Healthcare Mission to Mars

Task: Mars Hospital Model

You have just one task to complete—design and create a model for your Mars hospital! For this task, you will be guided through the design process as you work with your team to design and build your prototype. Remember that the design process is iterative, and your team should review the work completed in each stage to determine whether design changes are needed.

Design Statement: Astronauts have safely landed on Mars and now a healthcare facility needs to be established. With your team, design and create a model of a healthcare facility that will be established on Mars.

Design Requirements:
- Must be able to withstand dust storms, radiation, or cold temperatures
- Must have 2 rooms:
  - 1 emergency room
    - 2 clay astronauts (20 grams each)
  - 1 airlock with 2 doors
- *Optional* Must spend no more than $_____
- Must use only materials available
- Cannot be larger than 12x12x12 inches
- Must be enclosed (roof, sides, base)
- Must be built and tested during the allotted time

Materials Available:
- Clay
- Notecards
- Post it notes
- Cotton Balls
- Popsicle sticks
- Straws
- Paperclips
- Plastic grocery bags
- Glue
- Tape
- Scissors
- Newspaper
- Cardboard
- Felt
- Mylar
- Foam Sheets
- Cork
- Other

Healthcare Mission to Mars

Generate Concepts: Brainstorm design ideas for your healthcare facility keeping in mind the design requirements.. **Add a picture of YOUR OWN SKETCH here:**

Design a Solution: With your team, select the most optimal design. **Create a final, detailed drawing of your facility design here and label all the parts:**

Write a list of all the materials you plan to use (optional: calculate the cost here):

Build and Test
Using the materials selected in your design, work with your team to **build the model of the healthcare facility and test your model to see if your design withstands dust storms, radiation, or cold temperatures. Adjust if needed and test again.** Record your results on what happened below:

- **Test 1 Results:**

- **Test 2 Results:**

- **Test 3 Results:**

Evaluate the Solution: Reflect on these questions:
- **Did your model function correctly during testing?**

- **What worked?**

- **What could be improved further?**

- **Did your project meet the design requirements listed? Explain.**

- **Take pictures or a video that show your finaldesign in action. Insert those below:**

Extra Resources:
https://www.nasa.gov/feature/students-design-space-habitat-concepts-for-mars