



## Startalk Balvihar Hindi Language & Culture Camp, 2013



### PBL Task: Eco-Friendly, Energy Efficient Model House Project

Assignment: You have acquired a piece of land in India and are now planning to build a dream home on this land. You wish to build a house that has Eco friendly features and is energy efficient, making maximum use of natural resources. You will be building a prototype of this house over the next 10 days, adding various features each day. You will be given all the information and the material needed to build the house.

Layout: Classes will be divided into groups of three, each with the task of creating their own unique home. Each specific group will consist of four members, each with a different responsibility for the home, however all students will participate in each activity.

- Student 1 will be responsible for the design of the blueprint of the house.
- Student 2 will be responsible for construction of the home from the materials provided.
- Student 3 will be responsible for design the landscape/surrounding of the home.
- Student 4 will be responsible for the design of the interior of the home (furniture, appliances, etc.)

Day to Day Instructions for House Project:

[ Note to Teachers: divide the class into 3 groups of 4 students each. Each group will make their own house]

Day 1: In groups of 4, research the given topic on the Internet and come up with ideas to build your model house. Make a list of the features you might want to put in your house that will make it energy efficient and Eco friendly. Consider a design that will utilize natural resources like sunlight, solar energy, wind and rainwater.

Day 2: Draw blueprint of your dream house. Perform Bhoomi Puja.  
Build basic structure. Make a removable roof. Plant given seeds as per instructions.

Day 3: Decide the orientation of your house and make doors/windows/ roof so as to get maximum Sunlight and fresh air. Explain the orientation of the house on an index card. State if it matches the principles of Vaastu Shatra. Place Sundial in front of the house. Decorate outside walls with traditional Surya Symbols.

Day4: Make solar heater/cooker as per instructions and place in the model house. Decorate/design kitchen. Add features to roof to maximize natural light.

Day5: Choose any one festival and decorate the model house according to the traditions of that festival. Display appropriate greetings on the house ( write on index card). Display festival related craft items next to the house.

Day6: Field Trip

Day7: Plan a garden around your house. Identify the type of soil around your house and accordingly, choose different Indian plants for your garden. Draw and label these plants and place around the house. Display plant information cards.

Day8: Design/construct a rain water harvesting unit for your roof type. Make Rain barrel and Composting bin for your garden. Decorate kitchen with pattal /dron ( made during lab time).

Day9: On index cards, describe the Ayurvedic benefits of the plants you have planted in your garden. Index card should be placed next to each plant. Complete any unfinished tasks related to your model house.

Day10: Present your dream home at the Science Fair.

**How to make home by card**

board <http://www.google.com/search?q=how+to+make+a+model+home+out+of+cardboard&hl=en&tbm=isch&tbo=u&source=univ&sa=X&ei=2nWmUdvFJ5Po8wTUzoBA&ved=0CDMQsAQ&biw=1366&bih=612>

**How to Build a Model Home for School**

Read more: **How to Build a Model Home for School |**

eHow [http://www.ehow.com/how\\_10065701\\_build-model-home-school.html#ixzz2UikEWT3j](http://www.ehow.com/how_10065701_build-model-home-school.html#ixzz2UikEWT3j)

[http://www.ehow.com/how\\_10065701\\_build-model-home-school.html](http://www.ehow.com/how_10065701_build-model-home-school.html)

**Materials needed: foam board for base, large box to make the house, poster boards and construction paper in different colors for decorations, markers, glue, scissors, knife for cutting cardboard, small foil trays and soil for planting seeds, seeds.**

**Note- Assign TAs to make one box of supplies for each group. The students will put their name on the box and take care of their supplies. That way we can keep track of scissors, markers etc.**