Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Pd: \_\_\_ Ast: \_\_\_\_\_

**FOUR NEWEST ELEMENTS ON PERIODIC TABLE GET NAMES**

*ScienceNews*

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Four new elements now have names.

In December, the International Union of Pure and Applied Chemistry (IUPAC) officially recognized [the discovery of elements 113, 115, 117 and 118](https://www.sciencenews.org/article/four-elements-earn-permanent-seats-periodic-table), filling out the seventh row of the periodic table. As is traditional in chemistry, the naming rights go to the discoverers: Scientists at RIKEN in Wako, Japan, named element 113, and a Russian-U.S. collaboration named the others.

***NEW NAMES****The periodic table’s newest elements now have names. The International Union of Pure and Applied Chemistry approved the names nihonium (Nh), moscovium (Mc), tennessine (Ts) and oganesson (Og) on November 28.*

Element names have to follow certain rules — that means no [Element McElementface](http://www.bbc.com/news/uk-36225652). In line with convention, the [proposed names for the four elements](http://iupac.org/iupac-is-naming-the-four-new-elements-nihonium-moscovium-tennessine-and-oganesson/) are derived from scientists’ names and geographical locations of research institutes. After a five-month public review period and approval by IUPAC, the names will become official.

Bottom of Form

Element 113 is dubbed “nihonium” and will sport the chemical symbol Nh. Its name comes from the Japanese word “Nihon,” or “Land of the Rising Sun,” a name for Japan.

Element 115 will receive the moniker “moscovium,” shortened to Mc, after the Moscow region, home to the Joint Institute for Nuclear Research in Dubna, where the element was discovered in collaboration with researchers at Lawrence Livermore National Laboratory in California and Oak Ridge National Laboratory in Tennessee.

Tennessee also gets a periodic table shout-out. The proposed name for element 117 is “tennessine,” after the home state of Oak Ridge, Vanderbilt University and the University of Tennessee. It will bear the symbol Ts.

Element 118 will be named oganesson, or Og, after Russian physicist Yuri Oganessian, who contributed to the discovery of several superheavy elements.

**Discussion Questions:**

1. What do you think was the motivation for scientists in “filling out the seventh row of the periodic table?”
2. Why do you think the IUPAC has rules, or naming conventions, that must be followed when naming a new element?
3. From the article, do you get the impression that scientists expect to find even more elements in the future? If so, which ones would you expect them to be?
4. Element 113, “nihonium,” is named in homage to the country of Japan where it was discovered. Why did the Japanese scientists choose this name to represent their element?