

HOW TO PROTECT ASTRONAUTS FROM RISKS ON THE **MARS**

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PLAN:

✦ Space Radiation ✦

- Gravity fields
- Closed environment
- Confinement problem

▶ SPACE RADIATION ◀

SUN



- Sun is a source of radiation
- Solar flares can kill astronauts
- Key: Study the Sun, create new shield for spaceship

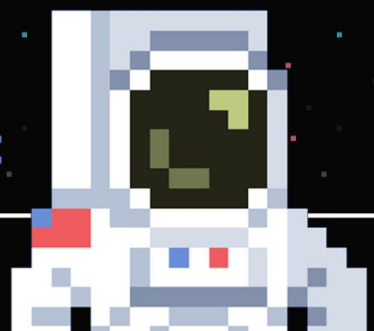


▶ SPACE RADIATION ◀

GALAXY



- Another source of **radiation**
- May increase **cancer** risk, damage central nervous system
- Key: use more efficient shielding materials

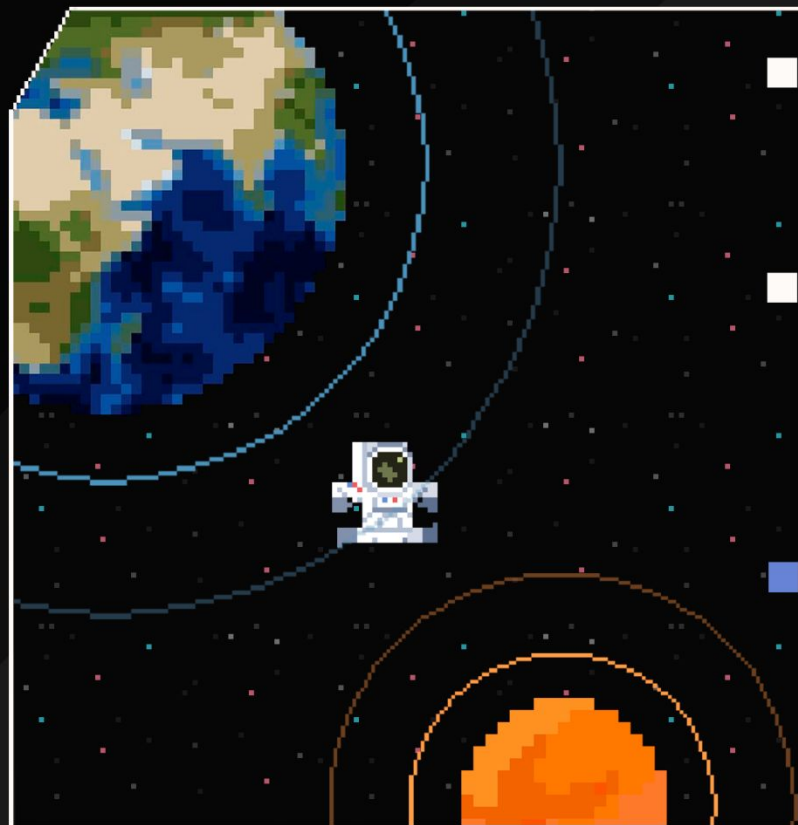


⚡ ENERGY: 3

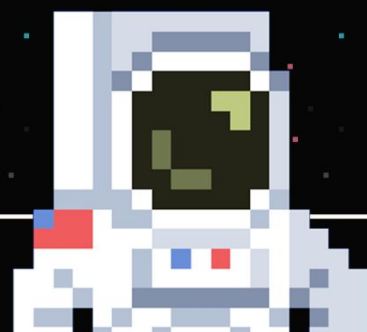
🛡️ SHIELD: 1

❤️ HEALTH: 6

GRAVITY FIELDS



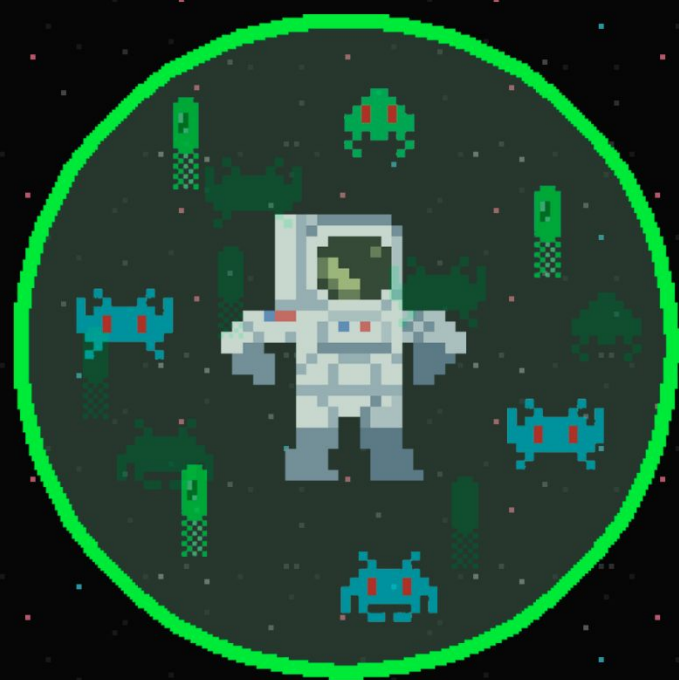
- During 6 months you will be **weightless**
- On the Mars, you will have to work in **1/3** of Earth's gravity
- **Key: use medicines, do regular exercises**





CLOSED

ENVIRONMENT



- **Microbes** can change properties in space
- High stress hormone levels increase **disease** risk
- Key: monitor the air quality of the space station



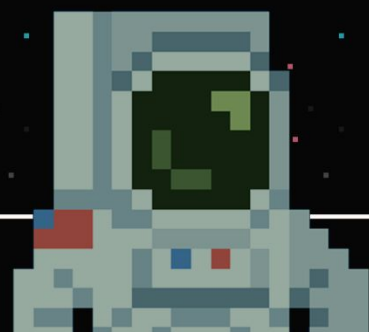
ENERGY: 1



SHIELD: 0



HEALTH: 5



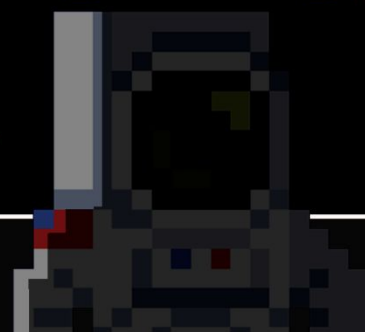
► CONFINEMENT ◀

- You'll be **crowded** in a small space over a long time
- Isolation can cause **depression**
- Key: New Lighting, keeping a journal

 ENERGY: 0

 SHIELD: 0

 HEALTH: 3



TO SUM UP...

✦ Radiation

- Weightlessness
- Microbs
- Isolation



ENERGY: 0



SHIELD: 0



HEALTH: 0



«What does not kill him,
makes him **stronger.**»

F. Nietzsche



A pixelated space-themed background featuring a large red planet in the upper right, a grey cratered planet in the lower left, and a dark space filled with white stars. A white-bordered menu box is centered on the screen.

THANK YOU

REPEAT?



YES

NO