# PNEUMONOULTRAMICROSCOPICSILICOVOLCANOCONIOSIS 

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Word-lovers, logologists and others interested in words know that
PNEUMONOULTRAMICROSCOPICSILICOVOLCANOCONIOSIS is generally regarded as "the longest word in the dictionary", at 45 letters. To be more specific, it appears in Webster's Third New International Dictionary, the Unabridged Merriam-Webster website, and the Oxford English Dictionary. According to Wikipedia, the word first appeared in the 1939 supplement to Webster's New International Dictionary, Second Edition - but my 1958 edition of Webster's Second spells the word with a K rather than the now familiar C - thus, PNEUMONOULTRAMICROSCOPICSILICOVOLCANOKONIOSIS. For the remainder of this article, I'll work with the C spelling, rather than the K spelling.

Most sources state that the word was invented (probably by Everett M. Smith, president of the National Puzzlers' League in 1935 - his nom was Puzzlesmith) in imitation of polysyllabic medical terms, alleged to mean 'a lung disease caused by the inhalation of very fine sand and ash dust' but occurring only as an instance of a very long word.

It's noteworthy that the number of letters, 45 , can be factored in a number of ways $-15 \times 3$, $9 \times 5,5 \times 9$ and $3 \times 15$. This suggested some of the ideas for this article. Could I find fifteen 3 -letter words using all the letters of
PNEUMONOULTRAMICROSCOPICSILICOVOLCANOCONIOSIS? Similarly, could I find nine 5-letter words; and five 9-letter words; and, most challenging, could I find three 15-letter words?

Finding fifteen 3-letter words is easy. There are probably many solutions; here's just one: CAR CIS COL CON COO ILL ION MOP OVA POO RIM SET SIC SUN UNI

Finding nine 5-letter words is relatively straightforward. Again, many solutions are possible, but here's my first solution:
COCCI COCOA ILIUM INION MOONS SINES SLURP TROOP VOCAL

Finding five 9-letter words involved a few false starts. My first solution is below, but note that the fifth word isn't a typo for NINCOMPOOP, but a variant spelling found in the Oxford English Dictionary:
ATROCIOUS COLLISION CONCLAVES CRIMINOUS NICOMPOOP
Finding three 15-letter words using the letters of
PNEUMONOULTRAMICROSCOPICSILICOVOLCANOCONIOSIS is much more challenging. In short, I haven't been able to find three 15 -letter words. I have been able to come up with near-solutions involving two 15 -letter words and a third word with 10, 11, 12 and 13 letters. So, the challenge for readers is to find a solution using three 15 -letter words, or even a near-
solution with two 15 -letter words and one 14-letter word. Here are some of my nearsolutions:

| 15-15-10: | MICROPOICILITIC | UNCONSCIOUSNESS | MONOCARPAL |
| :--- | :--- | :--- | :--- |
| 15-15-11: | CERVICOSCAPULAR | NONMONOPOLISTIC | MONOSILICIC |
| 15-15-11: | MICROPOICILITIC | NONSUCCESSIONAL | MONOCARPOUS |
| 15-15-11: | NONICONOCLASTIC | SEMICONSPICUOUS | MICROVILLAR |
|  |  |  |  |
| 15-15-12: | CERVICOMUSCULAR | MONOPOLISATIONS | COLONOSCOPIC |
| 15-15-12: | MICROPOICILITIC | NONVALOROUSNESS | COLONOSCOPIC |
| 15-15-12: | MICROPOICILITIC | NONVAPOROUSNESS MALOCCLUSION |  |
| 15-15-12: | NONMONOPOLISTIC OCCLUSOCERVICAL | PARSIMONIOUS |  |
| 15-15-13: | NONMONOPOLISTIC OSCILLARIACEOUS | UNMICROSCOPIC |  |

Can any reader find a 15-15-14 near-solution, or even a perfect 15-15-15 solution?
Moving away from near-solutions involving 15-letter words, what can be achieved with words of 10 or more letters? I've summarised my best finds below, but readers can feel free to improve on them.

Four 10-letter words + one 5-letter word (10-10-10-10-5):
COLLISIONS CONCOCTION PERISCOPIC VOLUMINOUS AROMA

Four 11-letter words + one letter (11-11-11-11-1):
APPARITIONS MICROCOSMIC UNCONSCIOUS VIOLONCELLO O
Three 12-letter words + one 9-letter word (12-12-12-9):
CLONICOTONIC CIRCUMVOISIN MONOSEPALOUS ACROPOLIS

Three 13-letter words + one 6-letter word (13-13-13-6):
CIRCUMCLUSION COMICOPROSAIC NONVOLITIONAL OOPSES

Three 14-letter words + one 3-letter word (14-14-14-3):
Zilch! This is a significant challenge, and readers are invited to find a solution.
Two 14-letter words + one 13-letter word + one 4-letter word (14-14-13-4):
MUCOCELLULOSIC AMINOPROPIONIC CONSOCIATIONS VORS

My Scrabble-playing friend Allan Simmons (from Coldingham, Scotland) managed to construct a couple of 14-14-13-4 solutions, but each uses a word outside of my regular dictionaries. Wikipedia has CONOCLINIOPSIS, a genus of flowering plants in the daisy family:
CIRCUMVOLATION CONOCLINIOPSIS CONIOSPERMOUS COAL
CIRCUMVOLATION CONOCLINIOPSIS COLONOSCOPIES ARUM

Finally, I wondered if there was any three-word solution using all the letters of PNEUMONOULTRAMICROSCOPICSILICOVOLCANOCONIOSIS, regardless of length of the solution words. Perhaps 18-14-13 or 19-13-13 or 20-13-12 or any of the other combinations. Unfortunately, the longer the potential solution words are, the more likely it is that they use the limited number of 'useful' letters - there's only two A's, one E, two R's and one T. The excessive number of C's, I's and O's tends to make it impossible to find a genuine threeword solution. For example, starting with the 20-letter SPECTROMICROSCOPICAL, it uses five of the six 'useful' letters, and leaves a concentration of I's, N's and O's. However, ...

While a three-word solution seems impossible, I wondered whether it would be possible to find a solution using three multi-word terms - for example, personal names, place names, and phrases. After a fair degree of searching, I eventually managed to construct this three-term solution:
PAOLO CIRINO POMICINO
INCLUSIVE CLASSROOMS COCONUT

And the definitions:
Paolo Cirino Pomicino : an Italian politician, born September 1939, elected to the Italian Chamber of Deputies in the 2006 general election (listed in Wikipedia);
inclusive classrooms : a term used in American pedagogy to describe classrooms in which all students, irrespective of their abilities or skills, are welcomed holistically (also in Wikipedia); coconut : no definition needed!

As a final thought, perhaps the investigations in this article could be reworked using the K spelling of PNEUMONOULTRAMICROSCOPICSILICOVOLCANOCONIOSIS - ie PNEUMONOULTRAMICROSCOPICSILICOVOLCANOKONIOSIS. How significantly different would the results be?

