



## Hidden chemical puzzle

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Write the answers to the questions in the grid. One vertical column will be the chemical name of an over-the-counter medication.

Enter your students' correct solutions into a draw on or before October 1, 2019. The prize is a Chem Time Clock to be awarded to the teacher and is donated by Educational Innovations ([www.teachersource.com](http://www.teachersource.com)). Please have your students print their full name clearly and send your students' solutions to: *Chem 13 News*, Hidden chemical puzzle, Department of Chemistry, University of Waterloo, Waterloo, Ontario, N2L 3G1, Canada; or email [kjackson@uwaterloo.ca](mailto:kjackson@uwaterloo.ca).

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### Clues

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|---|--|
| 1) Anti-knocking agent added to gasoline until 1996 - $(\text{CH}_3\text{CH}_2)_4\text{Pb}$ | 11) Main component of sand or glass - $\text{SiO}_2$   |
| 2) O, S, Se, Te and Po  | 12) Compound that carries genetic information (DNA)  |
| 3) She won Nobel prizes in chemistry and physics  | 13) Relation between pressure, volume, Kelvin temperature and the number of moles ( $PV=nRT$ )     |
| 4) Fruit sugar - $\text{C}_6\text{H}_{12}\text{O}_6$  | 14) Double ringed nucleotide in DNA  |
| 5) Oil of wintergreen - $\text{C}_8\text{H}_8\text{O}_3$                                    | 15) A fungicide formerly used as a seed treatment - $\text{C}_6\text{Cl}_6$                        |
| 6) Element reacts with compound to yield a different element and compound                   | 16) Inert element in orange-red electrified glass tubes  |
| 7) Used to treat skin ailments - $\text{KMnO}_4$  | 17) Reaction in which electrons are transferred from one atom to another (redox)                   |
| 8) Fuel for barbecue grills - $\text{C}_3\text{H}_8$  | 18) Radioactive alkali metal   |
| 9) Petroleum refined for use in the internal combustion engine                              | 19) In 1863 J. Wilbrand first prepared this explosive (TNT)  |
| 10) Father of chemistry (last name only)  | 20) Substance used as a moth repellent and deodorizer (PDCB) - $\text{C}_6\text{H}_4\text{Cl}_2$ ■ |