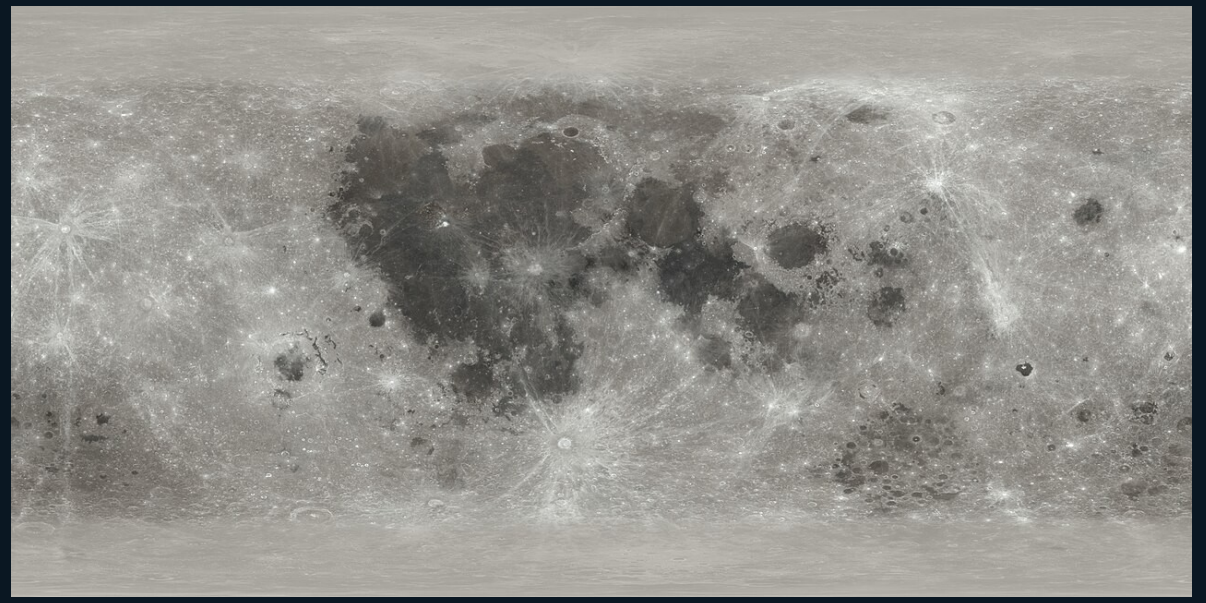
HOUSTON, WE HAVE AI

Lunar Lab

What keeps a Moon base alive?

An educational 3D strategy game



NASA SVS lunar map used in the game globe

Rotate the Moon. Enter your base.

NASA Space Apps 2026
Junior Astronaut Mission Trainer

More oxygen.
Less water.

One new module changes the whole base.

POWER

Runs the equipment

WATER

Feeds electrolysis and food production

OXYGEN

Supports the crew

Players predict a tradeoff, observe a stage and revise their plan.

Practice before command

Six guided missions. One action at a time.

01 **Rover and map**

Select the rover. Set a route.

02 **Data and solar power**

Read the evidence. Choose a sunlit site.

03 **Science expedition**

Reach the crater. Survey it. Read the result.

04 **Signal beyond the ridge**

Place a relay. Reconnect the rover. Send data.

05 Power and breathing
Choose the build order. Compare outcomes.
06 Landing and delivery
Choose a landing site. Bring supplies to base.

Supplies now. Autonomy later?

A cargo choice changes the next decisions.

CONSUMABLES

Water, oxygen and food meet immediate needs.

EQUIPMENT

A solar array and recycler support local production.

Choose a landing site. A cargo rover brings supplies to base.

Game distances and timing. No rocket-plume or regolith-ejecta simulation.

A real solar flare

39

MINUTES

10 May 2024
X3.9 solar flare

06:27 start 06:54 peak
07:06 end UTC

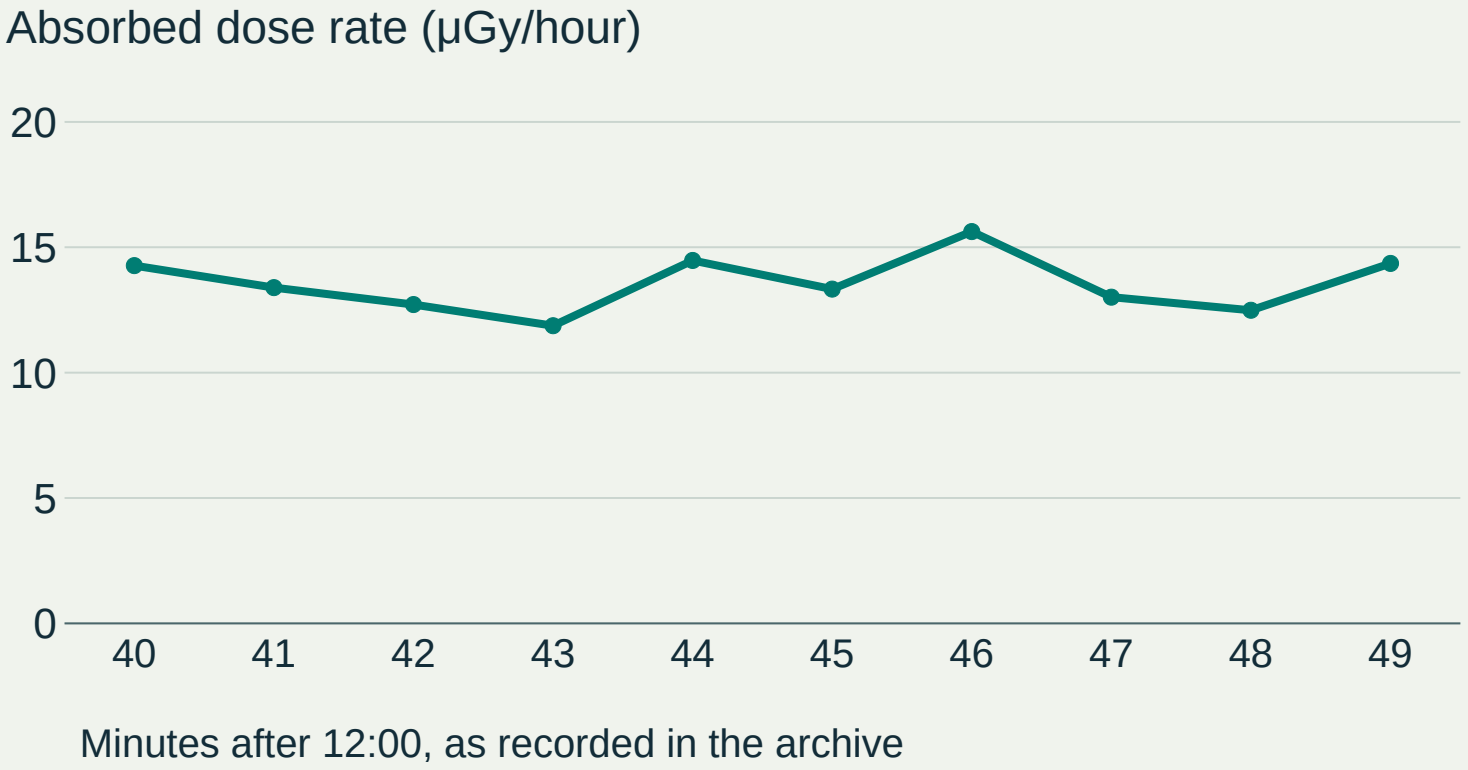
Players calculate duration. Then ask what else a crew decision needs.

NASA CCMC DONKI, event 30666 / v2

Flare class alone cannot establish a lunar radiation dose.

Location changes the meaning

Orion HERA-HSU1 21 November 2022



12:46

15.63 µGy/hour

Maximum of these 10 readings

Measured inside Orion’s storm shelter

NASA OSDR / RadLab archived sample

Instrument reading, not a person’s dose or a lunar-surface measurement.

What would you build first?

PLAYABLE NOW

A lunar globe and field camps
A minimap for navigation
Earth cargo with ground delivery
Six guided missions

LEARNING GOAL

Explain a resource choice.
Recognize what the data cannot tell you.

Learner evaluation is the next step.

Play Lunar Lab

NASA SVS DONKI OSDR / RadLab NASA LunaNet

OpenAI ChatGPT and Codex assisted development and this presentation. Independent project.