

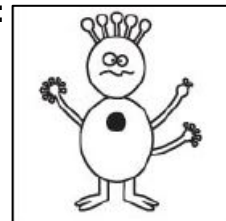
PERIODIC PEOPLE

INTRO TO PERIODIC TABLE LESSON

I absolutely love using this activity to begin a unit on the Periodic Table and the way the elements are arranged. The pictures are from a blog that I found years ago, and although I cited the blog when I created the 'Periodic People' cards, I'm sorry to say that I cannot find the blog! But anyway, these little periodic people drawings are so awesome for this activity.

To set up the activity, print out one of the Periodic People sheets per student group of 3. **Cut out the people and take out this guy from each set before you drop the set into a plastic baggie or paperclip it:**

This guy is the 'missing' piece in the activity, which students will discover if they set up their 'periodic table' correctly.



Print enough copies of the activity sheet (back/front) for each student in the class. Hand them out.

Read the directions for Part 1 on the activity sheet. I talk through the Procedure with my students unless it is a very high class that would generally understand the challenge of chopping a number line into parts to make a table (like a calendar). This is the process of what the students will be doing to create a periodic table of the periodic people so that they have things in common as you move left to right or top to bottom.

Now, let the student groups start discovering! They will start to see the patterns and try to line up the people. Walk around the room and remind them about the number line example. One thing I've found to be super helpful for groups who are stuck is to just simply say– “Who is the most simple guy?” They will find the skinniest guy with one antennae and one finger. Then say– “Okay, now start creating a ‘number line’ of progressively more complex guys.” Then walk away. This usually helps groups to get ‘unstuck’ and begin creating the ‘Periodic People table’ that will solve the mystery of the missing guy!

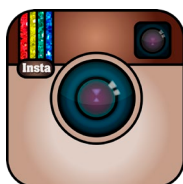
Once the groups have their table set up, tell them to raise their hands to have it checked by you. If it's correct (see the Answer Key), tell them that they should now answer questions #1 through 3 on their activity sheet. Remind them to write down ALL of the patterns that they see! I like to have the students STOP after answering #3. Then, as a class, we view the TedED video 'The Genius of Mendeleev's Periodic Table'. This presents the amazing connection between this activity and the actual Periodic Table.



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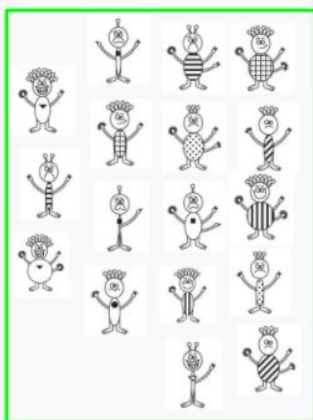


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The Case of the Periodic People

Purpose

To discover patterns from various kinds of information in order to arrange items or elements into a meaningful sequence, similar to the process by which early versions of the Periodic Table of Elements were constructed.

Periodic People

You have been chosen for this top secret mission. Your mission, should you choose to accept it, is to work with the "sketches" of the suspicious characters on the secret agent list. They are part of a family of secret agents, but the most deadly of all has never been sketched. Your job is to arrange the sketches in a pattern so that you can draw the missing secret agent.

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The Periodic Table of Suspicious Characters



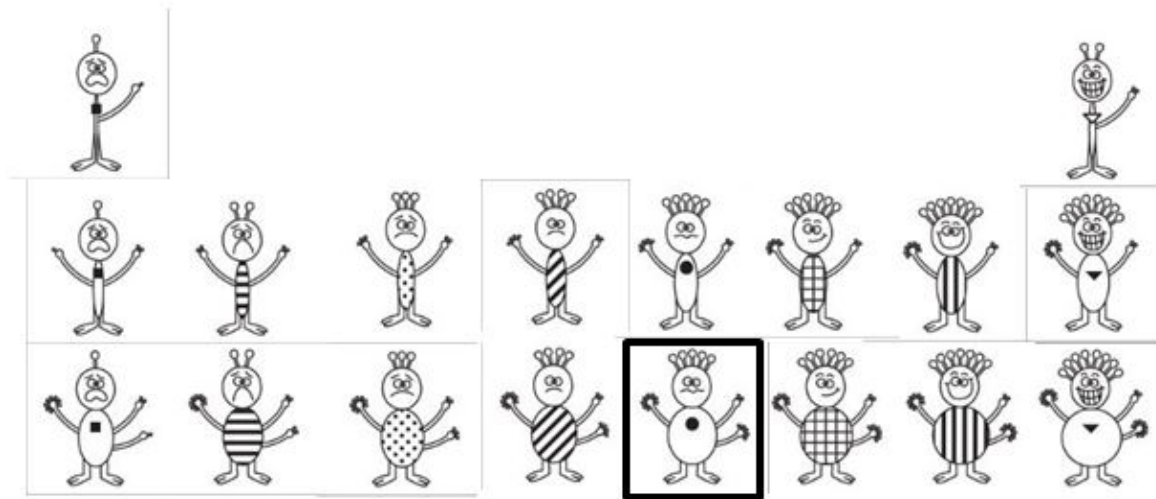
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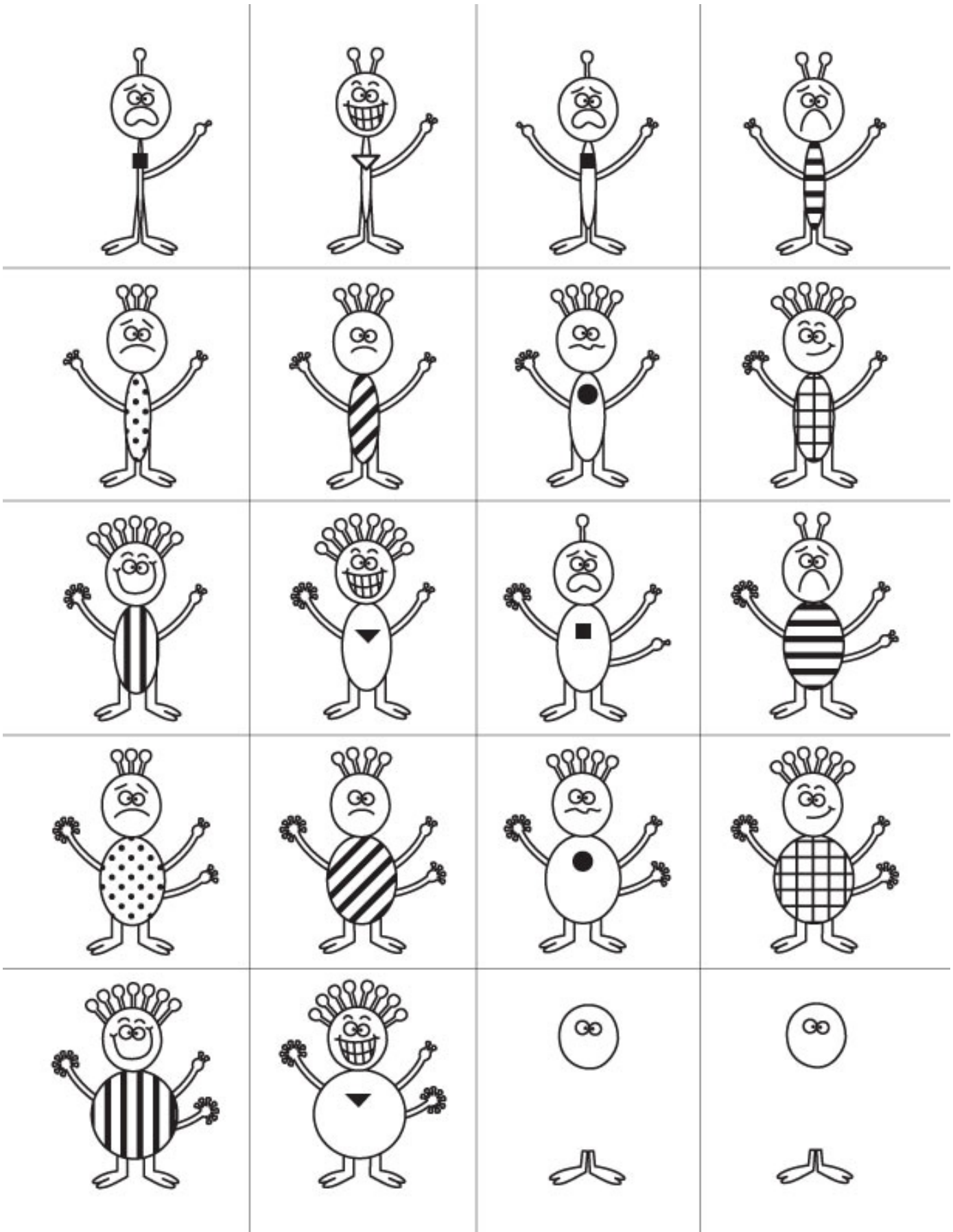
The Genius of Mendeleev video: (show before students answer #4)

<https://tinyurl.com/msem7hc>

<https://www.youtube.com/watch?v=fPnwBITSmgU>

Answer Key:





Periodic People Activity

Adapted from Oakland Schools Chemistry Resource Unit Activity #6: Periodic People

Purpose

To discover patterns from various kinds of information in order to arrange items or elements into a meaningful sequence, similar to the process by which early versions of the Periodic Table of Elements were constructed.

Part 1: Periodic People

You have been chosen for this top secret mission. Your mission, should you choose to accept it, is to work with the "sketches" of the suspicious characters on the secret agent list. They are part of a family of secret agents, but the most deadly of all has never been sketched. Your job is to arrange the sketches in a pattern so that you can draw the missing secret agent.

Procedure

1. Here is a helpful hint to assist your solving this:

Let's say that you are given the numbers from 0 to 99 written on little squares of paper.

You can arrange these numbers in order so that each number is greater than the previous number by placing them all one by one in order from lowest to highest.

Once they are in one long row of 100 squares, you can now, WITHOUT CHANGING THE ORDER, organize the sequence of 100 numbers into *columns and rows* so that there are *similarities in columns as well as rows*.

You must still keep the numerical sequence so that each number is greater than the previous number. Like this:

0	1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28	29
30	31	32	33	34	35	36	37	38	39

Notice that each number is one greater than the last.

Also, now there is organization in columns as well because all the numbers in a column end in the same digit and begin with digits in consecutive order.

And, finally, all the numbers in a row begin with the same digit.

It might be useful to point out here that "**columns**" are vertical lists of numbers, and "**rows**" are horizontal strings of numbers.

2. Use this same idea with the sketches of suspicious characters.

First arrange them in one single line so that each little man is DIFFERENT from every other by a particular characteristic.

Once you have that arrangement, "chop" the sequence (as done with the numbers) so that you have commonalities in columns as well as rows.

Remember to keep the original arrangement as you do this! *Unlike the numbers, not all the columns and rows need to have the same number of squares. HINT: look at the pattern of the actual Periodic Table.*

3. Once you have the correct arrangement, you should have one blank space where the missing secret agent fits. Using the characteristics of his column and row, you should be able to draw him.

Results and Reflection

Draw the missing secret agent here and note his features:



1. List ALL of the relationships you see as you look *down a column* of your secret agent table.
2. List ALL of the relationships you see as you look *across a row* of your secret agent table.
3. What do you think the word *periodicity* means?
4. How do you think this activity relates to the organization of the periodic table of elements?