

# Re:Build Nature — Creative Exercise (WC: 2285)

## Task A — Creative exercise: Design a board or card game that deals with the theme “optimism”

*Design and document a board game (non-digital) or a card game (non-digital) that deals with the theme “optimism” which you are free to interpret in the way you find most interesting. The target audience is adults, and if you utilize dice, avoid worn-out game mechanics such as moving around a game board according to dice throws. The game documentation should include the rules of the game, visualizations of the board, pieces, tokens, and cards. You must introduce ALL THE ELEMENTS THAT ARE NEEDED TO PLAY THE GAME. In the documentation, include a statement explaining how you used the theme “optimism”. Note that the theme should be weaved into the game design, e.g., the rule system, so that it is a central part of the game and not just a visual layer or merely an aspect of a backstory.*

*In addition to the game rules and visualizations of the other elements of the game, this file should include:*

- 1. **A report of testing the game**, explanations of what you learned during the test, and how you would fix the problems observed. If it is difficult for you to organize test sessions in person with others, you can use digital tools to test your game online (e.g., Tabletop Simulator, <https://tabletopia.com/>), make a one-player game, or simulate a multiplayer game by yourself.*
- 2. **A description of an interesting and memorable moment** in the game. Typically, such moments involve strong emotions such as surprisal, awe, regret, or pride. Can your players experience something that they think back to and want to share and discuss with others?*

*Evaluation criteria:*

- 1. Ability to design a game system*
- 2. Execution of the design*
- 3. Consistency of the design*
- 4. Ability to organize and communicate ideas clearly and concisely*

## Contents

1. High Concept Document .....	5
1.1. Key Details .....	5
1.1.1. Game Title .....	5
1.1.2. Author .....	5
1.1.3. Target Hardware .....	5
1.1.4. Genre .....	5
1.1.5. Theme .....	5
1.1.5.1. Optimism .....	5
1.1.6. Core Gameplay Idea .....	5
1.2. High Concept/Synopsis .....	5
1.3. Features .....	5
1.4. Player Motivation .....	5
1.5. Target Audience .....	5
1.6. Competition .....	6
1.6.1. Terra Nil .....	6
1.7. Unique Selling Points .....	6
1.8. Design Goals .....	6

1.9. Design non-goals .....	6
2. Gameplay Loop .....	6
2.1. Pre-game .....	6
2.2. Action Point Generation .....	6
2.3. Players' Move .....	7
2.4. Cat Token Related Actions .....	7
2.5. Round Over .....	7
2.6. Game Over .....	8
3. Rules of the game .....	8
3.1. Gaining Optimism .....	8
3.2. Using AP .....	8
3.3. Positive Action Cards .....	8
3.4. Negative Action Cards .....	8
3.5. Trading Skill Points .....	8
3.6. Cat Token .....	8
3.7. Corruption .....	8
3.8. Garbage .....	9
4. Visualizations .....	9
4.1. Board .....	9
4.2. Player Card .....	9
4.3. Cat Token .....	9
4.4. Cards .....	10
4.4.1. Positive Action Cards .....	10
4.4.2. Negative Action Cards .....	10
5. A report of testing the game .....	10
6. A description of an interesting and memorable moment .....	10
7. Conclusion .....	11
8. Glossary .....	11

## # Checklist

- [x] players: 3
- [x] hexgrid (hexes are cute)
- [x] robots ~~with wide abilities,~~ which they late rspecialize
- [x] optimism level influences the whole game (like luck)
- [x] action cards: positive and negative
- [x] dice roll to avoid negative action, chance dependent on optimism level
- [x] ability to place a cat after round ends, chance dependent on optimism level
- [x] no max cats per hex, but max numbere of cats = (number of hexes \* 1.5).floor()
- [x] 1 round = all players using their action points
- [x] players get action points at the start of round, each rolls a d10
- [x] number of cats amplify the action cards, effect written on action card
- [x] corruption levels in each tile
- [x] corruption: 1D6 per resource, higher skill level required to work with resource
- [x] corruption does not spread, only acts as a gatekeeper for skill levels
- [x] 1 corruption level = 1 skill level
- [x] skill level trading between players
- [x] trading can only be done when players are in the same hex
- [x] 1 trade per AP
- [x] 1 skill level per trade
- [x] each player starts with 3 skill points; needs to distribute in {water, plant, animal}
- [x] 25%, 50%, 75%, 100% optimism give 1 more point to each player to specialize
- [x] action points, number depends on optimism level 1 + chance, eg: 0 to 1 move if 10% optimism, 0 to 2 moves if 20% optimism, 1 to 2 moves if 30% optimism, 1 to 3 moves if 40% optimism, 1 to 4 moves if 50% optimism, 2 to 4 moves if 75% optimism, 3 to 4 moves if 90% optimism, 4 moves if 95% optimism
- [x] --- optimism is like the opposite of depression
- [x] 1 action point: move to another hex, draw 1 action card, save one action card for later, transmute
- [x] negative cards apply automatically
- ~~[ ] negative cards apply corruption in current hex~~
- ~~[ ] positive cards remove corruption~~
- [x] obtain raw resources by using action points on tile, 3 AP to get 100%, each tile gives 3 resources, 1 for each AP, max 3 AP
- [x] transmute raw resource into refined resources
- [x] raw resource: garbage (always 3 per hex)
- [x] refined resources: ~~rock matter,~~ plant matter, animal matter, ~~neutrients,~~ water
- [x] 3 resources per hex
- [x] 1 resource = contained,
- [x] 2 resource = spill into 3 hex decided by player,
- [x] 3 resource = spill into all neighbors
- [x] water: allows plants and animals to live
- [x] plant: plants
- [x] animal: animals
- [x] draw all the refined resources on the map, spillover is shown with the drawing
- [x] win condition: transmute all garbage into refined resources, and you get a

cool map :3

- [x] lose condition: dont have fun (no lose condition)

map:

```
  HHH
  HHHHH
  HHHHHHH
  HHHHH
  HHH
```

- [x] gameplay flow:
  - [x] start of game:
  - [x] each player selects skill points
  - [x] they all start on corner of hex, decided by them
- [x] each round:
  - [x] each player rolls dice, gets AP
  - [x] strategise on how to spend their AP
  - [x] round ends, roll for cat

# Re:Build Nature — Creative Exercise (WC: 2285)

“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 (1D6) which generates action points (APs) according to Equation 1.

$$AP = 1 + \left\lfloor \text{Bias (Equation 2)} * \frac{\text{dice roll}}{6} \right\rfloor \quad \sim \text{Eq 1}$$

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

**Design Note:** The game-play 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%
Dice Values	always	1	2, 3	4, 5, 6	1, 2	3, 4, 5, 6	1	2, 3	4, 5, 6	1	2	3, 4	5, 6	1	2, 3	4, 5, 6	1, 2	3, 4, 5, 6	always	always	always
Action Points	1	1	2	3	2	3	2	3	4	2	3	4	5	3	4	5	4	5	5	6	7

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 can 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. There is no fixed order that the players have to follow.

**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.

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 decides if they can place a cat. The chance is calculated using Equation 3. Only one roll per round.

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

**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 more SP 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 when the players are happy with the map or all the garbage has been refined.

## 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

There are four requirements to trade skill points.

1. The player giving skill has enough AP
2. Negative skill points don't aren't valid
3. They're both in the same hex
4. The skill category is the same

### 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.

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

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. The corruption levels are calculated once a player enters the hex.

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

### 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. Here, spilling means that the hex being spilled into gets a +1 bonus for the resource and you need to indicate which hex is being spilled into by drawing.

**1 stack** can't spill

**2 stack** upto 3 hexes

**3 stack** upto 6 hexes

Some resources have requirements.

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

## 4. Visualizations

Items required:

- Pencils
- Crayons
- Erasers
- Glue

Anything to enhance the tiles!

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

### 4.1. Board

The players need to have two boards. One serves as the "data layer", used to track how many resources are present, the corruption levels and how many raw resources are remaining. The other one is used for drawing the map.

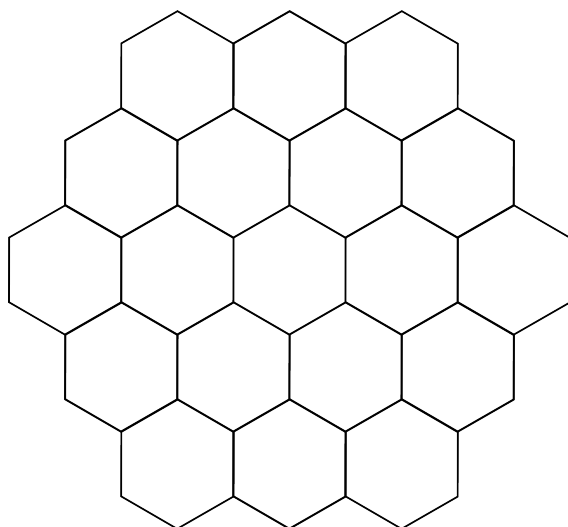


Figure 1: Example Hex Grid of length 3 (standard)

**Design Note:** Hexagons are bestagons! :3

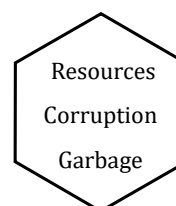


Figure 2: Layout for a single "data layer" hex

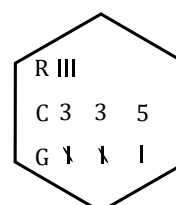


Figure 3: Example of a hex

### 4.2. Player Card

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

### 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 Skill	+1 Animal
+1 Plant Skill	+1 Water
+1 Animal Skill	+1 Plant
+3 skill points	+1 skill point to all
+1 AP	+1 AP to all
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 Skill	adds +1 garbage
-1 Plant Skill	adds +1 garbage
-1 Animal Skill	adds +1 garbage
-1 to all skill levels	gain +4 skill levels
-1 AP	+1% optimism
can't participate next round	+1 AP
lose one of your stashed card	skip next negative card

## 5. A report of testing the game

The testing was done by meeting in real life and hosting a game. Two of my friends (Ashutosh, and Divyesh) joined me to play the game (see: Photo 4). A two hour session was held. The drawing part was done on pc, using the digital painting app [Krita](#) and a pentablet ([XP-Pen Deco Fun L](#)). The data layer was done on a paper (see: Photo 6). We used out keychains as player tokens to track position (see: Photo 1, Photo 2, and Photo 3).

These were the major problems we encountered and what I did to remedy them.

- +1 Water felt weird resource
  - Rework it to give +1 skill instead
- The AP generation rules were confusing
  - Made the lookup table easier to refer
- Rules were unclear and ambiguous
  - Tried my best to clarify them
- Very few avenues to increase optimism
  - Did nothing, working as intended
- Checking for corruption was after the turn felt like cheating
  - Made it so the corruption is automatically rolled everytime someone enters a new hex

## 6. A description of an interesting and memorable moment

- I got a negative card in the first round and made the optimism level negative, my friends playfully teased me the whole game.
- We were very excited to reach 10% optimism as we won't be limited to one AP.
  - "Gambling" by drawing action cards when optimism level was below 10% felt similar to how every action taken when suffering from depression felt like a gamble.
- Divyesh rolled for AP when it was Ashutosh's turn, he got a 6, we peer pressured Ashutosh to roll instead of taking the 6 and he got 1.
- Ashutosh drew a "-1 Animal" action card, we cheered him for an encore, and he got "+1 Animal", making it so he ended his turn with +1 Animal skill level.

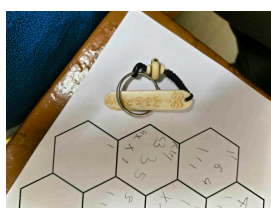


Photo 1: Ashutosh's Token



Photo 2: Divyesh's Token

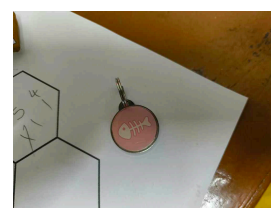


Photo 3: Herschel's (my) Token



Photo 4: Meeting up to play



Photo 5: Discussing Moves

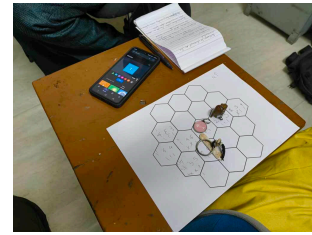


Photo 6: Final Positions

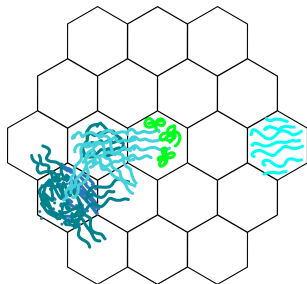


Photo 7: Final Map

The game is really fun to play with friends. Although the learning curve is a bit steep and the game is kinda slow, working cooperatively with friends and building up optimism (actual and mechanistic) to fill the map is really fun.

— Divyesh

## 7. Conclusion

Once I got hang of how to use optimism as a mechanic, I was able to use my personal experience with fighting depression as inspiration. I tried my best to represent my feelings as game mechanics. Similar to how starting the journey to heal depression feels extremely difficult and slow, the game starts slow and feels like we made no progress. Every move felt like a gamble, it might either make me feel better, or it might worsen the situation. However, with the help of my friends, I persevered, and slowly, but surely got better. After a while my recovery started accelerating and I was able to study, and do everyday tasks which felt like a drag. Everytime something positive happened, be it playing games with my friends or getting to pet a stray cat, it boosted my moral. It feels good to look back at the game screenshots, photos, and chat messages.

This was the first board game I made and there were many oversights, but I trusted in my friends to give me good feedback and they delivered. As for the core gameplay, I believe I was able to weave the feeling of optimism through hope into the game mechanics.

## 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.