

# Mission C: The Periodic Table

## Worksheet: Organization of the Periodic Table

Mrs. Côté

Name: \_\_\_\_\_

Science 9

#1. **Directions:** Using the blank periodic table, and your textbook, complete each of the following tasks:

1. Label (number) all the periods and groups along the side and top of the rows and columns.
2. color each of the following parts and create a key to identify each

Key:

- Metals
- Nonmetals
- Metalloids

\* Draw the steps defining the metalloids on the table \*

**Periodic Table  
Of The Elements**

Group	1	2																	18													
Period	1	2																	18													
	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	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54														
	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86
	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118
			<small>Currently, these elements are officially unnamed.</small>																													
	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138		
	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168		

#2. **Directions:** Using the blank periodic table, and your textbook (pgs. 110-112), color the families for noble gases, alkali metals, halogens and hydrogen and indicate the color on the key below. You will have to wait until Mini Lesson #2 to complete the other families.

Key:

- Hydrogen
- Alkali metal family
- Alkaline earth metals
- Transition elements
- Metalloids
- Halogen
- Noble gases
- Lanthanide series
- Actinide series

**Periodic Table  
Of The Elements**

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	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118
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	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168		

**#3. Directions:** Read the three paragraphs below about other items found on the periodic table and Answer the following questions that follow on the backside of the page.

### What else can we identify from the periodic table?

Some periodic tables even tell us whether an element is a solid, liquid, or gas at room temperature. This is sometimes done by color or by the type of print used. Most elements are solids. There are a few gases. Only mercury and bromine are liquids at room temperature. All elements can be solids, liquids, and gases; it simply depends on the temperature.

Some elements are radioactive and do not have a stable form. Radioactive means that they naturally give off particles. All the elements with an atomic number of 84 or greater are radioactive. Technetium (43) and promethium (61) also have no stable form. All elements have radioactive forms, and most elements have stable forms. Some periodic tables show whether an element is radioactive or stable.

Most of the elements that we see on the periodic table are natural. This means that they occur somewhere in nature. These are called natural elements. Synthetic elements are elements that are made by humans in laboratories. Many of the heavier elements are synthetic. It was once thought that neptunium (93) and plutonium (94) were synthetic, but now they have been found in small amounts in nature. All of the elements with an atomic number of 95 or greater are synthetic. Some periodic tables show whether an element is natural or synthetic.

1. What state are most elements found in on the periodic table? What gauge is use to determine this?
2. What does radioactive mean?
3. What is the difference between natural elements and synthetic elements? What type are the majority of the elements on the periodic table found as?

**#4. Directions:** Using the list of vocabulary words, match the word to its definition. Use each word only once.

### Definitions:

- \_\_\_ 1. Each horizontal row in the periodic table
- \_\_\_ 2. Each vertical column in the periodic table
- \_\_\_ 3. Elements that give off particles.
- \_\_\_ 4. Elements that are made in laboratories
- \_\_\_ 5. Elements that occur somewhere on earth.
- \_\_\_ 6. Elements that are good conductors of heat and electricity.
- \_\_\_ 7. Elements that are poor conductors of heat and electricity.
- \_\_\_ 8. Elements that have characteristics of both metals and nonmetals.
- \_\_\_ 9. The number of protons in an atom of an element, it is how the elements are put in order.
- \_\_\_ 10. Organizes the elements by their properties

### Vocabulary Words:

- A. Atomic Number
- B. Family
- C. Metalloids
- D. Metals
- E. Natural
- F. Nonmetals
- G. Period
- H. Periodic table
- I. Radioactive
- J. Synthetic