

SURVIVING ON MARS - DIY TERRARIUM

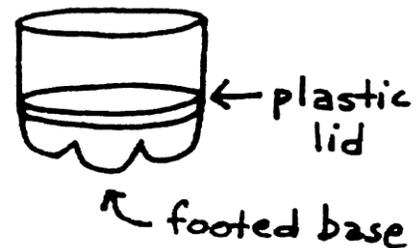
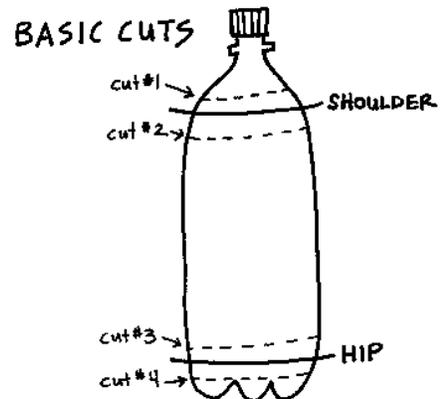
As seen in the book and movie “The Martian”, it will take all kinds of people to sustain a future colony on Mars. Botanists are essential when it comes to surviving in space since we will need to be able to grow enough food in order to survive as we do on Earth.

Materials needed:

- Adult supervision!
- Scissors/utility knife
- A poke or something similar to make small holes
- Clear tape
- One 2-Liter soda bottle
- Gravel, soil, and terrestrial life!
- One plastic lid

Instructions (adults should supervise when cutting):

1. Remove the label from your bottle.
2. Cut the bottle 2 cm below the shoulder and 1 cm above the hip
3. Poke air holes in the top. Begin with 3-4 “x’s” of holes, and add more if your terrarium appears too wet. Cut three 3 cm-long slits in the top so it slides into the base.
4. Put the plastic lid inside the base.
5. Fill the terrarium base with a layer of sand or gravel for drainage, then soil (garden, woodland, or potting soil). You might also add a little gardener’s charcoal to keep the soil in good condition.
6. Add plants or seeds. Water the soil well at first, but rarely thereafter unless no moisture condenses on the inside of the terrarium top.



Space Science Tie-In:

The *Biosphere 2* in Oracle, Arizona was originally an experimental project demonstrating the viability of closed ecological systems to support and maintain human life in outer space. Although the project was ultimately unsuccessful, it did teach us a lot about what it will take in order to survive on Mars and other celestial objects.

Source: **Bottle Biology, Second Edition**

Ingram, Mrill. *Bottle Biology: Hands-on Biology with Plastic Containers*. 2nd ed. Madison, WI: Bottle Biology Program, Dept. of Plant Pathology, U of Wisconsin-Madison, 1993. Print.

