

II. Activities

Inquiry A: *The Table*

Objective: Students create an organizational scheme based on their own criteria.

Time Frame for Activity: 15 minutes.

Materials:

Assorted Legos®

Quantity of each color	Size
8	1X1
4	1X2
2	1X3
1	1X4

Draw a plus (+) on half of the 1X1, 1X2, and 1X3 and minus (–) on the other half of the 1X1, 1X2, and 1X3.

Procedure:

1. Get the students into groups.
2. Hand each group a bag of Legos® listed above.
3. Allow the students to play with the Legos® without instruction for a few minutes.
4. After a few minutes, ask the students to separate the Legos® into individual pieces.
5. Instruct the students to organize the Legos® as they would like for the next procedure.
6. Have the students make a note on how they organized their Legos®.
7. Ask the students how they organized the Legos® and draw their organizational chart(s) on the board. (If the first organizational chart is not based on size and color, lead the students towards this type of organizational system by asking the groups if anyone had used a different organizational method.)
8. Compare the Lego® Organization to the Periodic Table. (Be specific to demonstrate the similarities between a 1X1 blue and a 1X1 red and the reactivity of Li and Na.)

TxCETP Course Component: *Introduction to Periodic Trends “Lego® my Periodic Table”*
 This material is based on work supported by the National Science Foundation under Grant No. DUE 9987332.

Lego® Organizational Chart

	1X1 (+)	1X2 (+)	1X3 (+)	1X4	1X3 (-)	1X2(-)	1X1(-)
Red							
Blue							
Yellow							
White							

Modified Periodic Table

	1A	2A	3A	4A	5A	6A	7A
Period 2	Li	Be	B	C	N	O	F
Period 3	Na	Mg	Al	Si	P	S	Cl
Period 4	K	Ca	Ga	Ge	As	Se	Br
Period 5	Rb	Sr	In	Sn	Sb	Te	I

9. Introduce the terms group and period and relate these terms to size and color.

NOTE: Steps 7-9 in Inquiry A can be discussed after the Inquiry B procedures with the Legos® have been finished (After step 8 in the procedure of Inquiry B).

Formative Assessment:

1. Ask the students how they organized their Legos®?
2. How does the organization of the Legos® correlate to the Periodic Table?
3. What is a group?
4. Could you use the Periodic Table to predict how elements react and/or combine to make compounds?

Note: The Formative Assessments were designed to give the instructor and students feedback on the knowledge gained from the exercise. Therefore, the formative assessment may be done verbally as a dialog between the instructor and students.