooperative board game set in a post-apocalyptic world. Three robots want to transmute garbage into a beautiful landscape. Specialize your robots to transmute tough garbage and end up with a beautiful map.

1.3. Features

"Hooks" for the game

- Cooperative Gameplay: Cooperative game with 3 players
- Nature Restoration: Transmute garbage into a beautiful ecosystem
- Post-Apocalyptic Setting: Set in a world where robots have gained sentience
- Create a Map: Draw on the tiles to transmute garbage
- Cats!

1.4. Player Motivation

Why is the player playing the game?

Players want to relax and play with their friends. Once the game finishes, they end up with a map as physical, everlasting proof of their gameplay.

1.5. Target Audience

Who is the game aimed at?

People interested in relaxing with their friends.

1.6. Competition

Examples of similar products and comments on how it's different

1.6.1. Terra Nil

> Terra Nil is an intricate environmental strategy game about transforming a barren wasteland into a thriving, balanced ecosystem. Bring life back to a lifeless world by purifying soil, cleaning oceans, planting trees, and reintroducing wildlife, then leave without a trace.
>
> — Official Steam Page

"Re:Build Nature" differentiates itself from "Terra Nil" by offering a multiplayer experience with a strong emphasis on optimism. While "Re:Build Nature" also has animals and plants, it's up to the player's imagination on how they look. Also, due to the presence of action cards and cat tokens, the players need to strategize on what to do.

1.7. Unique Selling Points

What makes the game idea unique?

- Physical evidence of completed game.
- Relaxing gameplay with friends.

1.8. Design Goals

The important design aspects of your game that we want to instill

- Create a cooperative experience with positive vibes
- Relax with friends
- Have enough variety to be replayable
- Act as a team-building exercise
- Create a tangible sense of achievement with the completed map
- Encourage homebrew and customization through a modular design
- No fail state

1.9. Design non-goals

Design aspects that we're explicitly trying to avoid

- Mechanics which introduce competition between players
- Mentally intensive game that requires juggling resources
- Punishing gameplay
- Extremely random gameplay
- Long gameplay loops

2. Gameplay Loop

2.1. Pre-game

Players need to distribute 3 skill points (SPs) between the following skills.

- Water
- Plant
- Animal

Optimism level starts at 0%.

Design Note: Starting with a weak and generalized skill set, and then eventually specializing.

Recommendation: The players can attach their player cards to the outside of the grid, and that would be their starting position.

2.2. Action Point Generation

At the start of the round, all players roll a ten-sided dice (1D10) which generates action points (APs) according Equation 1.

$$\mathrm{AP} = 1 + \left\lfloor \text{Bias (Equation 2)} * \frac{\text{dice roll}}{10} \right\rfloor \qquad \sim \text{Eq 1}$$

$$\text{Bias} = \begin{cases} \{0\} & \text{if } \text{Optimism} < 10\% \\ [0,2] & \text{if } 10\% \le \text{Optimism} < 20\% \\ [1,2] & \text{if } 20\% \le \text{Optimism} < 30\% \\ [1,3] & \text{if } 30\% \le \text{Optimism} < 40\% \\ [1,4] & \text{if } 40\% \le \text{Optimism} < 50\% \\ [2,4] & \text{if } 50\% \le \text{Optimism} < 75\% \\ [3,4] & \text{if } 75\% \le \text{Optimism} < 90\% \\ \{4\} & \text{if } 90\% \le \text{Optimism} < 95\% \\ \{5\} & \text{if } 95\% \le \text{Optimism} \end{cases} \sim \text{Eq } 2$$

Design Note: The gameplay accelerates towards the end as optimism is high. This feels similar to real life, where, without optimism, there's no hope, and without hope, the energy level is extremely low; thus, people are unable to perform actions and do stuff.

Minimum Optimism Level	0%	10%	10%	10%	20%	20%	30%	30%	30%	40%	40%	40%	40%	50%	50%	50%	75%	75%	90%	95%	100%
Max Dice Value	6	1	3	6	2	6	1	3	6	1	2	4	6	1	3	6	2	6	6	6	6
Action Points	1	1	2	3	2	3	2	3	4	2	3	4	5	3	4	5	4	5	5	6	6

Table 1: Look Up Table for AP calculation

2.3. Players' Move

The players strategize, if they need to move to some tile, they move towards the tile, if they need to perform actions, they spend AP to either refine resources or draw action cards. If they want to trade SP, they can spend AP to do so.

Refer to the rules (Section 3.2) to see what players can do with AP.

Design Note: This gives freedom to the players. This way, if they get a negative action card and need to react to it, they're able to.

There is no fixed order that the players have to follow. The players are free to spend AP in any order they want. This phase ends once all the players have used their AP. APs don't carry over, use it, or lose it.

2.4. Cat Token Related Actions

The players have a chance to place a cat on the hex they're currently in. The players roll a six-sided dice, which will decide if they can place a cat. The chance is calculated using Equation 3. Only one roll per round.

$$\text{Success?} = \begin{cases} \text{Yes} & \text{if } \left\lfloor \frac{\text{dice roll}}{6} * 100 \right\rfloor \le \text{Optimism} \\ \text{No} & \text{otherwise} \end{cases} \sim \text{Eq } 3$$

Design Note: I love cats; they make everything better for me. That's why cat tokens are being used to amplify the positive action cards.

dice roll	1	2	3	4	5	6
minimum Optimism	16	33	50	66	83	100

Table 2: Look Up Table for success calculation

2.5. Round Over

Players get 1 additional skill point at the following optimism thresholds

1. 25%
1. 50%
1. 75%
1. 100%

Design Note: Trying to mimic the process of specialization in real life

Go to Action Point Generation

2.6. Game Over

The game is over either when the players are satisfied with the map or all the garbage has been refined into resources

Design Note: The goal is to have fun

3. Rules of the game

3.1. Gaining Optimism

- 3% for visiting hex with cat
- 3% for placing cat
- 2% for transmuting all the garbage in a hex
- 1% for trading
- Drawing action cards
  - Positive action cards give +3%
  - Negative action cards give –2%
  - Avoiding negative action cards give +1%

3.2. Using AP

- Draw an Action Card
- Travel to another hex
- Transmute garbage into resources
- Save the action card for later
- Trade skill points

3.3. Positive Action Cards

The player decides when and where to use the positive action card. The action card is applied to the hex they're currently standing on.

3.4. Negative Action Cards

The negative effects of the action card are immediately evoked on the hex the player is in. You can roll to avoid the negative effect. Success follows Equation 3.

Design Note: Rolling to avoid is being used to mimic the feeling that negative outcomes affect you less when you're hopeful and optimistic.

3.5. Trading Skill Points

The players can trade skill points if and only if they're in the same hex, and the skill category is same.

For example, if `A` has $\{1, 2, 2(x)\}$ and `B` has $\{0(y), 2, 3\}$, `A` can't give x and turn it into y.

Invalid Trade	`A` -> $\{1, 2, 1(-1)\}$ and `B` -> $\{1(+1), 2, 3\}$
Valid Trade	`A` -> $\{1, 2, 1(-1)\}$ and `B` -> $\{1, 2, 4(+1)\}$

3.6. Cat Token

Cat tokens can only be placed in the current hex, and they can't be moved. There is no max cat per hex; however, the maximum number of cats per board is calculated using Equation 4.

$$\text{Max number of cats per board} = \lfloor \text{number of hexes in the map} * 1.5 \rfloor \qquad \sim \text{Eq } 4$$

Length	3 (standard)	4	5
Hexes	8	23	46
Cats	12	34	69

Table 3: Look Up Table for calculating max number of cats

Unless otherwise stated, the cat modifiers only apply if the action card is used in a hex with a cat token. The cat modifiers are applied for each cat token in the hex.

3.7. Corruption

The corruption level is randomized on each tile. Corruption level determines the minimum skill level required to transmute the garbage. Players need to roll a six-sided dice (1D6) for the corruption level for each resource (that is, water, plant, and animal). For example, Level three corruption requires a minimum of level three skill. Rolling to check for corruption level doesn't consume AP. Corruption doesn't spread.

Design Note: Corruption level exists as a skill level check; hopefully this will encourage players to specialize their AP and also increase optimism level.

The players can only check for corruption level on the hex they're standing on.

3.8. Garbage

There are three garbage per hex. Transmuting one garbage consumes one AP. The resources stack multiplicatively and can spill into other tiles depending on the stacking level.

1 stack can spill into 1 other hex, decided by the player
2 stack can spill into 3 hexes, decided by the player
3 stack can spill into all neighbors

Some resources have requirements.

- `Water`: none
- `Plant`: require `Water`
- `Animal`: require `Water` and `Plant`

4. Visualizations

Items required:

- Pencils
- Crayons
- Erasers
- Glue

Design Note: These are just suggestions; use your creativity!

Anything to enhance the tiles!

4.1. Player Card

The players can draw whatever they want as their player character inside a hexagon.

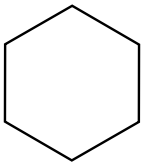

Figure 1: Outline for the hexagon where the players can create their character and write their final stats.

4.2. Board

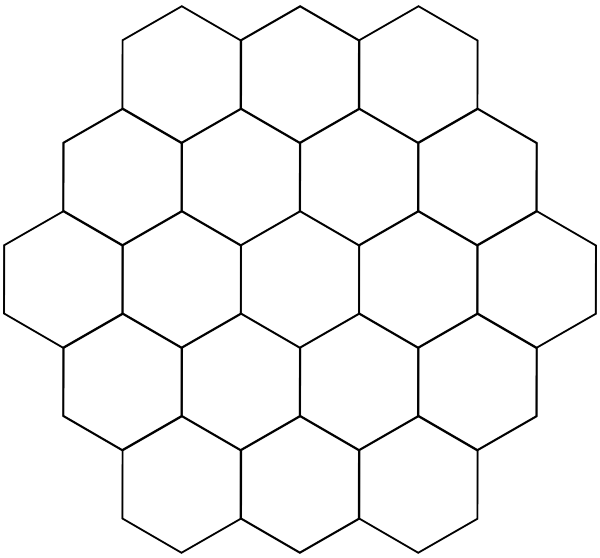

Figure 2: Example Hex Grid of length 3 (standard)

Design Note: Hexagons are bestagons! :3

The hexagon can then be attached to the grid, so all the player cards are in the same place.

4.3. Cat Token

Draw a cat and then cut around the cat, so there is minimal paper, and then glue it on the grid.

Design Note: Small fun moments to look back at and laugh.

4.4. Cards

4.4.1. Positive Action Cards

Effect	Cat Modifier
+1 `Water` to all	+1 `Animal`
+1 `Plant` to all	+1 `Water`
+1 `Animal` to all	+1 `Plant`
temporary +1 to all skills to all	temporary +1 skill point
+1 AP to spend in current round	+1 AP next round
temporary +10% optimism	permanent +1% optimism
skip the next negative card	permanent +5% optimism

4.4.2. Negative Action Cards

Effect	Cat Modifier
–1 `Water`	adds +1 garbage
–1 `Plant`	adds +1 garbage
–1 `Animal`	adds +1 garbage
temporary –1 to all skills	ignore one of the –1
–1 AP	+1% optimism
can't participate next round	+1 AP
lose one of your stashed card	doubles cat token effectiveness this round

5. A report of testing the game

6. A description of an interesting and memorable moment

7. Conclusion?

8. Glossary

- **Action Points (AP)** Energy system for the game.
- **Skill Points (SP)** Points allocated to skills that determine if the player can transmute garbage or not.
- **Optimism** A percentage based value that influences various game mechanics (not too dissimilar to luck.).
- **Garbage** Raw materials that can be transmuted into resources.
- **Raw resources** See: Garbage
- **Resources** The refined materials created from garbage. Limited to `Water`, `Plant`, and `Animal` in the base game.
- **Corruption** The measurement of difficulty required to transmute garbage into a resource.
- **Corruption Level** The minimum skill level required to transmute garbage into a particular resource.
- **Hex** A single tile on the board.
- **Cat Token** A token that provides bonuses when action cards are used on a hex.
- **Action Card** Cards that provide special actions or effects, both positive, and negative.
- **Transmute** The process of converting garbage into resources.

9. Analytic exercise

10. Acknowledgement

in no particular order

- Addy (DOS)
- Ashutosh
- Divyesh
- Emý
- Lucrious
- nottoph
- PerForkOp

11. Major Inspirations

- Terra Nil
- Wall-E
- “Terra Nil Claims It's A Reverse Citybuilder. It Isn't.” — Adam Millard - The Architect of Games
  Link to the video: https://www.youtube.com/watch?v=WKTvUrbMlrA
- “This Psychological Trick Makes Rewards Backfire” — Game Maker's Toolkit
  Link to the video: https://www.youtube.com/watch?v=1ypOUn6rThM