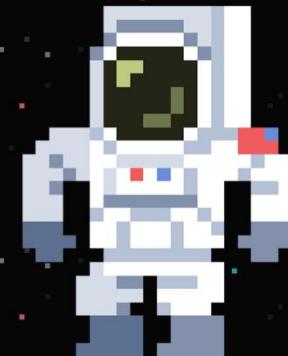


HOW TO PROTECT ASTRONAUTS FROM RISKS ON THE MARS

BY YANA KLABUKOVA



PLAN:

- Space Radiation ←
- Gravity fields
- Closed environment
- Confinement problem

► SPACE RADIATION ◄

SUN

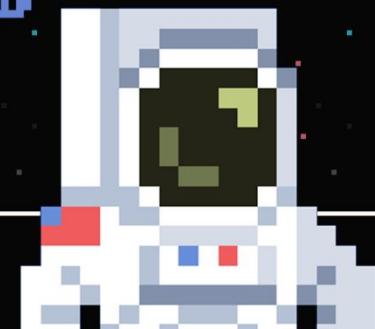


- Sun is a source of **radiation**
- Solar flares can **kill** astronauts
- Key: Study the Sun, create new shield for spaceship

⚡ ENERGY: 3

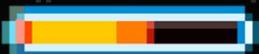
🛡 SHIELD: 2

❤ HEALTH: 6

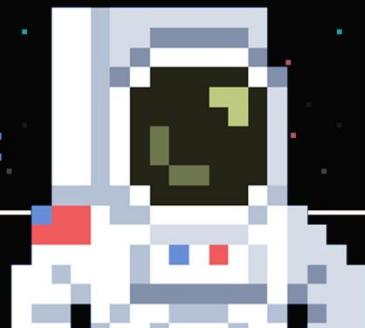


► SPACE RADIATION ◄

GALAXY



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

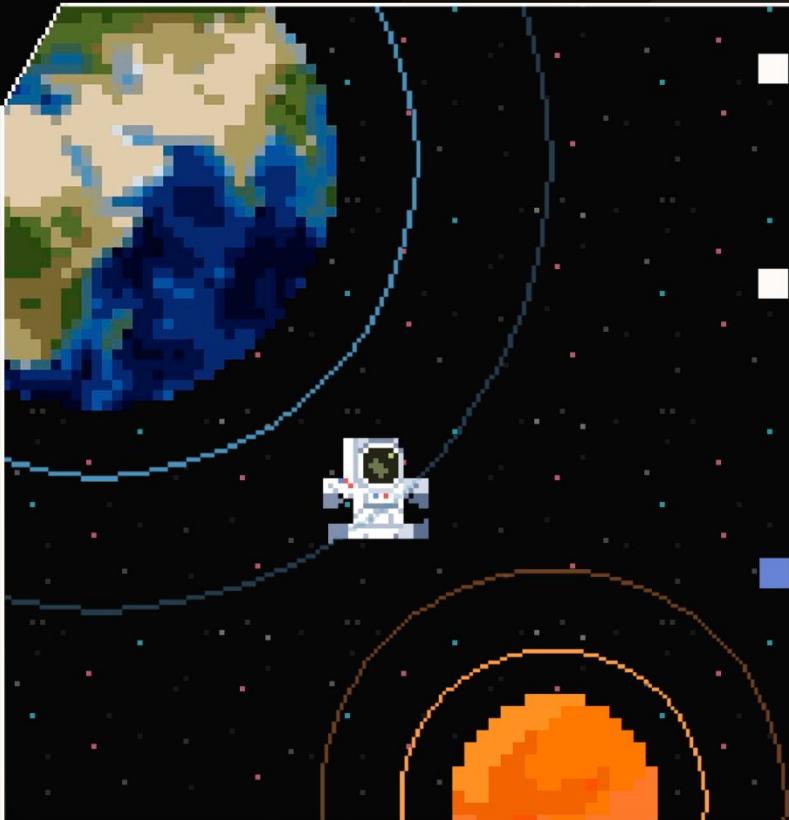


⚡ ENERGY: 3

🛡 SHIELD: 1

❤ HEALTH: 6

▶ GRAVITY FIELDS ◀

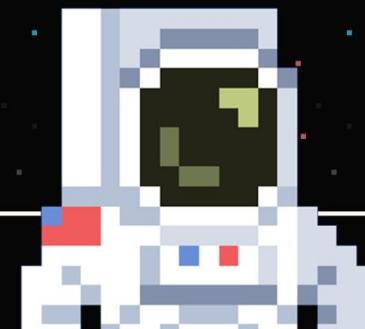


- During 6 months you will be **weightless**
- On the Mars, you will have to work in **1/3** of Earth's gravity
- Key: use medicines, do regular exercises

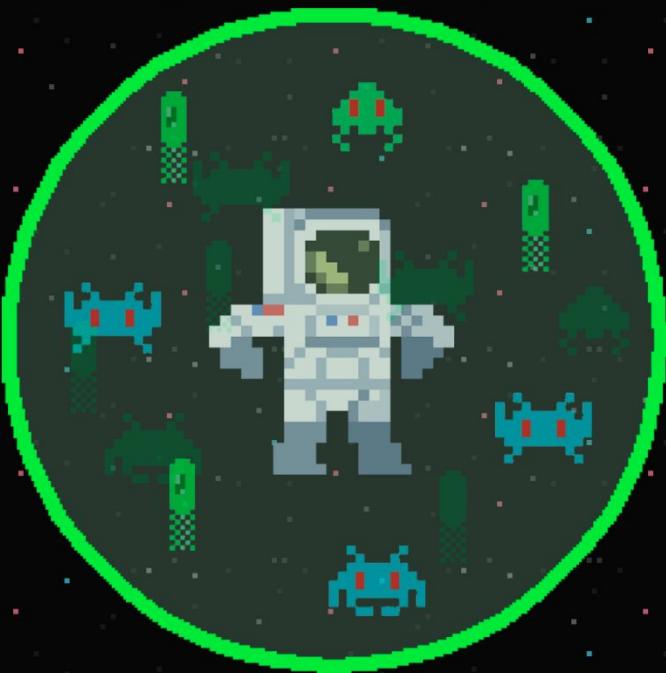
⚡ ENERGY: 3

🛡 SHIELD: 0

❤ HEALTH: 6



CLOSED ENVIRONMENT

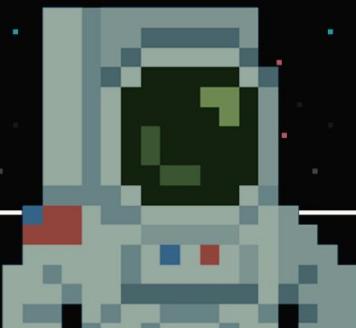


- Microbes can change properties in space
- High stress hormone levels increase disease risk
- Key: monitor the air quality of the space station

⚡ ENERGY: 1

🛡 SHIELD: 0

❤ HEALTH: 5



► CONFINEMENT ◀

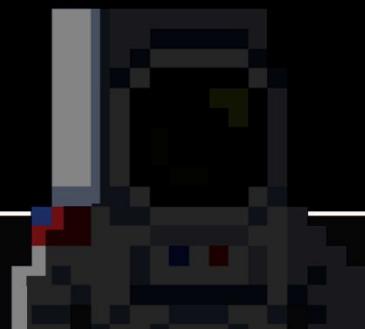


- You'll be **crowded** in a small space over a long time
- Isolation can cause **depression**
- Key: New lighting, keeping a journal

 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



THANK YOU
REPEAT?



YES

NO