

**Lab Activity Title:** Introduction to the Periodic Table  
**Submitted by:** Pam Kraus  
**Recommended Grade Level:** 11<sup>th</sup> grade Chemistry or other Physical Science class (this lesson can easily be adapted for grades 5-12)  
**Discipline:** Chemistry  
**Topic:** Periodic Table  
**Time Requirement:** Can be completed in approximately 10 minutes

**Required Materials:**

Assorted candies so that you have at least 4 common colors of each type of candy per student:

Skittles or M&Ms  
Gummy bears  
Jelly Beans  
Gum drops  
Paper towel or napkin

**National Science Standards Alignment**

Systems, order and organization; Evidence, models, and explanation; Structure and properties of matter

**Lesson Objective:**

The student will:

1. Organize a group of candies of various colors and shapes.
2. Explain the properties they used to organize their candies.
3. Predict what kinds of candies are missing from their sample.
4. Relate their organization method to Mendeleev's organization of the Periodic Table.

**Procedure:**

Preparation for Activity:

1. Prepare a plastic bag for each student containing at least 4 of each candy in the same colors as the other candies, but omit 2 pieces of candy of any color and type (i.e. a purple Skittle, gummy bear, jelly bean and gum drop; an orange Skittle, gummy bear, jelly bean, gum drop; a red Skittle, gummy bear, jelly bean and gum drop; and a green Skittle, gummy bear, jelly bean and gum drop, but leave out any 2 candies).

Student Instructions:

1. Give each student a bag of candy and a paper towel or napkin to set candy on.
2. Instruct students to organize their candies in whatever way they desire. Reassure them that there is no right or wrong answer.
3. Have students observe how other students arranged their candies (this can be done by just having them look at students around them, no need to have them get up and move around).
4. Inevitably someone will mention that they are missing some candy. Just say "oh really" or something similar and let them deal with it.
5. Ask a few students to explain how they organized their candies. Be sure to select at least one student who organized their candies by color and type with "gaps" for the 2 missing candies.

*\*Note: This lab activity was submitted to Ward's Science by a third party educator for the sole purpose of sharing content and ideas with other educators. Ward's Science is not affiliated with the author of this lesson plan. All product recommendations made by Ward's Science are suggestions for completion or extension of the activity or topics addressed, but are not required to complete the activity.*

6. Have one or two students tell which candies they are missing and ask how they know.
7. Now direct students' attention to the Periodic Table and begin to explain how Mendeleev used atomic mass and properties to organize the elements. Tell them that he left gaps where he predicted missing elements would go, much like they predicted what kind of candies they were missing. This introductory activity can lead into a detailed discussion of the Periodic Table.

### **Recommended Ward's Science Materials**

<a href="#"><u>Periodic Table of Cookies Demonstration</u></a>	<a href="#"><u>Item No. 6864200</u></a>
<a href="#"><u>Giant Color-Coded Periodic Table</u></a>	<a href="#"><u>Item No. 4751300</u></a>
<a href="#"><u>Ward's Chemistry Periodic Table Bookmarks</u></a>	<a href="#"><u>Item No. 9630135</u></a>
<a href="#"><u>Element Rummy and Flash Cards Game</u></a>	<a href="#"><u>Item No. 4739200</u></a>
<a href="#"><u>Clever Catch Ball: Chemistry – Elements</u></a>	<a href="#"><u>Item No. 360008</u></a>
<a href="#"><u>The Periodic Table &amp; Chemical Elements, Digital Download Video</u></a>	<a href="#"><u>Item No. 470006-146</u></a>

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