

*Once the technology and economics are in place to build real settlements on the Moon and Mars, the pioneers can make themselves “comfortable” and “at home” in spacious homesteads.*

## **Lunar/Martian Homestead Model** designed to get across these 5 lessons:

- **Modules** to make pressurized homes can be fabricated on location from metal alloys *or* fiberglass-reinforced concrete *or* glass-glass composites
- **Covered with a blanket** of loose rock powder soil to protect against cosmic rays, solar flare radiation, raw ultraviolet light, meteorites, and thermal extremes
- **Sunlight and the views** can be brought underground with them to create a cheery wide-open feeling.
- **Sweet refreshed air, greenery, sunshine, and color** are provided by banks of planters that process toilet wastes so that they are 95% treated when they enter the street sewer system.
- **Homes connect to pressurized streets** so that one can go anywhere in the settlement in “shirtsleeves.”

## **Things to Bring from Earth**

- ✓ **CAPITAL EQUIPMENT**
  - mining gear
  - modular factories
- ✓ **COMPLEX ITEMS**
  - electronics
  - controls
  - tools
- ✓ **SEEDS & PEOPLE** – *the*
- ✓ **PIONEER SPIRIT**
  - “can do” resource

## **Things to Make on Site**

- oxygen from the air
- water from polar ice
- ✓ **BUILDING MATERIALS**
  - metal alloys
  - ceramics & cast basalt
  - glass, fiberglass & concrete
- ✓ **SIMPLE MANUFACTURED ITEMS**
  - Shelter modules
  - Vehicle parts
  - Furniture, appliances
- ✓ **AGRICULTURAL PRODUCTS**
  - food & beverages
  - pharmaceuticals
  - fabrics, natural dyes