

A photograph of a desert landscape on Mars. In the foreground, a rocky outcrop is visible. In the middle ground, a Mars rover, possibly Curiosity, is standing on the sand, facing away from the camera towards a range of rocky mountains in the background. The sky is a hazy orange.

Marooned on Mars



Take out a blank sheet
of paper, label it

Page 317: **M**arooned
on **M**ars

The mission to
save Mark Watney.

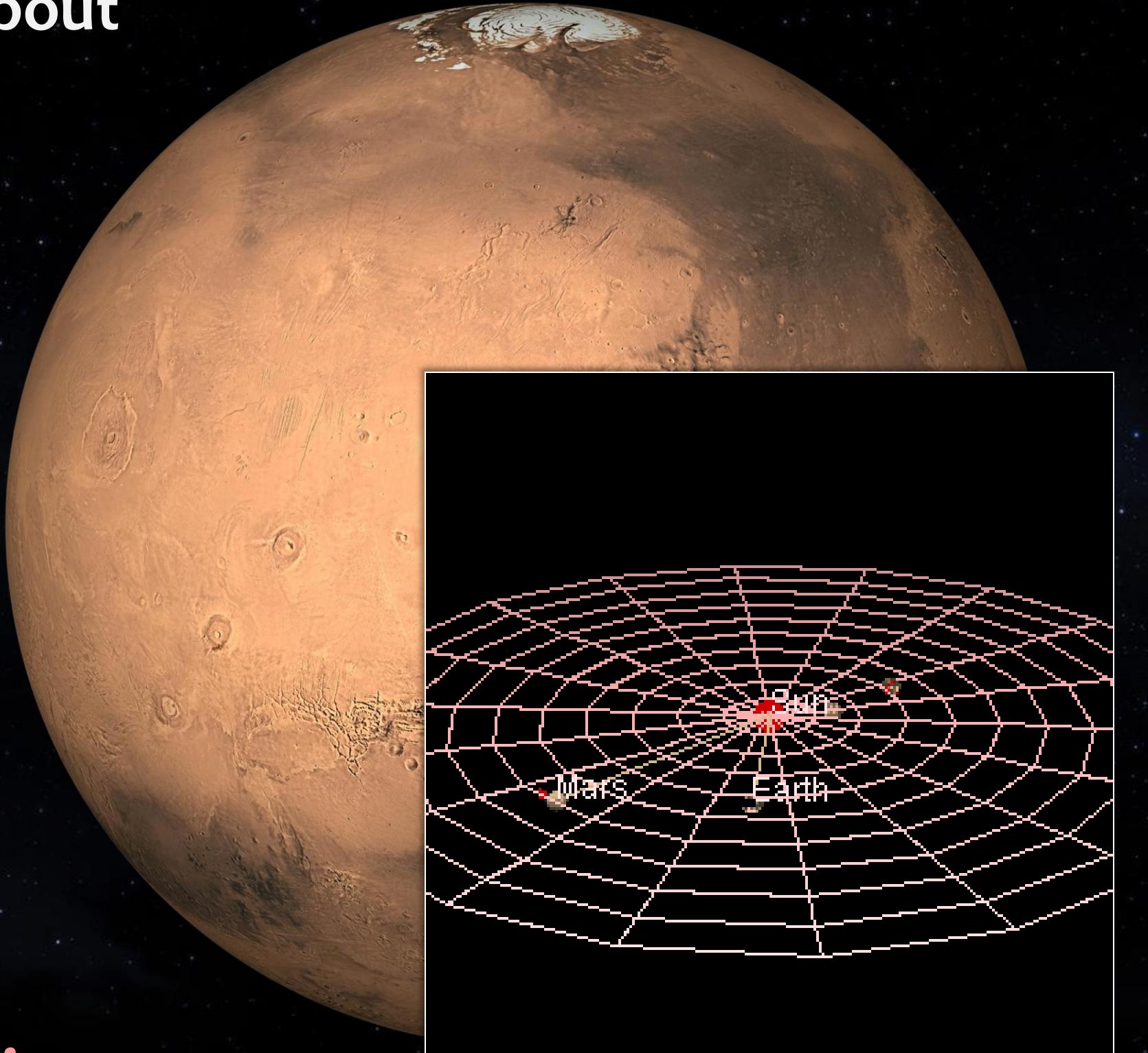
About $\frac{1}{2}$ the size of Earth and about $\frac{1}{3}$ of the gravity.

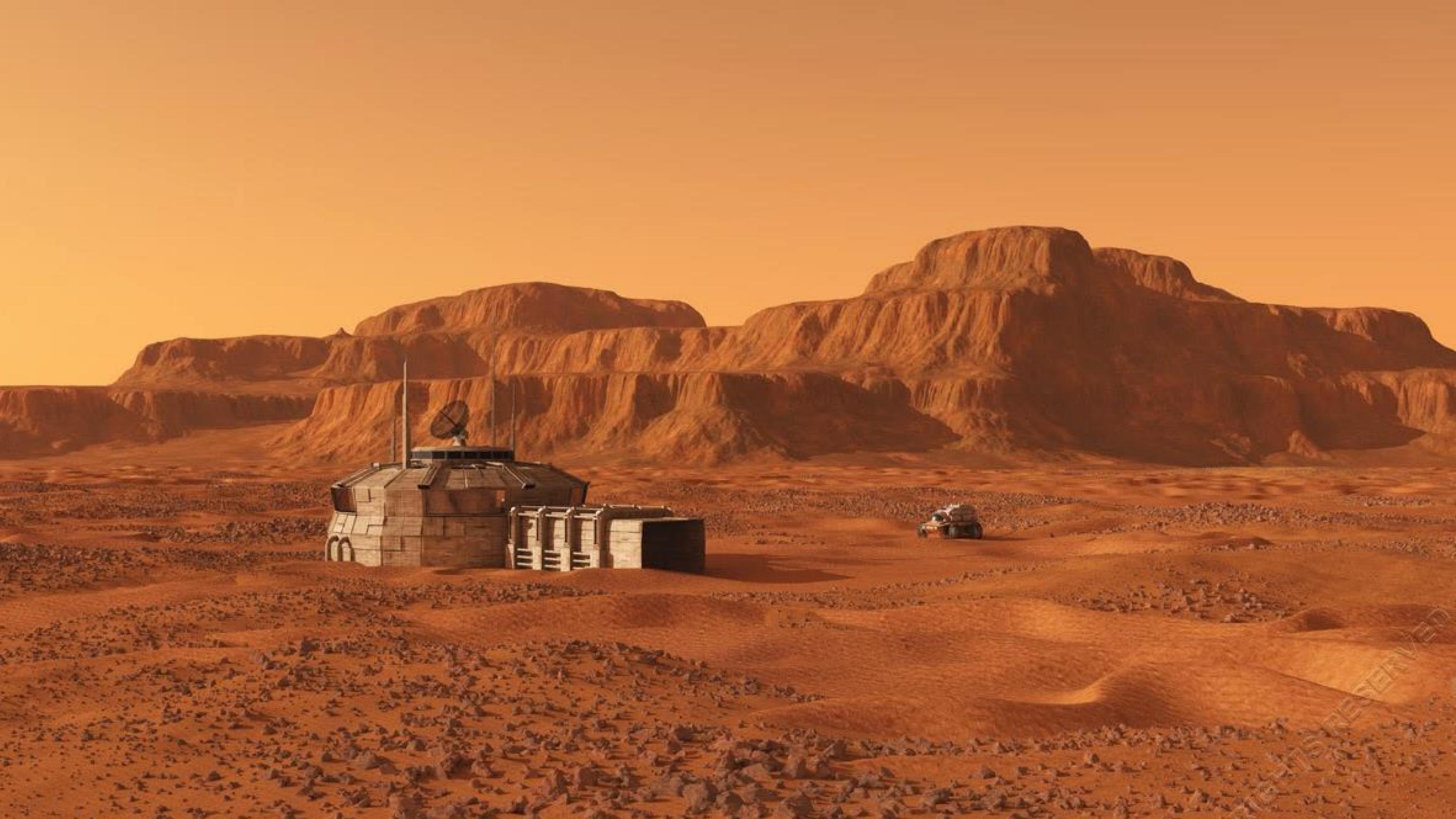
Average temperature -81°F

Atmosphere is 1% of Earth's, made of mostly CO_2 .

Water is present, although it is largely buried, salty, frozen, and undrinkable.

Surface is covered in iron oxide (rust) and silicon dioxide (sand).







CAUTION
STEP

WATNEY
20



R2

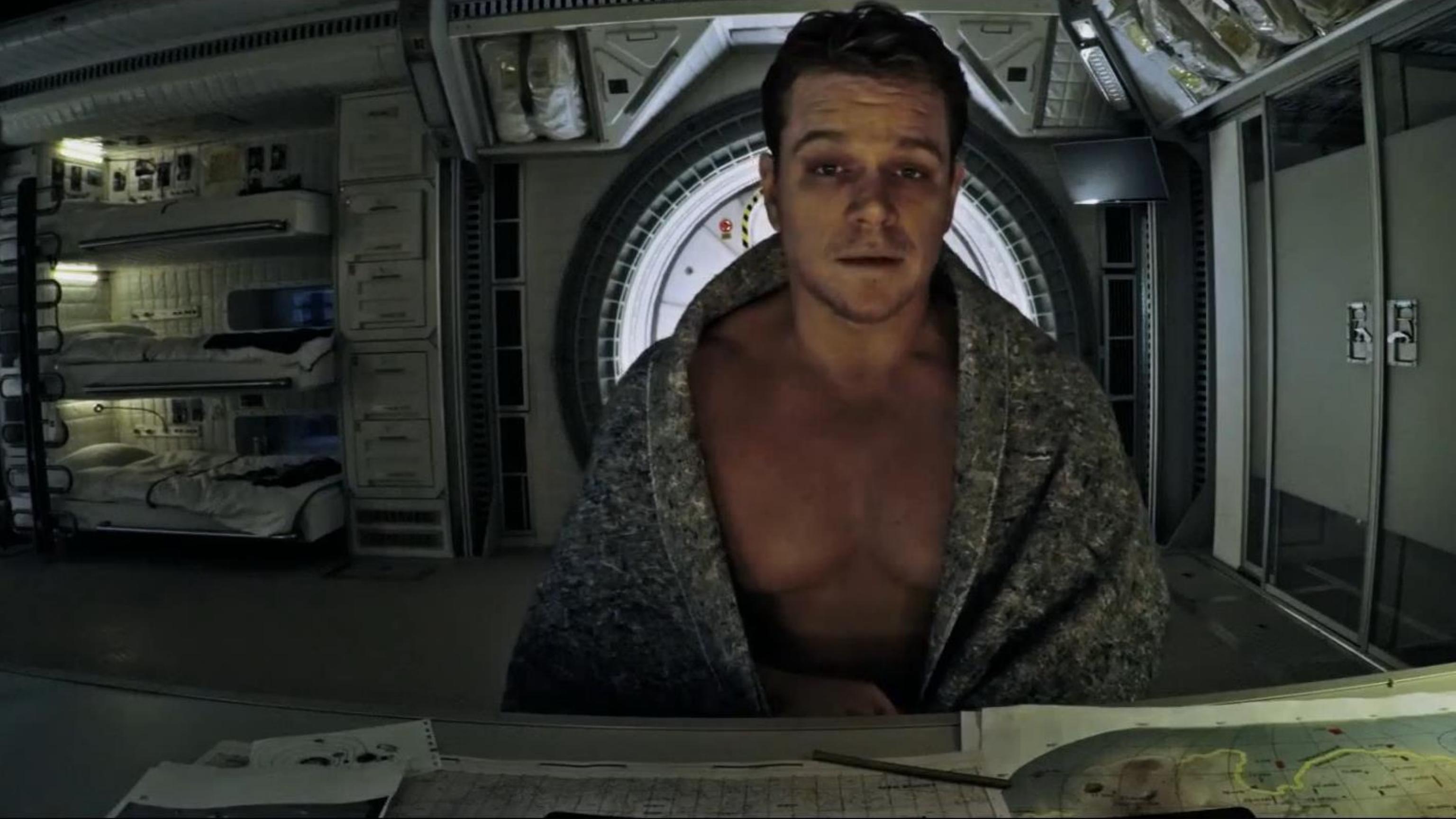
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CAUTION
PCBs

FLAMMABLE

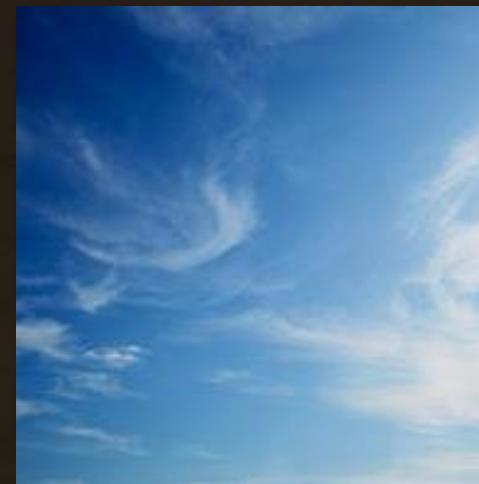


What does he need to survive?

1. Water.



2. Oxygen.



3. Clean air.

4. Food.

Goal: You and your partner, two NASA chemists, must send Mr. Watney four lab procedures that explain how to...

1. Obtain safe drinking water.



2. Find a long-term source of oxygen.

3. Purify the breathable air.



4. Obtain food.