POD DESIGN PROJECT 2013-14

You must design a Pod, or a living space, with three bedrooms and two bathrooms. The total square footage of this house cannot be greater than 1800 ft2. This living space must be drawn in pencil on blank paper, but must follow all of the constraints you will see listed below. **Your scale is required to be 1 ft = ¼ inch**. All **math must be calculated on separate paper and attached to your pod project**. Label you room calculations VERY CLEARLY!! The mathematics of your Pod design is worth 33% of your grade.

Architectural Teams for this assignment will be 3 or 4 people. Each person in your team is not required to design the same space, but you can choose to do so. Each team member is required to be the first line of help within your group, but every member is to DO THEIR OWN WORK.

The first aspect of this project is a complete drawing of your POD design, including all furniture. Your group will be assigned a set of templates that you will be using. You are responsible for the condition of your templates, so treat them with extreme care. Each room in your house should be completely furnished, should have a door/entryway, and should have wall dimensions.

You will also be expected to build everything in your drawings in inventor, and assemble each room in your house to the exact scale of your drawing plans that were submitted.

At the end of the drawing phase, you are expected to construct a model of each room in your drawing. NO FURNITURE. You will build each room, using cardboard for flooring and cardstock paper for walls. Each wall will be 9’ tall, and each doorway should be 7’ tall.

Once your physical model has been constructed, you will make the rooms and furniture in Autodesk Inventor. Each student will complete their entire pod; every room and every piece of furniture. Each person within each group can earn bonuses by the combination of completing their own work and helping groupmates with their problems.

THE SCALED DRAWINGS PORTION OF THIS ASSIGNMENT WILL BE STARTED IN CLASS BUT CAN BE DONE OUTSIDE OF CLASS AS HOMEWORK. Students are expected to communicate with their group-mates and make sure the project is progressing.

CONSTRUCTION OF POD MODEL, can be done both inside and outside of class. Model’s may be left in Mr. Motta’s room until presentations are completed, but should be taken home after the presentation is completed.

INVENTOR ROOM CREATION IS EXPECTED TO BE DONE IN CLASS. Students should be working daily on their Inventor work in class once that portion begins. Once we start Inventor POD construction, all other work on models and drawings is completed done at home.

**MAXIMUM SCORE ON THIS ASSIGNMENT IS 150%**, but to attain this score every member of the group is going to have to work hard, motivate one another, be quality teammates by working together, and show exceptional skills.

The following design aspects MUST be adhered to in this project:

* Basic rules of the Pod Design:
  + **You pod must not be larger than 1,800 sq. ft. and not smaller than 1,200 sq. ft.**
  + Your pod can be two stories, but must show the staircase on both floors, and the separate floors must be on separate sides of the same piece of paper.
  + **No Room can be smaller than 60 ft2. Closets are not rooms, so they can be smaller than this. Closets can be parts of other rooms and do not have to stand alone.**
  + **No room, including all hallways added together in the house, is allowed to be larger than 300 sq feet.**
  + **NO room can be larger than 250 sq. ft.**
  + Every room must have the area calculated on the calculation sheet.
  + Closets that are part of other rooms can be calculated separately or as part of rooms.
  + All rooms must have accessible doorways or entrances.
  + Every room must have all required dimensions listed on the paper, and these dimensions should match the Inventor Parts you create IDENTICALLY!
* **Your Pod may include more living areas than what is listed here, but for maximum points each of the following living areas should be contained in your space.**
  + Sleeping Areas
    - Four “Beds” will have to be contained in your Pod. This is why your Pod will hold 4-8 people. **Remember, these are not families, but people living in the same pod. No more than 2 of these people know one another.**
  + Bathing Areas
    - There must be at least 1 bathing/restroom area. You can have as many as you deem necessary, but must conform to all size constraints.
    - Your Pod requires at least 1 of each of these.
  + Dining Areas
    - Dining Area must be able to hold a table large enough to seat 8 people. You can measure the chair you are sitting it to get an idea of chair width, and calculate from there the size of the table(s) you think you will need.
  + Cooking Areas
    - This area must contain all of the things needed to prepare food and clean up afterward. Things to consider:
      * Remember that this room must be large enough to have areas to prepare the food before it is cooked. Make sure you take this into account.
      * Things included here could be stoves, refrigerator, sink, etc.
      * A pantry can be included here, in a different room, or not at all.
  + Rumpus Areas
    - This is an open area for fun, camaraderie, workout area, etc. Board game playing or poker might take place in an area like this. Calculate your space well.
  + General Living Areas
    - This is a typical get together area where television could be watched and/or Pod-mates could sit and chat. Factor in places for them to sit (chairs, couches, etc.) Remember, as many as 8 people could be sitting here watching “Deal or No Deal”. Will they fit?
  + Washing and Cleaning Areas
    - This is the area where you would clean and dry clothes, keep major house cleaning supplies, wash your animals, etc. It is should be able to contain all needed supplies.
  + Entrance and Door/Window Rules
    - Doors must be a minimum of 2.5 feet wide, and should be at least 6 inches away from side walls. **At least 2 doors must lead to the outside for fire safety**.
    - Archways or open entrances into the house are like doors, and must follow these minimum rules as well.
    - Windows can be placed on the exterior walls, but should not be shown on interior walls.

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| Sleeping Area 1 | Sleeping Area 2 | Sleeping Area 3 | Sleeping Area 4 |
| Bathing Area 1 | Dining Area 1 | Cooking Area 1 | Rumpus Area 1 |
| General Living Area 1 | Washing/Cleaning Area 1 | Hallway Area 1 | \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Area |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Area | \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Area | \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Area | \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Area |
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These boxes should be filled with your area calculations from your top view POD design drawing.