

Review of Grade 9 Chemistry SNC2D

Refer to p. 140 – 148.

1. Matter is anything that has _____ and takes up _____.

2. Classify each of the following properties as either physical (P) or chemical (C):

_____ colour	_____ boiling point	_____ flash point
_____ flammability	_____ malleability	_____ solubility
_____ state	_____ reaction with water	_____ conductivity

3. Match each of the following terms to its definition:

_____ compound	A. matter made up of only one kind of particle
_____ element	B. a mixture that looks the same throughout
_____ heterogeneous mixture	C. a pure substance made from two or more elements
_____ homogeneous mixture	D. a homogeneous mixture of a substance in a liquid
_____ mixture	E. a pure substance made from only one kind of atom
_____ pure substance	F. a mixture in which different parts are visible
_____ solution	G. a cloudy liquid mixture in which particles may be seen i
_____ suspension	H. a combination of pure substances

4. Complete the following table:

Atomic Particle	Symbol	Mass (amu)	Charge	Location
Proton				
		1	0	
				in shells surrounding the nucleus

5. Explain what determines the atomic number of an element:

Explain what determined the atomic mass number of an element:

6. Complete the following table:

Name	Symbol	Atomic Number	Atomic Weight	Number of Protons	Number of Electrons	Number of Neutrons
Carbon	C	6	12			
Sodium						
	F					
		1				
Neon						
		13				
	Mg					
		18				
Silicon						
	K					
		3				
Calcium						
		17				
	P					
Gold						

Note: You *can* have a different number of neutrons in the nucleus without changing the type of element; these atoms with different numbers of neutrons are called *isotopes*.



7. In the periodic table below, colour the metals green, the metalloids purple, and the non-metals yellow.

The Periodic Table of the Elements

<table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="border: none;">Element name →</td> <td style="border: none;">Mercury</td> <td style="border: none;">← Atomic #</td> </tr> <tr> <td style="border: none;">Symbol →</td> <td style="border: none;">Hg</td> <td style="border: none;">← Avg. Mass</td> </tr> <tr> <td style="border: none;"></td> <td style="border: none;">80</td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;"></td> <td style="border: none;">200.59</td> <td style="border: none;"></td> </tr> </table>																		Element name →	Mercury	← Atomic #	Symbol →	Hg	← Avg. Mass		80			200.59					
Element name →	Mercury	← Atomic #																															
Symbol →	Hg	← Avg. Mass																															
	80																																
	200.59																																
1																	18																
Hydrogen 1 H 1.01																	Helium 2 He 4.00																
<table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="border: 1px solid black; width: 10px; height: 10px;"></td> <td style="border: none; padding-left: 5px;">Alkali metals</td> </tr> <tr> <td style="border: 1px solid black; width: 10px; height: 10px;"></td> <td style="border: none; padding-left: 5px;">Alkaline earth metals</td> </tr> <tr> <td style="border: 1px solid black; width: 10px; height: 10px;"></td> <td style="border: none; padding-left: 5px;">Transition metals</td> </tr> <tr> <td style="border: 1px solid black; width: 10px; height: 10px;"></td> <td style="border: none; padding-left: 5px;">Other metals</td> </tr> <tr> <td style="border: 1px solid black; width: 10px; height: 10px;"></td> <td style="border: none; padding-left: 5px;">Metalloids (semi-metal)</td> </tr> <tr> <td style="border: 1px solid black; width: 10px; height: 10px;"></td> <td style="border: none; padding-left: 5px;">Nonmetals</td> </tr> <tr> <td style="border: 1px solid black; width: 10px; height: 10px;"></td> <td style="border: none; padding-left: 5px;">Halogens</td> </tr> <tr> <td style="border: 1px solid black; width: 10px; height: 10px;"></td> <td style="border: none; padding-left: 5px;">Noble gases</td> </tr> </table>			Alkali metals		Alkaline earth metals		Transition metals		Other metals		Metalloids (semi-metal)		Nonmetals		Halogens		Noble gases																
	Alkali metals																																
	Alkaline earth metals																																
	Transition metals																																
	Other metals																																
	Metalloids (semi-metal)																																
	Nonmetals																																
	Halogens																																
	Noble gases																																
3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18																		
Lithium 3 Li 6.94	Boron 5 B 10.81	Carbon 6 C 12.01	Nitrogen 7 N 14.01	Oxygen 8 O 16.00	Fluorine 9 F 18.99	Neon 10 Ne 20.18										Aluminum 13 Al 26.98	Silicon 14 Si 28.09	Phosphorus 15 P 30.97	Sulfur 16 S 32.07	Chlorine 17 Cl 35.45	Argon 18 Ar 39.95												
Potassium 19 K 39.10	Calcium 20 Ca 40.08	Scandium 21 Sc 44.96	Titanium 22 Ti 47.88	Vanadium 23 V 50.94	Chromium 24 Cr 52.00	Manganese 25 Mn 54.94	Iron 26 Fe 55.85	Cobalt 27 Co 58.93	Nickel 28 Ni 58.69	Copper 29 Cu 63.55	Zinc 30 Zn 65.39	Gallium 31 Ga 69.72	Germanium 32 Ge 72.61	Arsenic 33 As 74.92	Selenium 34 Se 78.96	Bromine 35 Br 79.90	Krypton 36 Kr 83.80																
Rubidium 37 Rb 85.47	Strontium 38 Sr 87.62	Yttrium 39 Y 88.91	Zirconium 40 Zr 91.22	Niobium 41 Nb 92.91	Molybdenum 42 Mo 95.94	Technetium 43 Tc (98)	Ruthenium 44 Ru 101.07	Rhodium 45 Rh 102.91	Palladium 46 Pd 106.42	Silver 47 Ag 107.87	Cadmium 48 Cd 112.41	Indium 49 In 114.82	Tin 50 Sn 118.71	Antimony 51 Sb 121.75	Tellurium 52 Te 127.60	Iodine 53 I 126.90	Xenon 54 Xe 131.29																
Cesium 55 Cs 132.91	Barium 56 Ba 137.33	Lanthanum 57 La 138.91	Cerium 58 Ce 140.12	Praseodymium 59 Pr 140.91	Neodymium 60 Nd 144.24	Promethium 61 Pm (145)	Samarium 62 Sm 150.36	Europium 63 Eu 151.97	Gadolinium 64 Gd 157.25	Terbium 65 Tb 158.93	Dysprosium 66 Dy 162.50	Holmium 67 Ho 164.93	Erbium 68 Er 167.26	Thulium 69 Tm 168.93	Ytterbium 70 Yb 173.04																		
Francium 87 Fr (223)	Radium 88 Ra (226)	Actinium 89 Ac (227)	Thorium 90 Th 232.04	Protactinium 91 Pa 231.04	Uranium 92 U 238.03	Neptunium 93 Np (237)	Plutonium 94 Pu (244)	Americium 95 Am (243)	Curium 96 Cm (247)	Berkelium 97 Bk (247)	Californium 98 Cf (251)	Einsteinium 99 Es (252)	Fermium 100 Fm (257)	Mendelevium 101 Md (258)	Nobelium 102 No (259)																		

8. Metals may be found on the _____ side of the periodic table.

Non-metals may be found on the _____ side of the periodic table.

The horizontal rows of the periodic table are called _____.

Elements in the same row have the same number of _____.

The vertical columns of the periodic table are called _____.

Elements in the same column have the same number of _____.

Which column contains the most reactive metals? What is the name for these elements?

Which column contains that most reactive non-metals? What is the name for these elements?
