Exploring Technology 10

**Home Planning and Design**

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 your own home or go online to see what someone else has already done!

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 cardboard. It is your responsibility to provide any materials you need to construct the model. Any additional materials are permitted to make this project exceptional!

The model MUST:

* be constructed to scale
* be constructed using a square to ensure accuracy
* match the design you drafted!!!!!
* The ‘green’ elements (below)
1. **Green Elements**

Your design must implement AT LEAST FIVE 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. Consider the handouts you were given and videos we watched as starting points.

THESE GREEN ELEMENTS MUST BE **PASSIVE**!!!! (is solar panels don’t cut it!!!)

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/write-up of how it works
3. explanation of why you chose that particular modification in your design