Perseus Bound (working title)

Single (or Two-Player TBD) Resource Management Survival Game

Description

Your ship is a prototype interstellar vessel on an early exploratory mission to the Perseus Arm of the Milky Way. Unfortunately, as an experimental vessel, your thermonuclear engines were damaged by a meteorite collision, and apart from the actual engine damage, all of your Uranium fuel stock had to be jettisoned to avoid catastrophic uncontrolled nuclear ignition. You're now in an unexplored star system in this distant part of the galaxy, and although you know the way home, you're stranded unless you can find a way to repair your ship.

To get home, you'll need to find or trade for resources to survive in this star system, repair your engine, and accumulate enough fuel for the return trip. In the meantime, you may find that there's life out there, and not all of it is friendly!

Objective

The game ends in one of two ways: You successfully repair all engine components (Uranium fuel is included as part of these repairs), or you die trying.

Of course, death comes in many forms, whether it's running out of rocket fuel, food, air, power, or being destroyed in battle by a hostile alien.

On the other hand, there is exactly one way to win, you must **repair all engine components**. If at any time all engine components are repaired, you will travel back to Earth, and of course, win the game!

Materials

The following materials are required to play the game ("Part of the box"):

- A playing board – 6x6 square checkerboard. Larger squares are easier to play with since you need space for both dice and ship tokens. (The printable game board also has a reference for movement and coordinate dice.)
- A Ship Resources Tracker – You'll need a space for your Cargo Bay, and somewhere to track your inventory of Food, Air, Rocket Fuel, Power, and your Hull integrity. The Ship Resources board has a spot for cargo, as well as tracks for all other ship resources.
- 6 each of Red (hostile) and Green (friendly) 6-sided dice, representing the planets potentially in play. 3 Yellow (unexplored) dice, representing discovered planets.

- 1 black and 1 white 6-sided dice for rolling coordinates and enemy vessel movements.
- A player token (optionally: A second player token of a different color for 2 player games.)
- A dozen or so Enemy Ship tokens. There is no formal upper limit to how many may be at play, but it's unlikely to be more than this.
- 9 Tracking tokens – Blue acrylic chips for 1-player, and 9 yellow ones additionally for 2-player games.
- Elements tokens. These can be cut out of the printable materials, or use colored cubes or some other items. You'll need at least this many of these different kinds (Colors are suggested but used throughout the rules):
  - 6 Carbon C ■ Cubes (Black),
  - 6 Hydrogen H2 ■ Cubes (Yellow),
  - 6 Oxygen O2 ■ Cubes (Blue),
  - 6 Uranium U ■ Cubes (Green),
  - 6 Titanium Ti □ Cubes (White),
  - 6 Copper Cu ■ Cubes (Orange)
- 6 (or 12 for a 2-player game) Debt ■ Cubes (Red)

Setup

1. Sort the Elements and Debt cubes into piles for easy access. Sort the (green) Friendly planet dice, (red) Hostile planet dice, and (yellow) Unknown planet dice, and Enemy Vessels similarly.
2. Remove all markers from an Engine Repair Status sheet, and all dice or ships from the map.
3. Set 18 Rocket Fuel, 6 Power, 6 Air, 6 Food, and 10 Hull on a character sheet Ship.
4. Add 2 of each Carbon ■, Oxygen ■, Hydrogen ■, and Copper ■ to a character sheet Cargo Bay.
5. Roll coordinates for the player starting position.
6. Roll coordinates for 3 planets. For each coordinate, roll a yellow unexplored die and place it at these coordinates. (This should be all of the yellow dice.)
7. Begin your first turn!

Levels of Difficulty

If you find the default setup above less than challenging, you can increase the difficulty.

- **Standard:** Recommended for new players or casual play.

- Start with 18 Rocket Fuel, 6 power, 6 air, 6 food, 10 Hull, and 2 of each Carbon ■, Oxygen ■, Hydrogen ■, and Copper ■ (This is the default setup described above.)
- You have limits of 30 Rocket Fuel, 20 Air, 10 Food, 10 Hull Integrity, and 10 Power. (This is the default rules described elsewhere.)

- **Challenge:**
  - Start with 6 Rocket Fuel, 6 power, 6 air, 6 food, 6 Hull, and 2 of each Carbon ■, Oxygen ■, Hydrogen ■, and Copper ■ (Note the reduced Rocket Fuel, air, power, and Hull).
  - You have limits of 10 Rocket Fuel (refilling fills your entire limit), 10 Air (refilling fills your entire limit), 6 Food, 6 Hull Integrity, and 6 Power. These Challenge limits are shown on the Ship Tracker in gray to remind you.
  - Because of the reduced Rocket Fuel, it is theoretically possible to be unable to reach a planet. During setup, scan planets first, then re-roll the player's starting position until at least one planet can be reached in 2 turns (that is, Manhattan Distance away must be equal or less than 6).
  - All planets are one value lower before you have worn out your welcome or exhausted their sentinels. (That is, if a green or red die is rolled as a 6, it is instead a 5 and so forth.) 1's remain as 1's.
  - In addition to 1 Rocket Fuel per square, power demands are increased: You need 1 Power to move 2 squares, 3 to move 3 squares, and cannot travel faster without exhausting your batteries.

Vocabulary

Resources

There are broadly two categories of resources in the game: Elements and Ship resources.

Elements are fundamental chemical elements which can be gathered, traded for, lost or won in battle, or used to maintain your ship. In the game there are 6 tokens for each resource available at any one time, which is the upper limit you can have in your Cargo bay. These include:

- **Carbon (C) ■:** The stuff of life! All carbon-based lifeforms have tons of carbon. Used to create food.
- **Oxygen (O2) ■:** The stuff you breathe! … and burn! This is the most useful element on a spaceship, as it can be used to create Air, as well as Rocket Fuel, and when combusted can also power a generator for batteries to get Power.

- **Titanium (Ti) □:** This is a hard one! (No, really. It's hard, hard as metal.) Your ship is built out of Titanium for its lightweight durability, and as such it is a critical element for repairing your Hull as well as your engine.
- **Hydrogen (H2) ■:** It's almost as useful as Oxygen ■ because of how it reacts with it, as part of combustion. You'll mostly use it for Rocket Fuel, but when you burn Rocket Fuel you can also power a generator, so it's part of creating Power.
- **Copper (Cu) ■:** Electricity powers everything on your ship from the lights to the navigation array to the shields. This Power needs somewhere to flow, and that's Copper! Use it to create Power, as well as for any engine repairs.
- **Uranium (U) ■:** The rarest of the elements in this part of the galaxy, Uranium is used by your thermonuclear engines to achieve relativistic speeds, and is necessary to travel back to Earth. It's also extremely difficult to manufacture, so only advanced alien races have it.

Note that for elements, you can sometimes be in debt. This happens either when you borrow from a friendly alien race, or when you're boarded after a lost battle against an alien vessel and don't have the ransom they're demanding. Either way, red Debt tokens represent this – and any time you get stuff, you need to pay off your debts before you can keep any for yourself. After all, you're going to leave as soon as you fix your engines, and probably won't return to pay it back later!

Ship R**esources** are the durability or capacity of your ship. You'll need to maintain these by using Elements – if any of them run down to zero and you need them, you die. Plain as that. You've only got one ship, though, so be aware of the maximum containment for these – if you have too much, you'll have to jettison the extra into space. The only way to get any of these is to spend Elements. *You can track these however you like, but an easy option is to use the provided tracks with some sort of marker token.*

- **Rocket Fuel (Max 30)**: The combustible combination of Oxygen ■ and Hydrogen ■, definitely don't light a match anywhere near it. You use this to travel in the local part of the galaxy. If you're traveling slowly, you can use less Power since your navigation system won't need to be on all the time.
- **Air (Max 20)** and **Food (Max 10)**: The basics for a healthy body. You need to eat and breathe, and these are it! Running out of Air or Food means death, be sure to keep these replenished.
- **Power (Max 10):** Your ship's onboard batteries store electrical power, which you use at a steady rate, and may use to keep your sensors on high range for faster travel, and to power your shields. You'll charge your batteries in any planet with your outboard solar panels, but in a pinch, you've got the copper and rocket fuel to make a jerry-rigged generator – they're one-shot though, before that copper gets burned to dust.
- **Hull (Max 10)**: This is the outermost layer of your ship, which is hit by any weapons first. Or, y'know, if you crashed into a planet – but you're a better pilot than *that*. Your biggest threat

here is battles with hostile alien vessels. If your hull is breached, your air will immediately leak into space, in which case, yes, you die.

Rolling Coordinates

At multiple points in the game, locations must be chosen for various objects. New objects added to the game must always be placed at new locations at coordinates determined by dice rolls. All coordinates begin in the upper left square, which is (1,1). To generate a coordinate, roll both the black and white dice, using the black value for the x/column coordinate, and the white value for the y/row coordinate. Re-roll until the coordinate is not occupied by any other object (planet, player, enemy ship).

Specifically for enemy vessels, if the coordinate is 3 squares or nearer to the player along a straight line (including diagonals), then re-roll both coordinates.

The new object should be placed at the first rolled coordinate that doesn't already have another object.

Anytime these rules say "roll coordinates" or "place an object" or similar, refer to this section.

Consume, Spend, Use, Lose, "- X something" …

Any language that implies reducing resources behaves the same, as follows:

If the resource is an Element: Remove the respective number of green Elements of the specified type from your Cargo Bay and sort them into matching piles of green Elements. If the resource is a Ship Resource (Air, Food, Rocket Fuel, Hull Integrity, or Power), move your inventory meter down on the resource track. If you have zero of any of these resources after reduction, move your marker off of the track, and if you require use of these resources after that, you will lose the game.

Example: You have 1 Air. At the beginning of your turn, you roll 1D6 = 3 and consume 1 Air, move your token out of the table and continue your turn. On your next turn, you have not replenished your air, but you roll 1D6 = 4 and must consume 1 Air again. In this case, you lose the game because you asphyxiated.

You cannot complete friendly planet trades or ship Maintenance or Repairs (e.g., trading Elements for Ship Resources) if you do not have enough of all specified resources – such actions are simply skipped, neither consuming partial Elements nor receiving any benefits. If you must lose resources as a result of a battle, you must instead take two (or four for Uranium) red Debt tokens. If you would exceed your maximum of 6 debt, then the hostile aliens confiscate your ship, and you lose the game.

Gain, Get, Receive, "+X something"…

Any language that implies you gain some number of a resource behaves the same, as follows:

If the resource is an Element: Move the respective number of green Elements of the specified type from the general supply, where they should be sorted into piles, into your Cargo Bay. Since there are only 6 of each Element, if there are no green Elements of the specified type, you forfeit the gains. That is, you can't substitute, use alternative tokens, write down extra numbers, etc., - there is a hard cap of 6, you must simply account for this while strategizing your play.

If you are borrowing during a Gather and Trade, you will take two Debt (red) tokens in for each borrowed Element. If you already have 5 or more debt, you can't borrow at all. (In this case the borrow action is simply unavailable to you – use Gather instead, to reduce your debt.)

If you gain Ship Resources, increment your marker on the associated resource track up to the maximum value indicated. Any additional gains after that are forfeit as a hard cap on resources.

Taking a Turn

Turn Sequence

Each turn consists of several steps, which must occur in exactly this order. Some steps are optional – that is, they may or may not be taken as the player wishes. Each of these will be explained in more detail below, but for quick reference, the turn order is:

1. **Consume Resources & Travel.**
   Collect solar energy if you land on a planet.
2. **(Optional) Scan for Planets**
3. **Move Enemy Vessels**
4. **Battle**
5. **Contact Planet (If yellow/unexplored)**
6. **Resolve Planet:**
   (a) Hostile—Spawn an Enemy
   (b) Friendly—(Optional) Gather or Trade
7. **Reduce Planet Value, Spawn an Enemy if a friendly planet is removed.**
8. **(Optional) Maintenance And Repair (Trade Elements for Ship Resources)**

Consume Resources & Travel

You travel this star system by gravitational slingshots, which makes it possible to fly on fairly little fuel as long as you stick to flybys. Over time, your Ship Resources for life support will gradually deplete – air and food that you consume directly, and power that keeps your lights and other systems running. Thus, travel is constrained by both your fuel and consumable resources, and it will cost extra fuel to travel without heading for a planet (since you will need to navigate without slingshotting!). Your ship uses a standard chemical rocket for interplanetary travel: this won't get you back to Earth, but it'll get you around nearby while you're trying to fix your engines.

At the beginning of each turn, roll both the black and white dice, representing resource depletion (black) and maximum travel distance (white).

Reduce ship resources immediately according to the black die's value, losing the game if you have zero of the affected resource during this roll.

Black Die Rolled a …	Resource Usage	Reason for resource usage:
1	Spawn Enemy Ship	You were spotted by enemy sentinels.
2	None!	You took a nap.
3 or 4	-1 Air	You asphyxiated.
5	-1 Power	Your ship is adrift.
6	-1 Food	You starved.

After that, you choose where to travel up to the maximum value of the white die (divided by 2 rounded up). You must travel in a straight line in the orthogonal (up, down, left, or right) directions, and travel is stopped short if you would land at any planet (unknown, friendly, or hostile), or land at any enemy vessel, or collide with the edge of the map. You cannot visit the same planet twice in a row – that would require fully shutting down your rocket engine! You must travel on every turn, similarly, to avoid your rocket engine completely shutting down.

Finally, given your tenuous rocket engines, you rely on gravitational slingshots and orbital mechanics to navigate efficiently. Therefore, if you travel to a square without a planet, it costs one extra fuel to adjust your orbit.

If you are stopped by landing on any object, the effects will be resolved later in the turn. Travel costs 1 Rocket Fuel for each square moved if you land at a planet, and one extra Rocket Fuel if you land in open space. In addition, due to the navigational sensors running at high power, to travel 3 squares requires 1 power.

Travel Distance	Rocket Fuel (Planet)	Rocket Fuel (Open Space)	Power
1	-1	-2	0
2	-2	-3	0
3	-3	-4	-1
4	-4	-5	-1
5	-5	-6	-1

If at any time your rocket fuel depletes past 0, you are adrift and have lost the game.

If you land on a planet, you also collect 2 solar energy during your orbit.

Scan for Planets

Your ship is equipped with a scanner array that can detect nearby planets. Once per turn, you may choose to spend 2 Power to activate this scanner to locate up to 3 planets. That's all you can do though – locate them. In order to know if they are hostile or friendly, you'll need to visit them by traveling! Your ship's database can track up to three unknown planets at a time, so if you are already aware of some planets' locations, you'll scan fewer – the Power cost is the same, though, just from firing up the sensors.

To use the scanner, first spend 2 Power. Then roll the black, white, and an unknown planet (yellow) die from the pool (not one that is on the game board). Roll all three, the black die is the column, the white die is the row. If at that column and row there is no other object (enemy vessel, planet, or the player), place the unknown planet as rolled. Repeat this for all of the available yellow dice.

There are 3 yellow dice in total, combined between the pool and the game board.

Move Enemy Vessels

Each turn, enemy vessels which are aware of your ship will try to reach you. If they succeed, or if you run into them during your own travels, you will then battle them. Battles risk Hull Integrity and loot from your Cargo Bay – and possibly destruction, if you lose and can't pay your ransom. On the flip side, if you win, you get to loot them!

Roll both the black and white dice. The black dice determines the distance horizontally (left and right) that the vessel tries to move, and the white dice determines the vertical. Divide both by two, rounding down (1 = 0 moves, 2 or 3 = 1 moves, 4 or 5 = 2 moves, 6 = 3 moves).

Move all enemies first horizontally according to the black dice: If they are on the same row as the player, they do not move. If they are above the player, they move down exactly the move count (even if it means passing the player's row, which might cause them to flank the player!), and if they are below the player, up. If at any time they land on the player's square they stop immediately (this causes a battle). If at any time they would need to pass another enemy, they stop short. They stop short at the edge of the board, too. They continue moving past planets.

Then move similarly for the vertical movement, towards the player horizontally and possibly passing the player's column.

Every ship that can move **must** move, and must move the full distance that it can both horizontally and vertically.

Enemy ships can never share squares except that any number of enemy vessels may share the same square as the player.

Battle

You've been attacked! Or, you attacked! Either way, the battle's on.

1. You have one opportunity to flee – at the start of battle. If you choose to flee, roll 1D6. If it is 1, 2, or 3 you failed to flee and immediately lose the battle. In that case, roll 2D6 and subtract the larger one from the smaller one (which is zero if they are the same) as your hull damage and proceed to the damage and loot steps. If you roll a 4, 5, or 6, you succeeded at fleeing, pay exactly 3 Rocket Fuel and no Power to travel 3 squares in a direction of your choice, following all rules besides cost under Travel, including stopping at planets or enemies. You don't gain immunity from other enemy vessels or other effects of travel, so this may result in another Battle.

2. Raise Shields: Choose some number of power (which may be zero). Each spent power will defend against one hull damage in the case of defeat. The Power is not refundable in case of victory. If you are willing to and have the available Power to, you may spend 5 power to become immune from damage (because the maximum possible damage is 6 – 1 = 5), but you'll still need to complete the battle to ascertain the winner for loot purposes.
3. Determine the instigator. If the battle started because enemy vessels moved onto you, they are the instigator. If the battle started because you collided with an enemy vessel during travel, you are the instigator. The instigator has advantage – should combat rolls tie, the tie breaks in their favor. If there are multiple enemy vessels in battle, instigation is determined by the first battle. That is, if the player moved onto an enemy and became the instigator, they instigate *all battles that turn*, and vice versa.
4. Roll for Victory! Roll the black and white dice. The black die is the player, and the white die is the enemy vessel. If these are tied, the instigator wins. Otherwise, the larger die wins.
5. Inflict Hull Damage: Subtract the winner's die from the loser's die, this value is the total damage (0 if they tied). Subtract shield power from this to determine Hull damage. Remove this number from your Hull Integrity, which ends the game if it is less than zero after subtracting (you blew up!).
6. To the Victor goes the Spoils: The winner loots the loser. Roll 1D6 to select the Element to be looted.
   (a) If the player won, they may receive *either* +1 of this Element *or* +2 of any ship resource.
   (b) If the enemy vessel won, spend 1 of this Element. If this element does not exist in your Cargo Bay, instead gain two Debt (red) tokens, except Uranium ■ which is worth 4 debt tokens. If you then have more than 6 debt tokens in your Cargo Bay, the enemy vessel seizes your ship, and you have lost the game. Otherwise, you have paid your ransom and they will go on their way.

Rolled die	Element (Cost or Gain)	Debt (If cannot pay)
1	1 Carbon ■	2
2	1 Oxygen ■	2
3	1 Titanium □	2
4	1 Hydrogen ■	2
5	1 Copper ■	2
6	1 Uranium ■	4

7. Remove the enemy vessel from the game board back to the general supply.

Note: By these battle mechanics, battles have about a 60%/40% split chance of victory, favoring the instigator. In the case of a loss, the player will take a minimum of 1, average of 2.3, and maximum of 5 hull damage; about 2/3rds of the time it will be 1 or 2 hull damage.

Contact a Planet

If you land on an unknown (yellow) planet, you will attempt to make contact with the inhabitants. Sometimes they're friendly and will offer resources, possibly in trade. Other times, they're hostile, and will spawn an enemy vessel. Respectively these results occur under Spawn an Enemy and Gather and Trade – but before that can happen, that first contact has to happen!

To contact a planet you have landed on, roll 1D6. If the die is 1 or 2, the planet is hostile, you will exchange the yellow die for a hostile (red) die of the same value. On a 3 or higher, the planet is friendly, you will exchange the yellow die for a friendly (green) die of the same value.

If a planet is friendly and there are no more green dice, no planet is placed (in particular, this means you skip Gather and Trade). If a planet is hostile and there are no more red dice, **spawn an enemy vessel immediately**. (You do not need to spawn a second one at the Spawn an Enemy stage.)

Spawn an Enemy

If you land on (or contact) a hostile (red) planet, you will raise the ire of its inhabitants, and they will contact a sentry – this enemy vessel will try to locate and stop you. Who knows where they're hiding?

Roll coordinates. To reiterate the special rule for enemy vessels, not only should the coordinate be devoid of any objects, it must also not be 3 or fewer squares away from you in a straight line from your ship – if you could travel to it in one turn, it's too close. Diagonals or other odd combinations of orthogonals are fine, as are distant (4 or greater) squares. Place an enemy vessel at these coordinates.

Once the enemy vessel is spawned, proceed to Reduce Planet Value.

Gather or Trade

Friendly planets are full of resources! You're just one ship, after all. Most resources can be found in nearby asteroids, comets, or on the uninhabited regions of a planet's surface. Of course, what you find if you take this route is a little unpredictable. Alternatively, the inhabitants, much like those on Earth, have done the work of mining and refining already and will usually be willing to barter. In the worst case, you can always ask nicely to borrow something, although you'll need to pay them back before you can keep anything else.

On each turn, you may choose ONE of the following actions:

- **Gather Resources** by mining asteroids or otherwise seeking out natural resources. Roll both the B&W dice and take their sum. **If you are in debt**, the number of elements does not change, but they must be used to reduce debt *before* you can collect anything.

Sum of B&W Dice	Resources	Where did you find it?
2 or 12	None	You struck out!
3 or 4	+1 Copper ■	Mined on an asteroid
5 or 6	+2 Oxygen ■	Skimmed the planet's atmosphere
7	Choose any 3:	Good Samaritans noticed you were stranded

	Carbon ■, Oxygen ■, or Hydrogen ■	
8 or 9	+2 Hydrogen ■	Buzzed the local star's corona
10 or 11	+1 Titanium □	Found a deposit on the planet's surface

- **Trade for Carbon ■, Oxygen ■, or Hydrogen ■:** The inhabitants find these resources just as abundant as you do! They're willing to trade up to 3 of any Element for the same number of Carbon ■, Oxygen ■, or Hydrogen ■, in any combination. This is a one-for-one exchange. *You cannot trade while you are in debt.*
- **Trade for Copper ■ or Titanium □**: It takes some industrial processing to refine ores into elemental metals. Any society that got at least as far as industrialization can do it, but it may not work well with their own supply and demand. Roll 1D6, on 3 or higher, they'll trade any 2 Elements for 1 Copper ■ or 1 Titanium □, and they're willing to negotiate with you twice – you can roll a second time, regardless of whether you successfully traded the first time. *You cannot trade while you are in debt.*
- **Trade for Uranium ■:** It takes a highly refined industrial culture to stockpile Uranium. The process is complex and expensive across the galaxy. Roll 1D6, and if it is 4 or greater, they're willing to trade 4 Elements of any kind for +1 Uranium ■. *You cannot trade while you are in debt.*
- Finally, if all else fails, you may ask to borrow resources. Nobody's willing to lend out Uranium because of the cost, but otherwise it's uncivilized to turn down a voyager in need. You may ask to borrow up to 3 of the same kind of Element, even if you are in debt, in which case you will take an Element of the chosen type for each, and two Debt tokens for each. Note that you cannot carry more than 6 debt in total – nobody will let you borrow that much, and if you're deep in unpaid debts when an enemy vessel loots you, they will seize your vessel. Think carefully about your debts!

Reduce Planet Value

Planets eventually weary of your welcome and stop responding to you. Friendly planets lose patience with you after you overstay your welcome. For hostile planets, they give up and stop sending more vessels against you. Either way, when this happens, the planet is removed from the board so the dice can be used to discover more planets in the sector.

For any planet you have visited, whether you spawned an enemy or gathered or traded, you will decrement the value of that planet's dice by 1. If it was already a 1, remove it from the board for later re-use.

If you remove a Friendly (green) planet, you overstayed your welcome, they send a sentry to scare you off. Spawn one enemy vessel.

Maintenance And Repair (Trade Elements for Ship Resources)

The whole point of all this Element business is to have the resources you need to maintain your ship and life support and repair your thermonuclear engine for the return trip to Earth. Each turn, you may perform one maintenance operation – that is, you may trade Elements for Ship Resources or to repair your thermonuclear engine. Refer to the following list for the possible exchanges:

- Spend 1 Copper ■, 1 Oxygen ■, and 1 Hydrogen ■ to build a macguyvered generator and burn enough hydrogen to obtain +3 Power.
- Spend 1 Oxygen ■ and 1 Hydrogen ■ to manufacture +18 Rocket Fuel
- Spend 1 Oxygen ■ to replenish +12 Air
- Spend 1 Carbon ■ to grow +6 Food
- Repair 1 Engine Part, spending the required 4 Elements indicated on the Engine Repair Status sheet.
- Spend 2 Titanium □ to repair +2 Hull Integrity.

Playing with Two Players

There are several modes to play with 2 players, with different end goals and rule modifications. Try them all!

These are under development.

Race Mode

<tbd> It turns out our national enemies also launched a ship at the same time! Now you and your other player are racing to get back home and claim the credit. Setup the game for one player, then for the second player just give them the starting resources. After that, choose a player to start and then alternate turns. The first player to fix their engine and return to Earth wins. Alternatively, if one player dies, the other wins. There is no player combat in this mode, although be aware that the limit of 6 of each Element is global – there will be resource competition.

Additionally:

- Each player may have at most 3 Uranium ■. (If either player obtained 4 Uranium, it would no longer be possible for the other person to pursue a victory – to balance this out, the Uranium limit is split across the players.)
- When moving enemy vessels, normally they will move *towards the active player* whoever that is. If you spend 1 Power, you can project a false image and cause them to move towards your opponent instead.
- Players cannot pass each other when moving, nor can they occupy the same square. You could use this to corale your opponent into battles, or just annoyingly block their way to the only friendly planet on the map.

Race Mode with Combat

<tbd> This is the same as Race Mode, with two differences:

- You can initiate combat with the other player by colliding with them. In this case, when choosing loot, the winning player selects the Element they want. Whether they get it depends on what is in their opponent's Cargo Hold, but the debt still applies to their opponent if they don't have it.
- The Uranium ■ limit is still 6 (as it is with one player), since players have a means to coerce their opponent to hand it over in battle.

Cooperative

<TBD> everyone came in a bigger ship and needs to work together to gather resources quickly enough. There is a sand timer (how many turns?) before the big ship's crew runs out of resources.

- The engine on the mothership is bigger, so it needs two extra repairs – the Nuclear Fuel Supply and the Reaction Chamber must be repaired twice.
- While the players retain separate Cargo Bays, they may collide to initiate trade. Any Elements or Ship Resources may be transferred between the players' ships during these rendevous meneuvers.
- Enemies always target the current player for each move, but this can be modifed: If 1 energy is spent by either player, they can choose to be the target of enemy vessels for the next 6 turns. Use a die to track this, if you need it. This may be useful for divvying up the work between players.
- If one of the players dies, the other may complete the game. But the game is won or lost as a team. The player who died gives all of their Elements to the remaining player, but loses all of their Ship Resources. (In brief, this is potentially opening an avenue where sacrificing one's own ship is for the greater good – an exceedingly costly, but potentially crucial, strategy.)