

## PART A: PERIODIC TABLE REVIEW GROUP ACTIVITY

Diagram Letter	A	B	C	D	E	F	G	H	I	J	K
Atomic # for each paper diagram											
Element Symbol for each paper diagram <i>(write in <u>later</u>)</i>											

Atomic # for each whiteboard diagram							
Symbol for each whiteboard diagram <i>(write in <u>later</u>)</i>							

➔ **TO BEGIN, USING THE 11 PAPER "DOT DIAGRAMS" in each envelope, do the following:**

*[IMPORTANT: Please do NOT write on the diagrams themselves!]*

- 1. Fill in the **ATOMIC NUMBER** of each element in the table above under the diagram's letter
- 2. What **ASSUMPTION** did you have to make to do #1? \_\_\_\_\_

- 3. Now **place the atom diagrams on the square layout to represent the proper arrangement of elements (in ROWS AND COLUMNS) for the first 3 rows of the Periodic Table.**

**NOTE: YOU WILL HAVE 7 EMPTY BOXES WITHOUT AN ELEMENT!**

- 4. **Raise your hand** to get your final arrangement checked by a member of the TEACHING TEAM.
- 5. What is **similar** in all diagrams in the **same ROW**? \_\_\_\_\_

What is **similar** in all diagrams in the **same COLUMN**? \_\_\_\_\_

➔ **These similarities are the KEY to describing the basis for the structure of the Periodic Table!**

- 6. On your whiteboards, **make dot diagrams of the 7 elements that belong in the empty boxes**, by using this principle of the basis for the structure of the Periodic Table.

➔ **As you draw them ARRANGE THEM in their proper ROW & COLUMN PLACES**

- 7. A copy of the **COMPLETE Periodic Table** will be given to your table. Use it to **fill in the ELEMENT SYMBOLS** (e.g., H for Hydrogen) **in the table at the top of this page** for each paper diagram element and each element drawn on your whiteboard.

*NOW, ERASE THE WHITEBOARD – WE'LL CONTINUE WITH PART B IN A MOMENT . . . .*

## PART B: MAKING MOLECULES

- 1) Based on PART A, fill in the element name, symbols, and atomic # for the first 3 rows in their proper arrangement of the periodic table:


- 2) Then on your WHITEBOARDS, **combine these elements into as many different molecules** that you can think of which are important to processes in nature that **relate to the topic of GLOBAL CLIMATE CHANGE**. (The substances might be in a gas, liquid, or solid form of matter.) (e.g.,  $O + O = O_2$ )
- 3) **Select a speaker** to share the molecules your group came up with and how they might be related to processes in nature that relate to Global Climate Change.

**BONUS Q:** Using **only 3 or 4 molecules**, ( like those in #2 above), **write out a simple CHEMICAL REACTION equation** that **takes place in nature** and is related to the topic of Global Climate Change:

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