



# Chemicals and Their Properties

Match each term with the best definition.

- |                              |  |
|------------------------------|--|
| ____ physical property       | A. elements in the first column of the periodic table; they are shiny, soft, and highly reactive                             |
| ____ chemical property       | B. a characteristic of a substance that does not involve changing into a new substance                                       |
| ____ element                 | C. a representation of an atom showing electrons in different orbits   |
| ____ period                  | D. a column of elements on the periodic table, which have similar properties   |
| ____ group                   | E. elements in the second column of the periodic table; they are shiny, silvery-white, and somewhat reactive                 |
| ____ alkali metals           | F. a description of what happens when a substance changes into a different substance   |
| ____ alkaline earth metals   | G. elements in the seventeenth column of the periodic table; they are highly reactive  |
| ____ halogens                | H. elements in the last column of the periodic table; they are odorless, colorless, monatomic gases with very low reactivity |
| ____ noble gases             | I. a pure substance that can't be changed into another substance   |
| ____ Bohr-Rutherford diagram | J. a row of elements in the periodic table   |



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F chemical property

I element

J period

D group

A alkali metals

E alkaline earth metals

G halogens

H noble gases

C Bohr-Rutherford  
diagram

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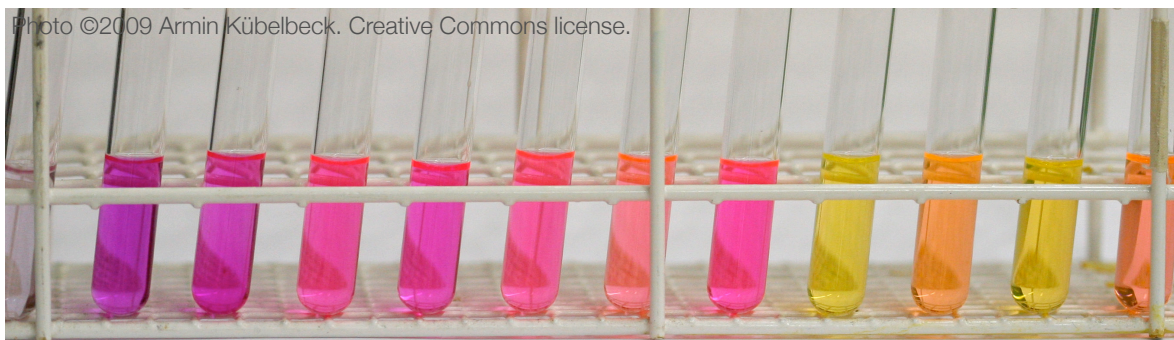
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\_\_\_\_ compound

\_\_\_\_ ion

\_\_\_\_ cation

\_\_\_\_ anion

\_\_\_\_ ionic compound

\_\_\_\_ ionic bond

\_\_\_\_ electrolyte

\_\_\_\_ molecular compound

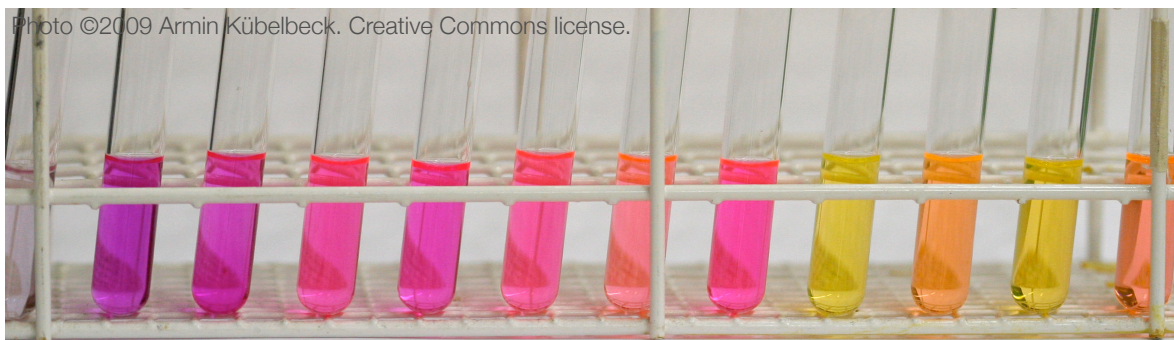
\_\_\_\_ covalent bond

\_\_\_\_ molecule

- A. a positively charged ion
- B. a compound that separates into ions when it dissolves in water; conducts electricity
- C. a compound made of cations and anions
- D. the bond formed when two non-metal atoms share outer electrons
- E. a pure substance made from two or more non-metals
- F. a pure substance made of two or more elements, combined in a fixed ratio
- G. a negatively charged ion
- H. a particle made of atoms joined by covalent bonds
- I. an atom with a charge, made when an atom gains or loses at least one electron
- J. the strong attraction between cations and anions in an ionic compound



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# Chemicals and Their Properties

Match each term with the best definition.

F compound

I ion

A cation

G anion

C ionic compound

J ionic bond

B electrolyte

E molecular compound

D covalent bond

H molecule

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# Chemicals and Their Reactions

Match each term with the best definition.

- |                                  |   |
|----------------------------------|---|
| ____ chemical reaction           | A. a reaction in which a single reactant breaks down into two or more products                          |
| ____ reactant                    | B. in a chemical reaction, the total mass of the products always equals the total mass of the reactants |
| ____ product                     | C. the reaction of a metal with chemicals in its environment, that breaks the metal down                |
| ____ synthesis reaction          | D. a solid formed when solutions react  |
| ____ decomposition reaction      | E. the rapid reaction of a substance with oxygen, producing oxides and energy                           |
| ____ precipitate                 | F. a chemical that is not present at the start of a reaction, that is made during the reaction          |
| ____ combustion                  | G. a process when substances interact to produce new substances   |
| ____ corrosion                   | H. a reaction in which two reactants combine to make a single product                                   |
| ____ galvanized steel            | I. steel with a thin coating of zinc, to prevent corrosion  |
| ____ law of conservation of mass | J. a chemical present at the start of a reaction, that is used up during the reaction                   |



## Chemicals and Their Reactions

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J reactant

F product

H synthesis reaction

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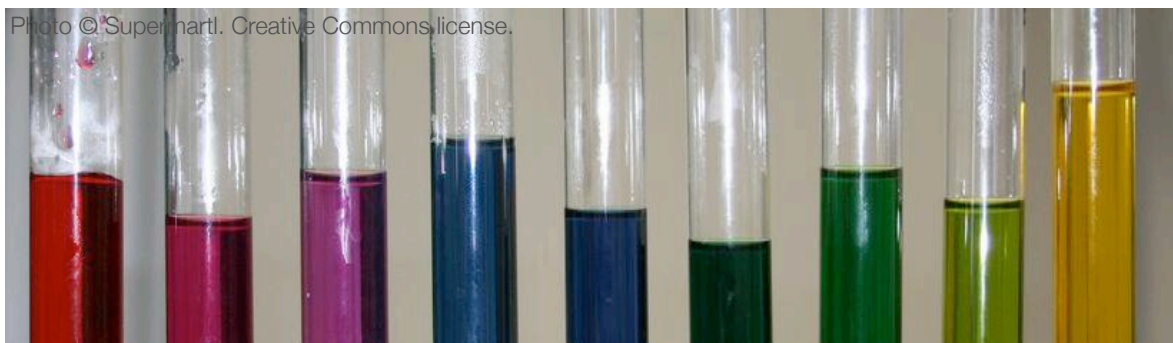
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# Acids and Bases

Match each term with the best definition.

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\_\_\_base

\_\_\_acid-base indicator

\_\_\_pH

\_\_\_neutral

\_\_\_acid leaching

\_\_\_neutralization  
reaction

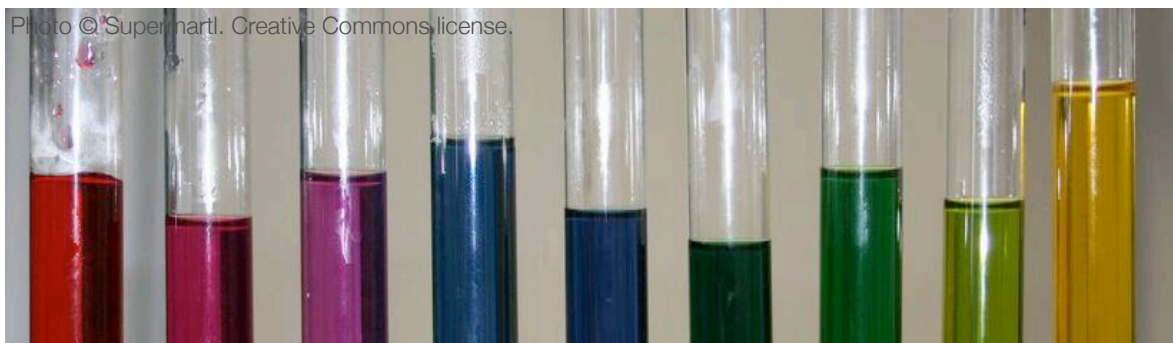
\_\_\_acid precipitation

\_\_\_dry deposition

\_\_\_buffering capacity

- A. a measure of how acidic or basic a solution is
- B. the process in which acid-forming pollutants form directly to Earth in solid form
- C. the process of removing heavy metals from contaminated soil by adding an acid solution and catching the solution that drains through
- D. the ability of a substance to resist changes in pH
- E. a substance that changes colour depending on whether it is in an acid or a base
- F. any precipitation with a pH less than normal rain
- G. an aqueous solution that conducts electricity, tastes sour, and turns blue litmus red
- H. a chemical reaction in which an acid and a base react to form a salt and water, bringing the pH closer to 7
- I. neither acidic nor basic, with a pH of 7
- J. an aqueous solution that conducts electricity, is slippery to the touch, tastes bitter, and turns red litmus blue

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J base

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A pH

I neutral

C acid leaching

H neutralization  
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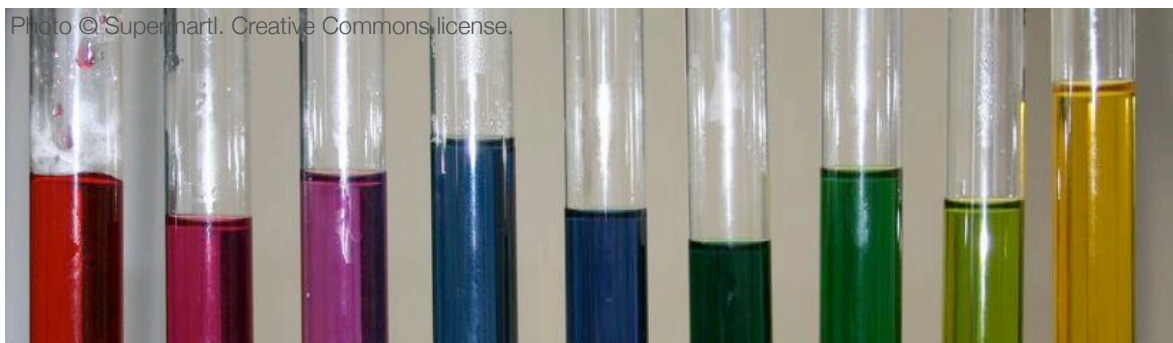
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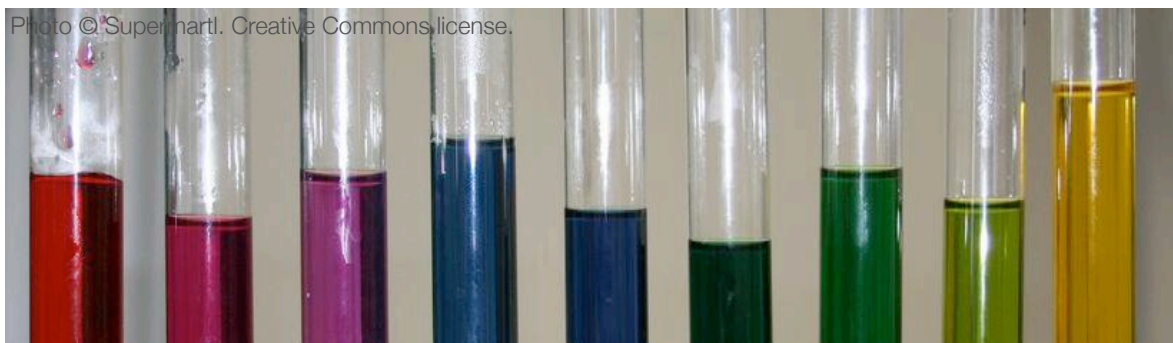
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