Exploring Technology 10

**Home Planning and Design**

Pairs Project

For this project you will be designing, planning, and constructing a single level structure. It may be a single floor from a multi-level structure, but should be only one level for this project. It is strongly suggested that you create a level in a home with many rooms. You may want to consider one of the homes of a student in your group.

Parts to this project

1. **Design**

The design for this project must be completed using two methods:

1. Conventional ‘Pencil and Paper’ method – this must be completed and ok’d before progressing to the next stage
2. Computer software (floorplanner.com, for example) which must be given the ‘green light’ BEFORE printing in color

The design must include:

* dimensions of all rooms and walls
* additional details such as power outlets, plumbing fixtures, and light switches
* additional consideration will be given to other details, such as flooring, furniture, and exterior details

1. **Model**

The model may be constructed using popsicle sticks or the scale-sized materials provided. Any additional materials are permitted to make this project exceptional!

The model MUST:

* be constructed to scale
* be constructed using squares to ensure accuracy
* be constructed in the same manner as a real home (walls built laying down, then stood up)
* have flooring
* match the design you drafted!!!!!

1. **Green Elements**

Your design must implement AT LEAST THREE design features that would be considered “Green”, or environmentally responsible.

To do this you must do a bit of research. You will need to find some ideas about GREEN ENERGY **BEFORE** starting the project.

These elements will need to be highlighted by a short write-up that will accompany the model and design package. Each of the three elements MUST offer the following information:

1. what the element is (ie insulated water heater)
2. diagram/writing-up of how it works
3. explanation of why you chose that particular modification in your design