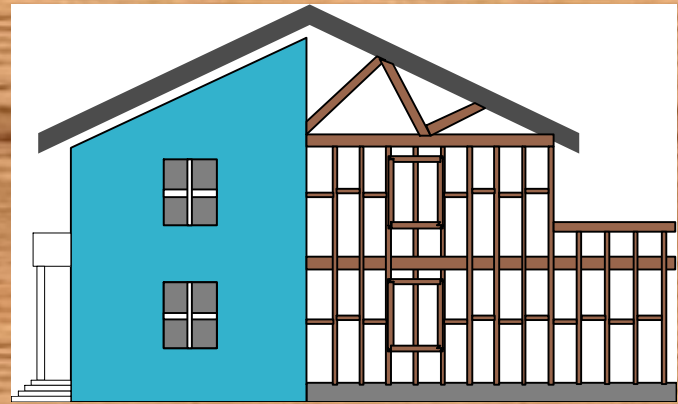
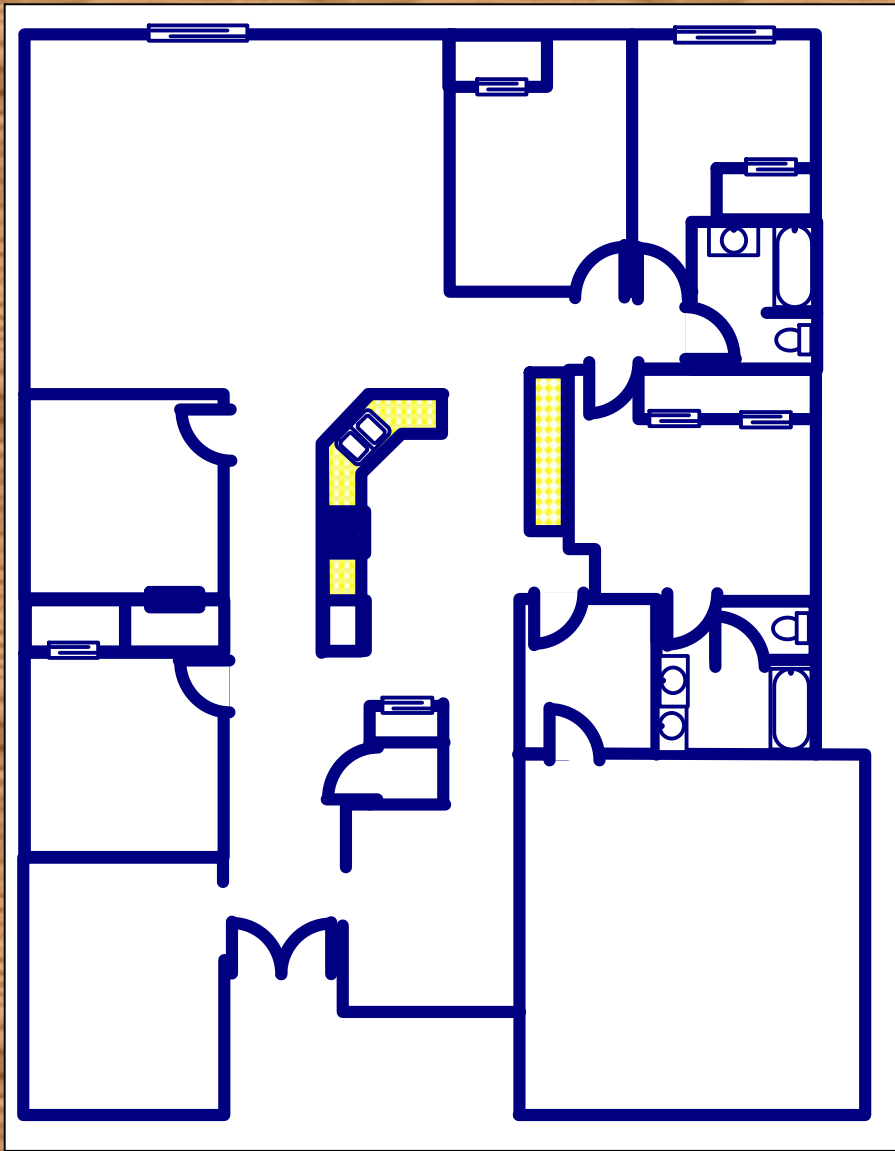




DESIGNING

A

HOME



By Nancy L. Wilkinson

Lesson 1 Measurement and Proportion

Objectives:

- 1) The students will estimate length and area.
- 2) The students will discover scale and how to find the actual size of an item through the use of scale.

Materials Needed:

- Maps
- Doll house furniture – one piece for each group. (This can be bought at any toy store)
- Rulers (centimeter and inch)
- Other items that are in scale such as matchbox cars

Activity:

- Italicized text represents answer(s).
- 1) If you were to use paper clips, what would be the length of your desk? Estimate the length and then measure the length and width of your desk in paper clips.
 - 2) Based on how many paper clips it took for the length of your desk, estimate the length of your classroom in paperclips.
 - 3) Discuss other units of measurement. (*Metric, customary, non-customary*)
 - 4) What is a scale? How is used on a map? Look at a map. What is the scale? What does this mean? You will want to look at several maps. *Ask the students to explain the actual distances on a map using the scale.*
 - 5) Dollhouse furniture is at a scale of 1 to 12. What does this mean? (*One inch = one foot*) There are three ways to write scale. What are they? (*1:12, 1 to 12, $\frac{1}{12}$*) (*Show other items that are in scale such as matchbox cars or die cast cars.*)
 - 6) Measure the piece of dollhouse furniture. What is the width and length of the real item?
 - 7) If you were to shrink your desk or table, what would the length and width be at a scale of 1:10? Create a drawing of your desk or table using the scale of 1:10. It might be easier for you to use the metric system.

Closure:

Students may share their drawings with class. The teacher might want to discuss similar and congruent using the scaled drawings. How are the scaled drawings similar to the real thing? What would you do if you made a congruent model?