A deck. A ship. A long way home.

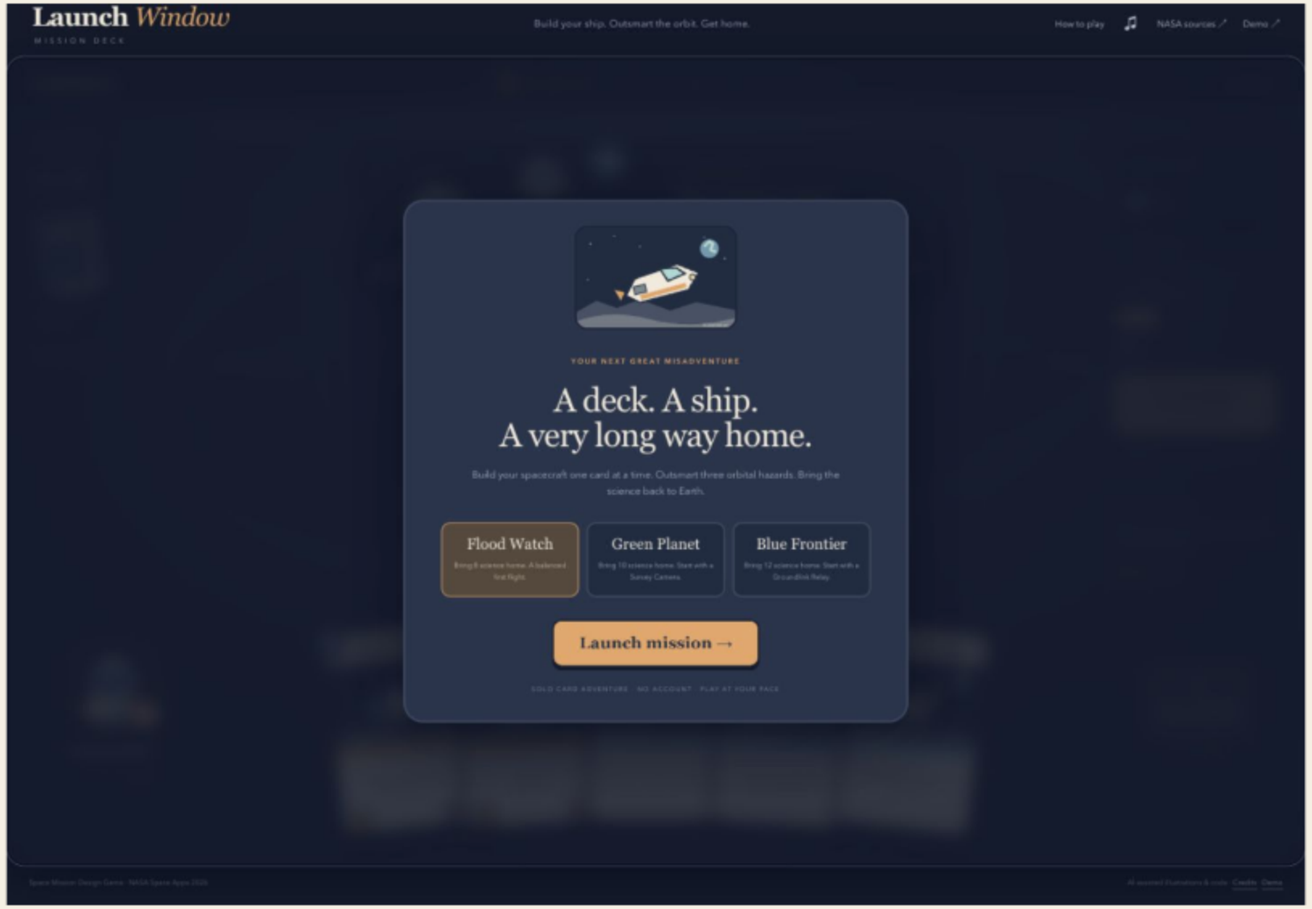
Launch Window / Mission Deck

Challenge: Space Mission Design Game

Build your spacecraft one card at a time.

Outsmart orbital hazards.

Bring the science home.



Team: Dammit Jim, I'm a vibe coded game not a mission simulator

Krzysztof Radomski

Play Launch Window →

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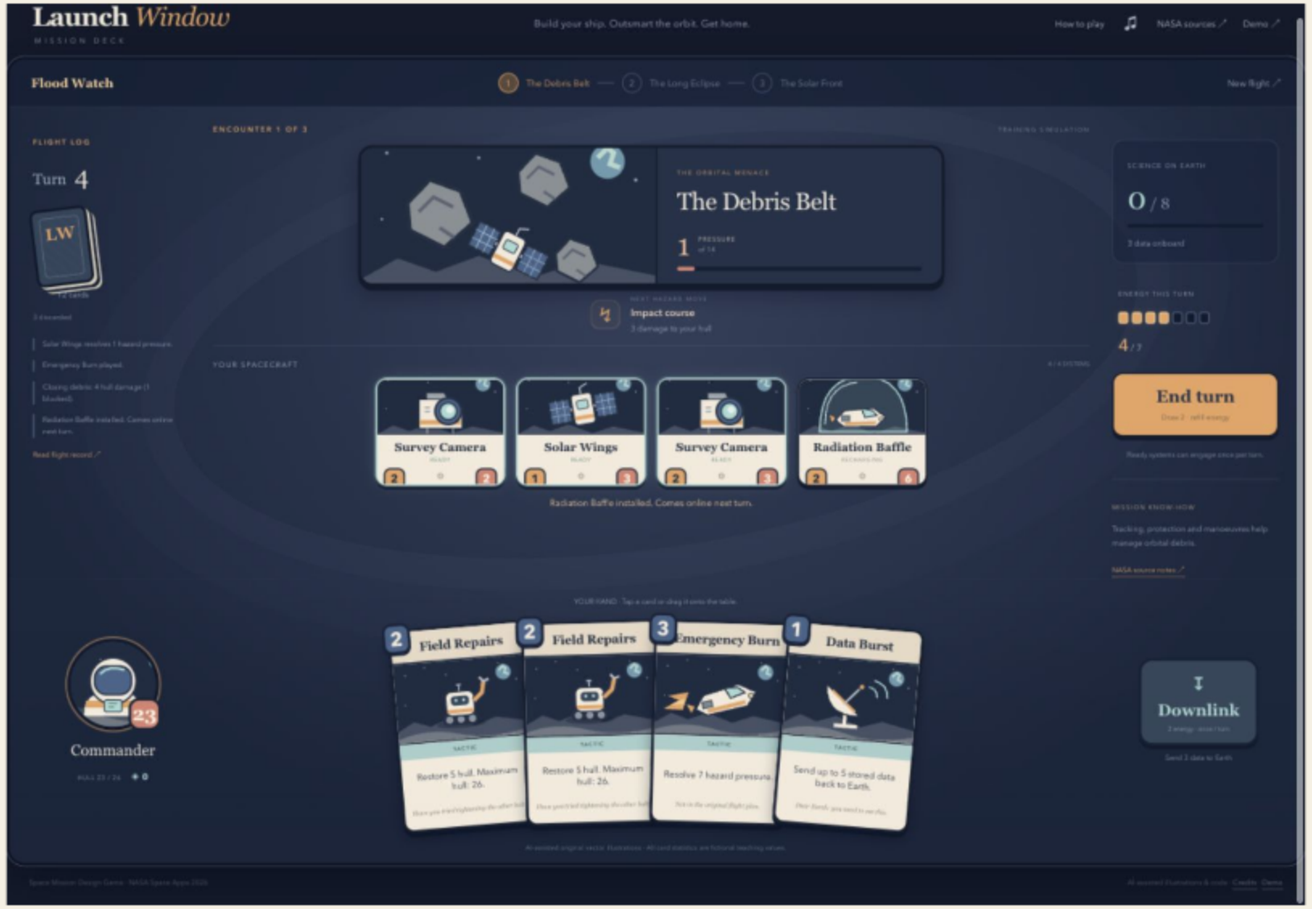
Build your spacecraft

Real choices in a hand of cards

Install systems in four slots.

Solar Wings provide energy. Survey Cameras collect data. Protective systems help the hull survive.

Play tactics for immediate help.



Play Launch Window →

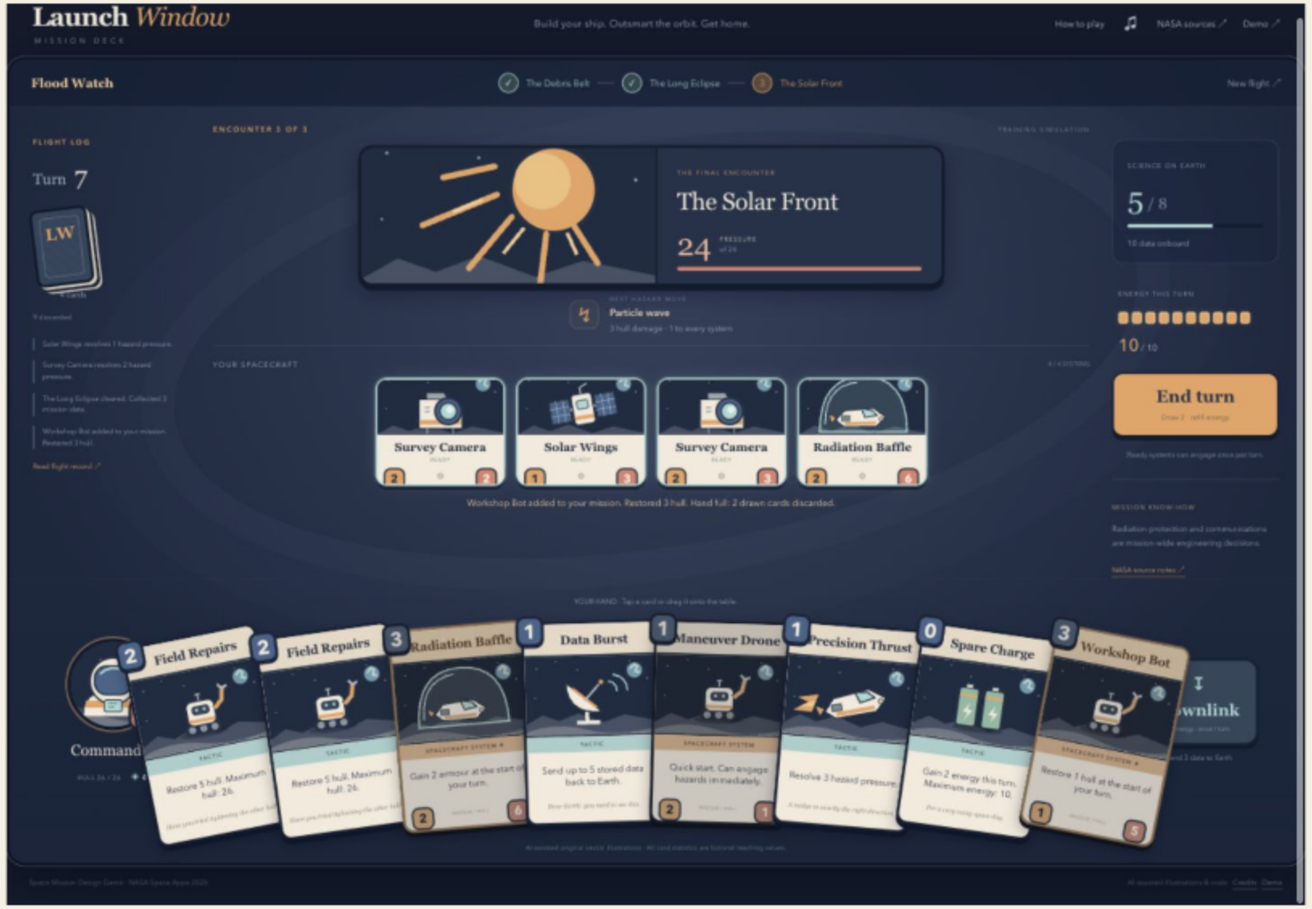
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Read the next move

A hazard’s turn is never a mystery

Ready systems engage once per turn.

Resolve pressure before the hull fails. Armour absorbs hull damage; some hazards also damage installed systems.



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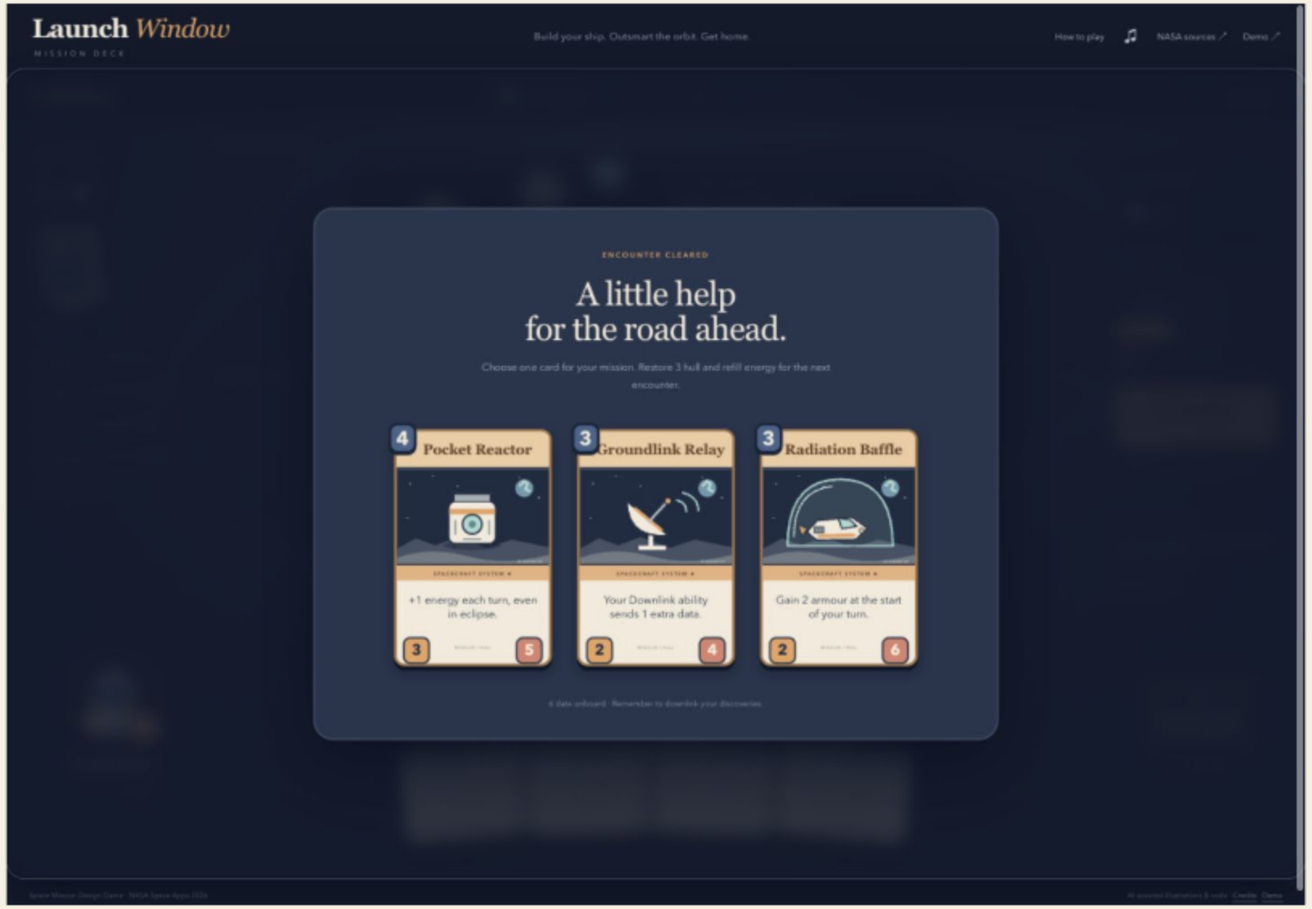
Grow the deck

Earn help for the road ahead

Clear an encounter and choose a new card.

Installed systems stay with the ship.

Choose power, protection, communications or repairs for the next challenge.

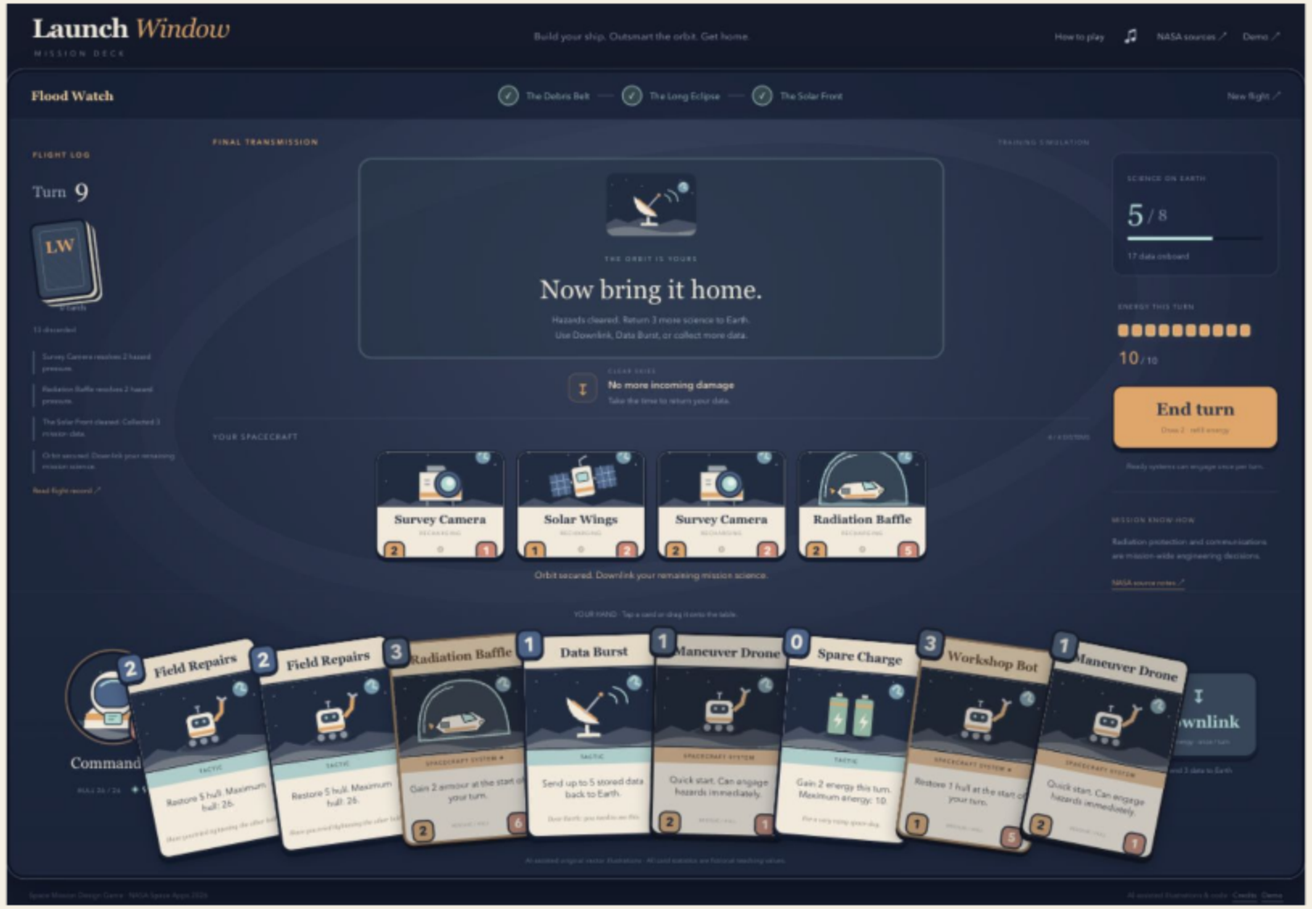


Bring the science home

Onboard data is only the beginning

Use Downlink or Data Burst to return science to Earth.

Clearing all three hazards is not enough if your science target is still unmet.



NASA resources in play

Mission principles. Explicit simplifications.

NASA's Design and Develop Science Missions informs connected mission segments.

CubeSat 101 informs spacecraft systems and ground communications.

Teaching rules, not real spacecraft physics.

3 mission objectives
15 card types
3 orbital encounters

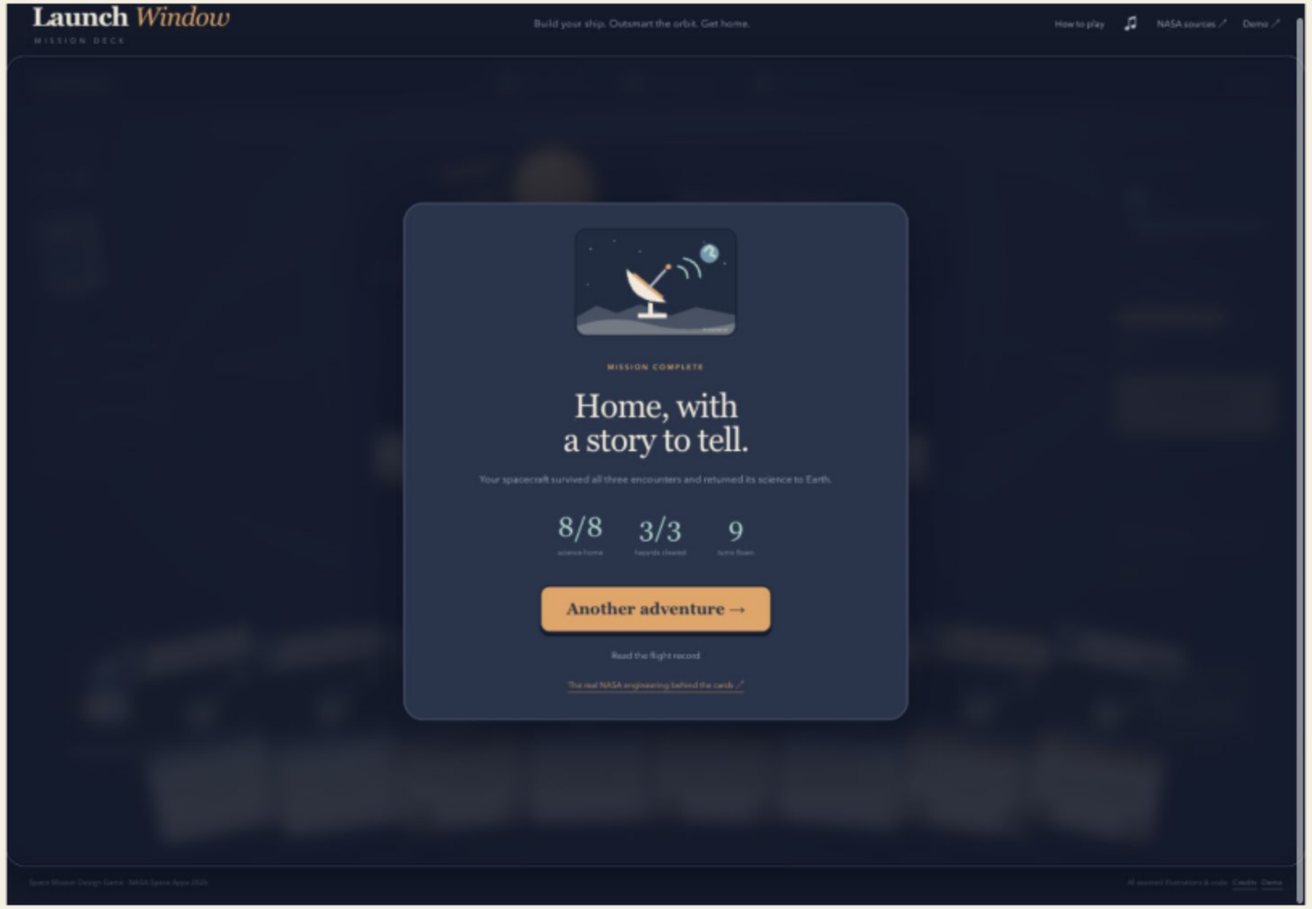
Sources and teaching assumptions →

Play. Revise. Explain.

One player. No account. A fresh flight.

A real browser run cleared 3 encounters on turn 9 and returned 8 science.

Next: classroom playtests to assess understanding. Learning outcomes are not yet measured.



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