# Eco Space Miner - Rulebook

## Content:

1x Rulebook
1x Sun Quadrant
6x Space Quadrant

(5x Regular Dice)

Card Packs:
36x Mineral Question Card
36x Water Question Card
36x Energy Question Card
72x Event Card
66x Upgrade Card

(individual color per player) figurines:
6x Base (cork)
6x11 Ships (wood)

Red, Blue & Yellow Currency Packs

20x Blue Glass Asteroid
20x Red Glass Asteroid
12x Blue Dice Asteroid
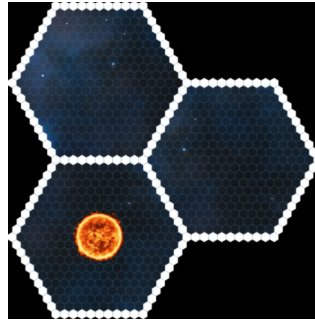30x Red Dice Asteroid (small)
30x Yellow Dice Asteroid (small)


Figure 1: Sun & Space Quadrants


Figure 2: Question Cards


Figure 3: Player Bases


Figure 4: Player Ships

## Board Set-up:

The Sun Quadrant is placed first. All players get to place an (equal) amount of Quadrants arround the sun Quadrant.
Each player gets to set an (equal) amount of glass asteroids. You may place 2 Blue and 1 Red Asteroid per Space Quadrant. Place 3 yellow dice asteroids within the Sun Quadrant. You may choose players to do so deliberately, or follow the Asteroid Event Card Rules, see page 4.

Starting with the youngest, every player gets to choose a color and set their Base building in one of the six Space Quadrants. There must be at least 2 tiles between the base and any asteroid. Only one base is allowed per Space Quadrant. Put your first (and so far only) ship in a tile adjacent to your base.

## The Game:

Each player gets to move in turns.
Each players turn consists of the following phases:

Movement & Mining Phase:

The player rolls <mark>two</mark> dice for each of his ships. Move your ship the equal amount of tiles (unless upgrades). Exceptions: For <mark>rolling doubles</mark> (like 2x 4) you draw an Event Card. Always. Additionally: Rolling double 6es allows for team mining (plus: Engine Research lvl 2 Upgrade. Unlocks: Rolling double 6es allows for team mining OR Moving 12 (plus Upgrades) additinally to the event card.
For <mark>any single 6 just roll that dice</mark> again, unless u have the Engine Research lvl 2 Upgrade.

(Glass Asteroids = content unknown)
(Dice Asteroid = content known)

- At the end of your movement phase u can mine an asteroid, as long as your ship is on an neighboring tile and has at least 1 movement point left.
- All your movement points on this ship are consumed by the mining operation (baring upgrades). To mine, draw a card of the Questions staple correspondign to the asteroids color.
- Depending on your answers or upgrades u get a varying amount of ressorces.
- You may attempt to mine the same asteroid again next turn, if you fail.

Once a glass asteroid has been mined successfully roll a dice in the color corresponding to the asteroids color to see the remaining mining opportunities left in the asteroid. Place that Dice there instead of the glass asteroid. If there is already a dice asteroid there, reduce its content by 1. If the asteroid's content hits 0, it is removed from the board.

<mark>Now you have to get your ship back to your base (probably in a following turn) to unload the ressources. Unloading takes 1 movement as well, but you may keep moving afterwards. You can unload directly to your base or into your Ore Processor, if you have one.</mark>

Trading Phase:
Any resources that your ships brought to your base can be traded with other players resources in their bases if they wish to trade with you.
If you managed to get a ship to Mars or Earth you can trade any resource from your base or on this ship with the Planet. Resources traded between ship and planet, remain on the ship (they dont magically go to your base).
Earth: Trade Metal for Water 2:1, Energy for Water 1:1
Mars: Trade Water for Metal: 2:1 Energy for Metal 1:1
Resources in your base can always be traded for any other resource: Metal vs Water 4:1, Energy: 3x Water and 3x Metal (6 total) to receive 1 Energy, 2 Energy to receive 1 Metal or Water.

Construction Phase:
Once you start building your first upgrades or ships your trading phase is offically over and you cannot trade any resources with a player/Earth/Mars any more. (This rule is optional. You may choose to allow to take actions from any phase at any time.)

You can now spend your ressources in these three categories:
- Buying more ships
- Upgrading your base level. This can only be done one level at a time.
- Building or upgrading an auxiliary addon or research to your base. Building multiple levels of an addon is allowed, if you can afford each step seperately.

Base Movement:
If your base is at least level 2 you may now choose to spend (1 Metal, 1 Water and 1 Energy) or (1 Metal and 5 Water) to move your base by 1 tile. Your base has to remain within your quadrant.

After all players moved the Earth and Mars tile get moved. (Mars: 9 tiles, Earth: 4 dice)
This ends the round.

**Special Conditons:**

Sun Quadrant:
Moving within the Sun quadrant is dangerous. Everytime one of your ships ends its turn within the Sun Quadrant you have to roll a dice to see if your crew or ship survive.
Any ship moving throuh or ending its turn on a tile directly touched by the sun is immediately destroyed.
Any tile adjacent the sun has a danger levl of 8. Count down form there untill you reach the outmost tiles in the sun quadrant with a danger level of 3.
Everytime one of your ships ends a turn within the sun Quadrant you have to roll a safety roll.
- If you roll higher than the danger level of the tile you are on, your ship and crew is safe.
- Rolling 2 or more less than the danger level will destroy your ship.
- Rolling exactly the danger level or 1 less, the radiation hits your ship strong enough to kill off the crew. Your vessel remains neutrally in space, until the crew of another ship (from ANY player) can board it, or you fail on a safety roll in one of the following turns and it gets destroyed by the sun.
- If a player boards the ship, they may move it 1 tile this round, and may still use all their remaining movement points on their own ship. After moving the boarded ship 1 tile, and it still being within the danger zone, they have to do a safety roll themselves.
- Higher Base Levels may reduce the Radiation danger level if you have the right upgrades to go with it.

Asteroid mining:
Mining operations can be hazardous. Some of the necessary explosions may shoot off large junks of the asteroid into space. Because of this Ships may only approach an asteroid for mining, if there is either one of your own or no ship on the tiles to your left and right of the asteroid. Of course, some more cunning captains use this fact to keep unwanted competition at bay.

Asteroid Event Card Rules (skip this untill you pull an asteroid event card): After deciding which Asteroid you got, roll 4 more dice to decide its location (3 for Energy). You may choose freely, which of the 4 dice you use for which of the following 4 steps:
A) Choosing quadrant. Clockwise, starting at 1 for your quadrant.
B) Metal + Water: Choosing Corner: Clockwise, starting at 1 for the corner closest to any player base.
   Energy: Choose the Counter-clockwise corner of the border between the rolled Quadrant and the Sun Quadrant.
C) Distance from chosen corner: Use the 3rd dice to count clockwise on the border between quadrants towards the next corner.
D) Offset: Use the last dice to chose how many tiles the asteroid is placed quadrant-inwards.

If you use the 3-4 dice smartly, you may be able to place the asteroid close to or inside your quadrant :)

Ore Processor: If you have the Ore Processor at least at level 1 you get to put each incoming Metal/Water ore (and later even Energy) in the ore processor. If you reach the required amount of ore in the Processor (f.e. 6 Water) you get to put 6+1 Water in your general Water storage after processing it. Your ore processor may simultaneously hold Metal, Water and Energy, but they dont mix. You cannot get 1 extra Metal from 5 Metal and 1 Water at level 1. You can get 1 extra Metal from 5 Metal and 3 Water on level 2 by processing the 5 Metal. The 3 Water remain untouched in

the Processor. If you are in dire need of any ressource you may always take it from the ore processor unprocessed, thereby not obtainign any additional ressource.

Team Mining:
Having double 6-es gives you the option to do team mining if you are next to an asteroid:
With team mining you get to choose one other player to help you answer up to 3 questions. Beforehand you may choose on a ratio in which any mined minerals will be split. You then keep answering questions till you get one answer wrong or are done with your third question. You then split any mined ores in the pre-arranged ratio. If no player is willing to accept your split-ratio, you loose the chance on team mining.

Future upgrades: In the future we may introduce an enhanced team mining mode where all players get to answer questions together. This would most likely be done by an event card.

Piracy: This rule is optional, but a lot of fun:
If a player brings a ship to another players base, and that base holds at least 10 ores of any type, the player may choose to rob the other player: Both players roll against each other on 2 dice each. If the robber rolls higher than the bases owner he gets to blindly pick 50% (Round DOWN!) of the base owners ores. If he rolls lower his piracy attempt is less successfull. He gets to pick 1 ressource directly and blindly pick ores untill he has 25%(Rounded UP! of the base owners Ressources. Ships from other players may not pass or stand within a neighboring tile of another player, or in other words, there must always be at least 1 tile between ships from differing players. This fact may be used to have 2 ships guard your base and thus making it inaccessible for other players, if you have 2 ships to spare.

**Victory Conditions:**

The first player to have obtained Main Base Level 4 wins the game

Terminology:
Auxiliary Upgrade equals Research upgrade equals any upgrade that is not a main base upgrade.

**UPGRADES**:
Main Base:
- Starting Point: Main Base Level 1.
- Main Base Level 2 Cost: 15 Metal, 5 Water. Bonus: Radiation Resistance Rolls gain +1 if you have Shipyard Level 2 and Engine Research Level 1.
Bonus #2: Allows for Base Movement. Cost:  (1 Metal, 1 Water and 1 Energy) or (1 Metal and 5 Water)
- Main Base Level 3 Cost: 15 Metal, 10 Water, 5 Energy.    Bonus: Radiation Resistance Rolls gain an addistional +1 if you the G-Force Jammer Research and permanently station one of your ships at the border to the solar quadrant to scan for radiation.
Base Movement Cost: (1 Energy) or (1 Metal and 3 Water)
- Main Base Level 4 Cost: 25 Metal, 25 Water, 15 Energy = **Victory**

Shipyard:
Lvl 1: Cost: 5 Metal, 2 Water. Ability to Construct ships at Ship Cost: 4 Metal, 2 Water.
Lvl 2: Requires Research Station. Cost: 4 Metal, 2 Energy. Ship Cost: 3 Metal, 2 Water or 1 Energy.
Lvl 3: Requires Research Station. Cost: 4 Metal, 2 Water, 3 Energy. Ship Cost: 2 Metal and (1 Water or 1 Energy).

<u>Research Station:</u> Necessary Building to access further Research. Cost 4 Metal, 2 Water.

<u>Engine Research:</u> Requires Research Station.
Lvl 1: Afterburner: Ships get +1 to Movement; Cost: 2 Metal, 2 Water, 5 Energy
Lvl 2: Engine Optimization: Rolling 6 Unlocked. You no longer have to reroll for 6. Cost: 2 Metal, 2 Water, 5 Energy
Lvl 3: +1 Afterburner; Cost: 2 Metal, 2 Water, 5 Energy

<u>Cargo Research:</u> Requires Research Station.
Lvl 1: Expands ships max capacity for Metals and Water from 3 to 4; Cost: 7 Metal, 1 Water, 2 Energy
Lvl 2: Expands ships max capacity for Energy from 1 to 2; Cost: 3 Metal, 1 Water, 4 Energy
Lvl 3: Ship already holding up to no more than 2 Metals or 2 Water or 1 Energy can now mine once more next round and not loose any mined ressources, as long as the stored and mined ressources match. Cost: 8 Metal, 5 Energy

<u>Ore Processor Research:</u> Requires Research Station.
Lvl 1: For every 6 Metal or Water that reach your base, get 1 extra. Cost: 4 Metal, 2 Water, 1 Energy
Lvl 2: Metal and Water Processing reduced from 6 to 5, New: Energy Processing: Get 1 extra Energy for every 4 Energy deliverd to your processor.  Cost: 2 Metal, 2 Water, 4 Energy
Lvl 3: All processing cost reduced by 1. (Metal/Water 4, Energy 3). Cost: 4 Metal, 4 Water, 4 Energy

<u>Cargo Slingshot:</u>
Requirements: Cargo Research lvl 2, Ore Processor Research lvl 1.
Cost: 4 Metal, 5 Energy
After mining you MAY shoot your cargo directly to your base. Consumes 1 Water as fuel directly from your ship. (or base if you were mining Metal/Energy)

<u>G-Force Jammer:</u>
Requirements: Engine Research lvl 2, Shipyard lvl 2; Cost: 5 Metal, 3 Energy.
Reduces g-forces to your crew massively, allowing your ships to spend only 1 movement point on mining and keep moving afterwards.


**Event Cards (more detailed Version):**

<u>Holdable Cards:</u>
- Advanced Radiation Shield: Save this card for when you need it. Upon failing a Radiation Roll, use this card to save your ship and crew. Return the card.

- Basic Radiation Shield: Save this card for when you need it. Upon failing a Radiation Roll, use this card to repeat the Radiation Roll once. If you fail again, no further Radiation Shield cards may be used. Return the card.

- Defective Radiation Shield: Save this card for when you need it. Upon critically failing a Radiation Roll, use this card to save the ship alone. Replace it by a neutral ship. Return the card.

- Software Talent: Save this card for when you need it. There is a programming genius currently passing through your base.  When you decide to use it, it will counteract any negative effects a "Nav-Net Update" or "Engine Software Update" Event may have on you. You may choose to counteract it's negative effects on all others as well. In case the event is a "Nav-Net Update" Event

that you drew yourself, you may selectively choose which other players will be infected by the malware.

- Hiddent Talent: Save this card for when you need it. One of your ships flight crew includes a programming genius. As luck would have it he just so happens to be on duty when a malicious software packet reaches your ship. When you decide to use it, it will counteract any negative effects a "Nav-Net Update" or "Engine Software Update" Event may have on YOU.

Immediate Events:
- Spy: Roll a dice and count that number from the youngest player to the oldest. If the player is not you, choose from any auxiliary upgrade or research they have and build it for half the cost. In case you try to build a higher level upgrade/research without having the lower levels, you still have to pay for those lower levels as well (at half cost). You still need to fullfill all other requirements to be able to build it.

- Veteran Spy: Roll a dice and count that number from the youngest player to the oldest. If the player is not you, choose from any auxiliary upgrade or research they have and build it for half the cost. Reduce that players auxiliary Upgrade by 1 level.

- Sabotage: Choose any player and roll a dice against them. If your roll is higher than theirs destroy any chosen auxiliary upgrade completely. You may also choose to do nothing instead.

- Sabotage: Choose any player and choose any auxiliary upgrade and delevel it by 1.

- Life Support Failure: Life support on this ship fails. Replace it by a neutral ship. The first player to reach it can claim it by splitting their crew in half, thereby minimally manning both ships. Neither ship can mine, until revisiting their base.

- Derelict Ship: Your ship stumbles across a derelict ship. Place a second ship next to your ship. As both ships are only minimally manned, neither ship can mine, until revisiting your base.

- Ore Pocket: You found a previously undiscoverd ore pocket. Increase the ore content of the asteroid you are currently working on by 2.

- Research Leak: One of your competitors has made a significant advancement in ore scanning techniques. Luckyly one of their researchers shared the finding with everyone for the betterment of humanity. All asteroids content is increased by 1.

- Scanner Software Upgrade: Your current ships scanner software has not been updated in several rotations. Sadly rescanning the current asteroid after the software update shows 1 less ore content.
- Scanner Software Bug-Fix: Your current ships scanner software seemed glitchy recently. Rescanning the current asteroid after a hotfix shows 1 more ore content.

- Nav-Net Update: Hidden within the regular Nav-Net Updates from your home base you completely miss the embedded malware, no doubt from one of your competitors. Before affecting your ships at all, the message has already resent itself. All your ships loose any remaining movement points this round. All players roll a safety roll. The other players must add or subtract the difference of their base level to yours to/from their roll. Any players rolling lower than you will have their ships disabled for this round as well.

- Engine Software Update: Hidden within the regular Engine Updates from your home base you almost completely miss the embedded malware, no doubt from one of your competitors. Your current ship cannot move next round. Keep the card untill then. Luckyly you could stop the message before spreading to any further ships.

- Criticla Reactor Malfunction: You loose your ship.

- Solar Flare: Roll a Radiation Roll against Danger level 4 (Base upgrades may help).If you fail by 1-2 Replace it by a neutral ship. Failing it by more results in the complete loss of a ship. (Radiation shield cards may be used in any case)

- Asteroid: Roll a dice to decide which asteroid appeared: Metal 1-3, Water 4-5, Energy 6. Consult the rule-book to see how to continue.

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- Proximity Asteroid: Roll a dice to decide which asteroid appeared: Metal 1-3, Water 4-5, Energy 6. Consult the rule-book to see how to continue. Skip the roll for the quadrant, as it will appear in your Quadrant (Sun quadrant bordering yours for Energy)

- Proximity Asteroid: Roll a dice to decide which asteroid appeared: Metal 1, Water 2-4, Energy 5-6. Consult the rule-book to see how to continue. Skip the roll for the quadrant, as it will appear in your Quadrant (Sun quadrant bordering yours for Energy)

- Cunning Sabotage: You can't quite understand how it is possible, but it happens. After filling your ship's cargo hold to its capacity with ore from the closest asteroid, the asteroid explodes. You fail to understand how anyone on your minimally crewed ships could be a traitor to your cause. Remove the closest asteroid.

- Ingenious Invention: Some of your scientists came up with a prototype rocket-based asteroid propulsion system. Sadly it failed after only a short while. Move any asteroid by 1 tile in a direction of your choosing.

- Alien Bacteria: One of your scientist discovered a small sample of alien bacteria. The bacteria managed to gather microtraces of the ore that were previously spread out through the entire asteroid in unmineable quantities. Before the bacteria died off, they managed to gather several masses, that actually warrant mining. Restore one Asteroid of your choosing to FULL content.

- Inexplicable Phenomenon: Some kind of gravitational wave hit the solar system. Move all asteroids 1 tile. Direction: Vector Sun -> Player left of you. Any asteroids now outside of the Solar System or directly touching the sun disappear.

- Battery Overflow: Energy consumption on your base has been pretty low recently. So low, as a matter of fact, that your batteries are full to the bursting. As to avoid the batteries running full, base command has decided to activate the base thrusters and move the base by 1 tile in any direction desired by you. Requires Base level 2: You may choose not to move your base as well.