

Space Station 2021

Scott Brown - Carrollton High School

Scenario:

You are working in NASA's Research and Development Division. In the past you have developed various space stations that are now orbiting the Earth. Your development team's has now been assigned to design a space station that can orbit the planet Saturn.

Assignment:

Your team is to design and construct a space station that can house a minimum of 25 people for at least 6 months. The space station should have a minimum of 15 levels, including: living quarters, control center, recreation, working, food services, experimentation, transportation, etc...

Requirements:

Space Station:

- Must be made from biodegradable and/or recyclable materials.
- Materials should be common household items.
- Must not be any larger than 18 inches in any direction (length, width or height).
- Must be at least 12 inches in any direction.
- Should be painted and detailed appropriately.
- Space station does not have to be openable (the floor plans will outline the interior).

Documentation:

- A floor plan showing each level of the space station. The floor plan should be labeled, identifying the function or purpose.
- A materials list of all items used.

Presentation:

- A 1 to 2 minute presentation will be given highlighting the features of the space station.

Additional Option:

To design and construct a scaled reusable space vehicle that can be docked at the space station. This should also be made of biodegradable and/or recyclable materials.