The “Missing Cousin”

1234 Some Street
Any Town, Texas

Dear Cousin:

What’s happening? I’m writing because Grandmother has a favor to ask of you. She says you are the most artistic and the most organized member of the family. I think she always did like you best. Anyway, here’s the deal.

Grandmother has collected pictures of all the grandkids. She wants you to make a collage by arranging photos in rows from the smallest cousin to the largest cousin. She said also to tell you those kids who belong to the same family are dressed alike. Grandmother would like the members of each family arranged in their own vertical column. I hope you will understand what she means when you see the pictures.

By the way, I said she has a picture of everyone. Actually, she is missing a photograph of Cousin Al. Grandmother says with your talent you will be able to sketch what Al looks like because his features are so similar to the cousins who surround him.

I have to go now. In a way, I’m glad she does like you best! Good luck, and don’t disappoint her.

Best wishes,
Your Cousin

Purpose: to arrange “family” members by their properties.

Materials:
- Sheet of cousins
- Construction paper
- scissors and glue
- instruction sheet
Procedure:
1. Prepare the construction paper – holding the paper lengthwise. Be sure to put your heading on at the top along with your “family name” as the title.
2. Cut out the “cousins” and arrange on the table in front of you.
   - Arrange the pictures in rows and columns similar to the periodic table.
   - Arrange the “cousins” from the smallest to the largest.
   - Arrange the “cousins” by their physical features – such as number of hands, number of curls, size of body, and etc.
3. Once all the “cousins” are arranged, glue them down to the construction paper.
4. Determine the position of Cousin Al and then draw him in. Be sure to show all his characteristics.
5. Answer the conclusion questions on the next page.
Conclusion:

1. What is the significance of the number of arms on each cousin?

2. What is the significance of the number of fingers on each of the hands?

3. Compare the number of hairs on the heads of the cousins to valence electrons? How does this observation relate to Mendeleev's work?

4. What is the significance of the size of the body?

5. What is the significance if the texture of the body?

6. Which cousin is missing?

7. Draw in the missing cousin into the empty spot on the collage. Be sure to include the correct number and pattern of each body part.

8. Write the symbol of EACH element represented by each “cousin” beneath his picture.

9. Draw cousin “Cal” (calcium) on your collage. Be sure to include the correct number and pattern of each body part.

10. Title your collage. Put your name and class period on the lower right corner of your collage.
Conclusion:

1. What is the significance of the number of arms on each cousin?
   Each arm represents the period the cousin is in.

2. What is the significance of the number of fingers on each of the hands?
   The number of fingers represents the total number of electrons or the atomic number of the cousin.

3. Compare the number of hairs on the heads of the cousins to valence electrons? How does this observation relate to Mendeleev’s work?
   The numbers of hairs tell what family/group the cousins are in. Just like Mendeleev’s suggested that groups or families have similar properties.

4. What is the significance of the size of the body?
   The size of the body represents the atomic mass. It shows how the families are increasing in mass.

5. What is the significance if the texture of the body?
   Texture of the body also represents which family/group the cousin belongs to. It shows the similar properties they have.

6. Which cousin is missing?
   Cousin “Al” is missing.

7-10. Students will include these items in their collage