This material is based on work supported by the National Science Foundation under Grant No. DUE 9987332.

Inquiry B: *Molecules*

Objective: Students will combine elements to form molecules

Time Frame for Activity: 15-20 minutes

Materials:

Assorted Legos® (See Inquiry A Materials)

Procedure:

1. Instruct the student to make 3 models using the Legos® with the restriction that the models have only two levels using the 1X4 and with no uncoupled receptacles or prongs (no overhang). Example: two blue 1X2 on top of a white 1X4, two red 1X1 and a blue 1X2 on top of a yellow 1X4, or a blue 1X4 on top of 2 red 1X1 and 2 blue 1X1.

2. Observe students progress and assist groups that are having difficulties.

3. Allow the student enough time to complete the three models.

4. Have the students compare and discuss their models with another group.

5. Draw a few of the student's models on the board and ask the other groups if they have any similar models.

6. Compare the models of a 1X4 to the molecules formed with C.

Formative Assessment:

1. How many hydrogen atoms can combine with one carbon?

2. If a carbon double bonds with one oxygen, how many valance electrons are left on carbon to bond to other elements.