

In-situ resource utilization (ISRU) is the mining and use of space resources.

ISRU is an asteroid mining game for 3-4 players lasting 45-75 minutes.

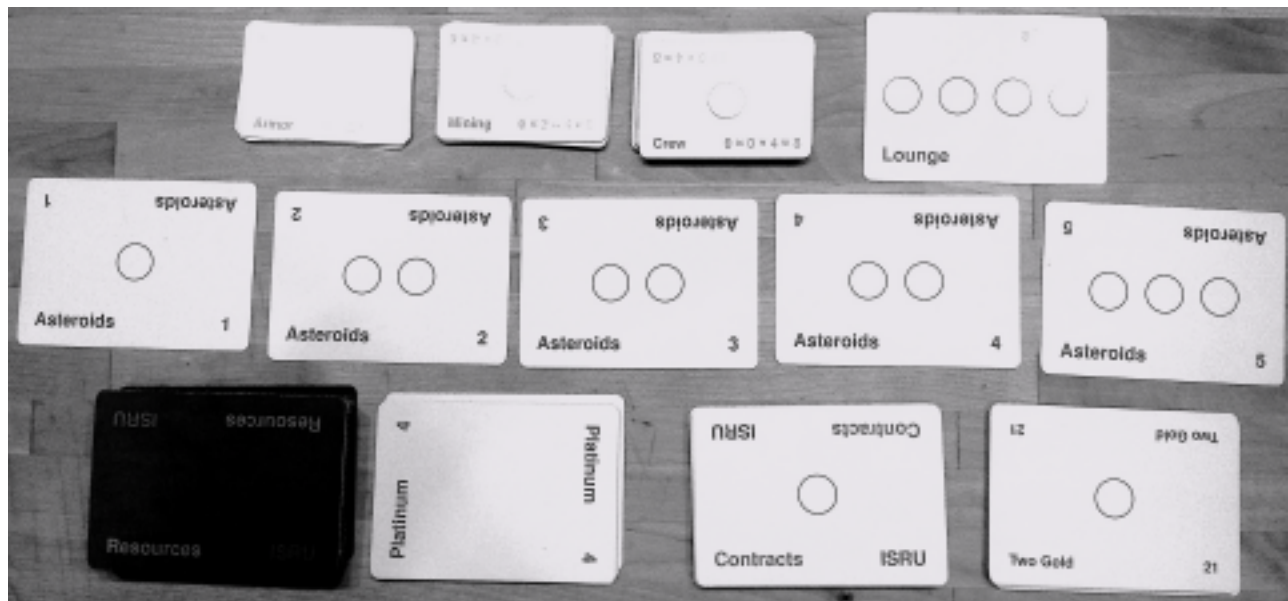
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Overview

Balance mining, upgrading, and contracts to earn points until contracts run out!

- **Setup:** Setup shared locations and distribute components to players.
- **Rounds:** Rounds contain many actions and then a **Refresh**.
 - **Actions:** Players place crew disks to take actions.
 - **Asteroids:** Take a chance to gain resources.
 - **Reserve Contracts:** Get more options of contracts to fulfill for points.
 - **Fulfill Contracts:** Trade resources for points.
 - **Lounge:** Avoid risk or expense but get no more actions for the round.
 - **Upgrades:** Trade resources for improved capabilities.
 - **Refresh:** Retrieve crew disks, reveal new contracts, and pass first player rocket.
- **Game End:** Play a final round when no contracts remain after **Refresh**, then calculate scores.

Setup



- Gather upgrades by type, then give each player two *Crew* upgrades and one *Mining* upgrade.
- Gather crew disks near the upgrade piles, each player should choose a different color and take two.
- First player will be whomever has spent the least time on Earth (or choose how you like).
- First player: take one *Copper* and the first player rocket.
- Second player in clockwise order: take one *Silver*.
- Third player in clockwise order: take one *Copper* and one *Silver*.
- Fourth player in clockwise order: take two *Copper* and one *Silver*.
- Shuffle remaining resources and form a draw pile near the asteroids.
- Shuffle contract cards and deal three to each player.
- Players may discard from these contracts, but must keep at least one each.

- Arrange the asteroids by their number from lowest to highest.

Actions

Starting with the first player, take turns in clockwise order, playing actions. To play an action, place a crew disk on an empty action circle and follow the instructions for that location. The next player in clockwise order with remaining crew disks will take their turn. When all crew disks have been placed, the round ends. **Refresh** and begin the next round.

Asteroids

- Place a crew disks on the next open action circle of the lowest available asteroid.
- Roll the die, add your number of *Armor* cards and compare:
- If your total is greater than the number on the asteroid:
 - You successfully mined! Draw resources equal to your number of *Mining* cards.
 - If resources run out, shuffle discarded resources to form a new draw pile.
- If your total is less than or equal to the number on the asteroid:
 - You crashed! Discard all of your resources.
 - Place your remaining crew disk on open action circles starting with the lowest number asteroid.

David places one of his crew disks on the first asteroid space. He rolls a 4, which beats the 2 on the asteroid. He draws one resource card for his one mining card.

Susan places one crew disk on the next asteroid space. She rolls a 3, which only ties the 3 on the asteroid. Armor may have added to her roll, but she has none and crashes. She places her remaining crew disk on the next available action circle and discards her resources. She will have to wait until next round to take further actions.

Reserve Contracts

- Draw 3 contract cards and place a crew disk in their place.
- From the drawn contracts, choose at least one to add to your reserved contracts.
- Be careful, when the game ends remaining reserved contracts reduce your score.

Morgan draws three contracts and places a crew disk on the contract pile. He draws 'Copper + Silver', 'Two Gold', and 'Three Silver'. He decides to take a risk keeps 'Three Silver' as it is worth the most points. He decides not take too many contracts at once though, and discards 'Copper + Silver' and 'Two Gold'.

Fulfill Contracts

- When the game ends your fulfilled contracts will be added to your score.
- Reveal one of your reserved contracts and pay the matching resources to place your crew disk on it.

*Teresa previously drew a 'Silver + Gold' contract and has both *Silver* and *Gold*. She reveals the contract, discards the matching resources and places a crew disk on it. When the game ends she will have an additional fourteen points.*

Lounge

- Using the lounge allows you to avoid risky or expensive actions.
- Place all of your remaining crew disks onto an empty *Lounge* action circle.
- You will take no further actions this round, but will play as normal again in subsequent round.

Morgan has resources in hand which he hopes to use to fulfill his valuable Three Silver reserved contract. He sees the asteroids have grown risky late in the round. Since he does not want to spend or risk these resources nor take another unfulfilled contract, he places his remaining crew disks on the Lounge and hopes that his caution will pay off.

Upgrades

- There are several available upgrades, each providing different bonuses:
 - *Armor*: Add one to your asteroids die roll for each armor upgrade card.
 - *Crew*: Use one crew disks each round for each crew upgrade card.
 - *Mining*: Draw one resource for each mining upgrade card when succeeding on asteroids.
- Pay the cost on the upgrade card to collect it and place your crew disk in its place.
- Costs are for the first, second, third, and forth upgrade of this type that you purchase.
- You may pay by discarding any combination of resources from your hand, but recieve no change.
- Upgrades are collected immediately and start benefitting you right away.
- Each type (*Armor*, *Crew* or *Mining*) may only be used by one player per round.
- If a type of upgrades runs out, that upgrade remains unavailable for the rest of this game.

David decides to upgrade his Mining ability. He has his initial mining upgrade, so he must pay the second cost of 2. He pays a silver from his hand, takes a Mining card and places a crew disk. He will draw one additional resource when succeeding on asteroids for the rest of the game and no one else may upgrade mining this round.

Susan decides to play it safe after crashing and upgrade Armor. The first Armor only costs 1, but the cheapest resource she has is a silver. She decides to pay this, losing the change, takes an Armor card and places a crew disk. She will add one to her die rolls for the rest of the game and no one else may upgrade mining this round.

Teresa also decides to upgrade, but Armor and Mining are taken so Crew is her only option. With two starting Crew, she must pay the third cost of 4. She pays a gold and a copper together, takes a Crew card and places a crew disk. She will have this extra crew disk to use for the rest of the game and no one else may upgrade crew this round.

Refresh

- If the contracts do not have a crew disk on them, discard the next three contracts face up.
- All players recollect the crew tokens the used last turn.
- Pass the first player rocket clockwise to the next player.
- If the contract draw pile is empty, the next round will be the final round of the game.

Game End

If the contract draw pile is empty after **Refresh**, play one final round. Then players add the value of their resources and fulfilled contracts together and subtract the value of their reserved contracts to get a final score. The player with the highest score wins. In a tie the player with the most fulfilled contracts wins. If a tie remains, play again!

$$\text{Final Score} = \text{resources} + \text{fulfilled contracts} - \text{reserved contracts}$$