

# Rulebook

## Objective of the Game:

Survive the 8 days

## Number of Players

3 to 5 players can play at once.

## Beginning of the Game

1. Every player chooses a player piece they desire to use and picks up 10 health tokens, 3 hunger tokens, and a single bandage and food card.
2. Shuffle the decks and set them in stacks on the sides
3. Players must place their pieces onto the center hexagon
4. Roll to decide which player goes first, the player with the highest number takes the first turn and the game will progress in a clockwise rotation.

## Game Components

- 1 game board
- 5 10 sided die
- 5 Player Pieces
- Stack of Arrow Pieces
- Stack of Bullet Pieces
- 37 Tile pieces
  - House
  - Factory
  - Store
  - Road
  - Building
  - Piece representing nothing
- Deck of Tile Event Cards
- Deck of Resources Cards (8 types)
- Deck of Weapon Cards (9 types)

# Gameplay

At the beginning of each player's turn they can initially choose to either craft something using the resources in their inventory, or to use a consumable that they already have ex; food, bandages and after doing so the players then move onto Phase 2.

## **Phase 2 (Exploration):**

The player then has a choice of one of the four following actions:

1. Don't move and look around
  - a. The following player doesn't lose a hunger token, and pulls a tile event card to see what event occurs, and either proceeds to Phase 3 or 4
2. Move to a different tile and look around
  - a. The following player discards a hunger token, and also pulls a tile event card to see what event occurs, and either proceeds to Phase 3 or 4
3. Move to a different tile but don't look around
  - a. The player then has to discard a hunger token, but doesn't pull a tile event card and skips to Phase 4
4. Nothing
  - a. The player then skips to Phase 4

## **Phase 3 (Encounter)**

1. In the scenario that the player encounters a monster or a hostile NPC
  - a. Player then has to choose one of the following options
    - i. Fight, then every player is dragged into the fight.
    - ii. Run ( Success only if you roll a 5 and up ) and discard a hunger token if you are successful
2. If you find a trader
  - a. Trader then presents 3 for 1 good trade ( Only 1 player may trade with him )
  - b. Choose one of the following
    - i. Give him 3 of any of your resource cards and receive one good (pick up a weapon card)
    - ii. Ignore him (he leaves after the turn ends)
3. You find a resource card
  - a. Player then picks up a resource card from the deck

## **Phase 4 (Aftermath)**

1. Check if you have more cards than you are able to hold (6 cards without the backpack, and 8 with the backpack)
  - a. In the scenario that the player has more cards than they are allowed to hold they must then choose to discard x amount of cards until they only have 6 or 8 cards left.
2. Trade with other players
  - a. If the other player agrees to trade then allow them to trade items then go back to number 1 in checking the players inventory.

# Combat

Combat is initiated when one or more players on the same tile encounter a tile event with a hostile NPC or a zombie. Initially, all players can decide whether or not to fight the monster or to attempt fleeing. The first, initial flee upon encountering it will cause the fight to terminate and the hostile encounter would disappear (see Fleeing in Combat). However, in the case it fails, all players would have to kill the creature or attempt fleeing again. The monster will initiate attacking first, either damaging everyone, or everyone ends up evading the attack. *The monster will damage everyone at once.* Players and monsters will continue to trade blows until *either everyone on that tile dies or the monster dies before the turn ends.*

## Fleeing in Combat

During the initial encounter, the initiator has the opportunity to terminate and save everyone from the fight by attempting a flee. If that one person fails, then everyone on the same tile as them are fighting.

During the fight itself, each individual could attempt to dip out of a fight if they so choose to. The entire fight can terminate if everyone flees. If one person flees, but the other doesn't, the fight continues for those that didn't flee. You can only flee in the period if there is an adjacent discovered tile.

# Cards and pieces

## Tile cards

Players will draw a random tile card if they have moved to an unexplored tile, and since they are the first player to discover the tiles. After that the player will pick up x amount of resource cards depending on the tile that they draw.

## Tile event cards

If the player decides to look around, they will then draw a tile event card which will determine the event that occurs for them.

- Nothing
- Nothing happens

- Snow storm
  - Players will lose 1 hunger for every turn until every player has left the tile
- Trader NPC
  - Players are prompted with a 3 resource for one good trade and if they choose to do so they will pick-up a weapon card, however if they choose to not do so the trader will just disappear next round.
- Hostile NPC/Zombie
  - Players have the decision to either attempt to flee or fight the hostile mob, if the player chooses to flee and is successful they have to discard 1 hunger token.
- Pick up resource/weapon card
  - Players then must pick up either a resource or weapon card depending on what is indicated on the card.

## Card Symbols

### Weapon cards

There are three geometric shapes you can see on all weapon cards, and they are rectangles, pentagons, and hexagons.

- Rectangles (Melee weapons and ranged weapons represent different meanings.):
  1. Melee weapon means missed attacks.
  2. Ranged weapons means bad shots.
- Pentagons: Represents base damage in all cards.
- Hexagons: Represents critical damage in all cards.

Above all the symbols. There are words of hit roll and numbers.

- Hit roll means player who roll the numbers from 1-10, and represent bad shot DMGs, base DMGs and critical DMGs respectively with a certain range. The number in rectangles of Melee weapons always represent 0 because it represent missed attacks.
- The range of hit roll with different degrees of damage for all weapons is different, but the damage value after the range is selected is fixed.
  - E.g. player who use the torch to attack and hit roll range is 4-8, it is base DMG, torch have a fixed base DMG of 3, so the player can do 3 points of DMG.
- Hit roll represents on range weapons:
  - 1-4 means bad shot DMGs
  - 5-9 means base DMGs
  - 9-10 means critical DMGs
- Hit roll represents on Melee weapons:
  - 1-3 means missed attacks (only 0)
  - 4-8 means base DMGs.
  - 9-10 means critical DMGs

## Some resource cards

There are some resource cards with circles and triangle symbols.

- Triangle: only represents on the backpack card. Means adds 2 extra inventory slots.
- Circles: one represents on the bandage card and three on the food cards.
  - Bandage card's circle means restores three health.
  - Food cards' circles means restores three hunger.

# Quantitative analysis

Weapons expected values

Weapons expected damage (weighted average over probabilities) in 1 hit:

- o Unarmed: 2.9
- o Knife: 3.4
- o Torch: 2.9
- o Spear: 4.1
- o Axe: 4.1
- o Bow and Arrow: 4.4
- o Pistol: 4.4
- o Revolver: 4.7
- o Sniper Rifle: 5.3
- o Assault Rifle: 4.8 expected value

As you can see, torch is pretty much useless as it's expected value is the same as unarmed. However, it has better probabilities, so it might "feel" better in hands of a lucky player. Further, we believe that this game should be extremely hard to be "beat" after the first playthrough, so we wanted to introduce some bad choices so players have room to make mistakes.

All hostile NPCs have 10 health, so we expect one player to require  $10/2.9 = 3-4$  turns to beat it. This means players should try to work together to fight monsters at early stages, as being left with 2-4 health after the first encounter almost certainly means this player would not survive until the end.

Tiles:

There is the same number of tiles of each type, so on average a tile would have +1 resource modifier. With the 0-2 spread, however, players will need to decide whether it is worth it to fight on a +0 tile and choose their paths more carefully. Further players would need to think more about what tile they want to finish their turn on on Days 2, 4, 6 as that's when there is a high

chance of being attacked, and one would want that inevitable fight to happen on a tile with better outcome.

Tile events:

- Hostile Encounters on Cards [40%]
  - Zombie [30%]
    - 10 Health
    - Damage: 2
    - Monsters can have 0-2 resource, specified on card
  - Hostile NPC [10%]
    - 10 Health
    - Damage: 4
    - Hostile NPC can have 1-3 resource
- Trader [20%]
- Resource [30%]
- Nothing [10%]

We decided to set hostile encounters to 40% probability. On average we expect the encounter to last 2-3 turns, so a player would take 4-6 dmg vs zombie, 8-12 vs hostile npc.

Players would not be able to survive if they have to fight every turn, and the hostile NPC should only be fought as a group and as a last resort.

Every 2 days, there is a 30% chance that a monster spawns at player location.

On average, there are 4 times as many resources than weapons.

- **Tile Cards: (comes with resources)**
  - House
  - Factory
  - Store
  - Road
  - Building
  - Nothing interesting...
- **Resource Card**
  - Raw resources (80%)
    - Food (25%)
    - Wood (25%)
    - Scrap (25%)
    - Cloth (25%)
  - Weapons 20%