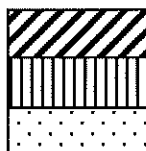


## Periodic Table – Map the table according to properties

Show the following information in the boxes on the blank periodic table:

1. **State at room temperature (25° C):** To determine the state refer to the periodic table inside the back cover of the Science Probe 9 textbook and/or the periodic table chart on the classroom wall.

- **Solid** – fill in with texture in black colour
- **Liquid** – fill in with texture in blue colour
- **Gas** – fill in with texture in red colour



(diagonal lines)  
(vertical lines)  
(dots)

2. **If the element is solid indicate how it behaves when hit or stretched:**

- Malleable – Write the letter **M**
- Ductile – Write the letter **D**
- Brittle – Write the letter **B**

*Hint:* All solid metals are malleable and ductile, whereas solid non-metals are brittle. Metals are to the left of the zig-zag line on the periodic table. Non-metals are to the right of the zig-zag line. This property does not apply to gasses and liquids because their particles are not strongly bound to each other (fluids).

3. **Atomic Mass:** To determine the average atomic mass (mass of one atom), refer to the periodic table inside the back cover of the Science Probe 9 book or the periodic table chart on the classroom wall.

- In each **column** draw an arrow indicating the direction of increasing mass (arrow directed from the element with the smallest mass, toward the largest)
- In each **row** draw an arrow indicating the direction of increasing mass (arrow directed from the element with the smallest mass, toward the largest)

4. **Density:** To determine the density, refer to the periodic table inside the back cover of the Science Probe 9 textbook and/or the periodic table chart on the classroom wall.

- In each **column** draw an arrow indicating the direction of increasing density (arrow directed from the element with the smallest density, toward the largest)
- In each **row** draw an arrow indicating the direction of increasing density (arrow directed from the element with the smallest density, toward the largest)

5. **Conductivity: If the element is conductive indicate the type of conductivity**

- Conducts electricity – Write the letter **E**
- Conducts heat – Write the letter **H**

*Hint:* All metals are conductive of electricity and heat, but non-metals are more complicated. Gases are not conductive (they can undergo convection, but not conduction). But, non-metal solids might sometimes conduct (under specific conditions). Search the internet for information on each of the solid non-metals to find out if they can ever be conductive of electricity or heat. If they can conduct, explain the necessary conditions (e.g. Carbon can conduct electricity when it is in the form of graphite, but not when it is in the form of diamond)

6. **Magnetism: Identify the magnetic elements**

- If the element is magnetic write **Mag**

*Hint:* Only 3 elements are naturally magnetic. Do an internet search to determine which ones.

# Periodic Table of the Elements

1	2	13	14	15	16	17	18
IA	IIA	IIIA	IVA	VA	VIA	VIIA	VIIIA
1	2	5	6	7	8	9	10
3	4	13	14	15	16	17	18
11	12	31	32	33	34	35	36
19	20	29	30	39	40	49	50
37	38	47	48	57-71	72	81	82
55	56	79	80	89-103	104	113	114
87	88	111	112	119	120	129	130

57	58	59	60	61	62	63	64	65	66	67	68	69	70	71
89	90	91	92	93	94	95	96	97	98	99	100	101	102	103

- Alkali Metals
- Alkali Earth Metals
- Transition Metals
- Other Metals
- Metalloids
- Other Non Metals
- Halogens
- Noble Gases
- Lanthanides & Actinides