## Chemistry: Periodically Puzzling

The Chemistry classroom is pretty spare - just desks and an enormous poster of the periodic table. Our informant, Molly Denim, says the VILE operative circled some of the elements and then erased the marks. If you can figure out which elements were circled, step right up and let us know what she was scrambling to find!

Molly left us a voicemail with these pieces of information about the VILE agent:

She used to have three dozen antique doilies but apparently she lost a trio of them over the years. She has some kind of obsession with aged lace and other things.

She doubled the high score of an arcade game and chose a ring as her prize.

Her vacation was originally a fortnight but she extended it by an extra day. The travel agent's face glowed with rage when they realized how much rescheduling they needed to do!

She used to complain that it was gross to remove two pounds of muck from her horse's stable (it might have been more - she's not very good at conversions). Anyway, that horse was the center of her universe.

Her garden is really pretentious - all stone and with half a half dozen reflecting pools.


| * Lanthanide Series | $57$ <br> La <br> Lanthanum | $\begin{array}{\|l\|} \hline 58 \\ \quad \begin{array}{c} \text { Cerium } \\ \hline \end{array} \\ \hline \end{array}$ | $\begin{array}{\|l\|} \hline 59 \\ \text { Praseymium } \end{array}$ | $60$ | $61$ <br> Pm Promethium | $\begin{gathered} 62 \\ \text { Sm } \\ \text { Samarium } \end{gathered}$ | $\begin{array}{\|l\|l\|} \hline 63 \\ \text { Europium } \end{array}$ | $\begin{aligned} & 64 \\ & \text { Gdadinium } \end{aligned}$ | $\underbrace{}_{\substack{65 \\ \text { Terbbium } \\ \text { Te }}}$ | 66 Dy Dysprosium | $67$ <br> Ho Holmium | $\underbrace{}_{\substack{68 \\ \text { Erbium } \\ \hline}}$ | $\begin{gathered} 69 \\ \text { Tm } \\ \text { Thulium } \end{gathered}$ | $\begin{gathered} 70 \\ \text { Yy } \\ \text { Yterbium } \end{gathered}$ | ${ }^{71} \begin{aligned} & \text { Lu } \\ & \text { Lutetium } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ** Actinide Series | $89$ <br> Ac Actinium | $90 \text { Th }$ | $\begin{aligned} & 91 \\ & \begin{array}{l} \text { Pa } \end{array} \\ & \text { Protactinum } \end{aligned}$ | $92 \underset{\text { Uranium }}{\mathbf{U}}$ | $93 \mathbf{N p}_{\text {Nepturium }}$ | $\begin{aligned} & 94 \\ & \text { Puu } \\ & \text { Puturium } \end{aligned}$ | $\begin{aligned} & 95 \\ & \text { Am } \end{aligned}$ | ${ }^{96} \text { Cm }$ | $\begin{gathered} 97 \\ \text { Bk } \end{gathered}$ | $\begin{aligned} & 98 \\ & \text { Cf } \\ & \text { Califorlium } \end{aligned}$ | $\begin{aligned} & 99 \\ & \text { Esinsterium } \end{aligned}$ | $\begin{array}{\|c} 100 \\ \text { Fm } \\ \text { Fermium } \end{array}$ | $\begin{gathered} 101 \\ \text { Md } \\ \text { Mendelevium } \end{gathered}$ | $\begin{gathered} 102 \\ \text { Noo } \\ \text { Nobelium } \end{gathered}$ | $\begin{gathered} 103 \\ \text { Lr } \\ \text { Lawrencium } \end{gathered}$ |

## Chemistry: Periodically Puzzling

The Chemistry classroom is pretty spare - just desks and an enormous poster of the periodic table. Our informant, Molly Denim, says the VILE operative circled some of the elements and then erased the marks. If you can figure out which elements were circled, step right up and let us know what she was scrambling to find!

Molly left us a voicemail with these pieces of information about the VILE agent:

She used to have three dozen antique doilies but apparently she lost a trio of them over the years. She has some kind of obsession with aged lace and other things.

She doubled the high score of an arcade game and chose a sparkly ring as her prize.

Her vacation was originally a fortnight but she extended it by an extra day. The travel agent's face glowed with rage when they realized how much rescheduling they needed to do!

She used to complain that it was gross to remove two pounds of muck from her horse's stable (it might have been more - she's not very good at conversions). Anyway, that horse was the center of her universe.

Her garden is really pretentious - all stone and with half a half dozen reflecting pools.


| * Lanthanide Series | $57$ <br> La <br> Lanthanum | $\begin{array}{\|l\|} \hline 58 \\ \quad \begin{array}{c} \text { Cerium } \\ \hline \end{array} \\ \hline \end{array}$ | $\begin{array}{\|l\|} \hline 59 \\ \text { Praseymium } \end{array}$ | 60 Nd Neodymium | $61$ <br> Pm Promethium | $\begin{gathered} 62 \\ \text { Sm } \\ \text { Samarium } \end{gathered}$ | $\begin{array}{\|l\|l\|} \hline 63 \\ \text { Europium } \end{array}$ | $\begin{aligned} & 64 \\ & \text { Gdadinium } \end{aligned}$ | $\underbrace{}_{\substack{65 \\ \text { Terbbium } \\ \text { Te }}}$ | 66 Dy Dysprosium | $67$ <br> Ho Holmium | $\underbrace{}_{\substack{68 \\ \text { Erbium } \\ \hline}}$ | $\begin{gathered} 69 \\ \text { Tm } \\ \text { Thulium } \end{gathered}$ | $\begin{gathered} 70 \\ \text { Yy } \\ \text { Yterbium } \end{gathered}$ | ${ }^{71} \begin{aligned} & \text { Lu } \\ & \text { Lutetium } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ** Actinide Series | $89$ <br> Ac Actinium | $90 \text { Th }$ | $\begin{aligned} & 91 \\ & \begin{array}{l} \text { Pa } \end{array} \\ & \text { Protactinum } \end{aligned}$ | $92 \mathrm{U}$ | $93 \mathbf{N p}_{\text {Nepturium }}$ | $\begin{aligned} & 94 \\ & \text { Puu } \\ & \text { Puturium } \end{aligned}$ | $\begin{aligned} & 95 \\ & \text { Am } \end{aligned}$ | ${ }^{96} \text { Cm }$ | $\begin{gathered} 97 \\ \text { Bk } \end{gathered}$ | $\begin{aligned} & 98 \\ & \text { Cf } \\ & \text { Califorlium } \end{aligned}$ | $\begin{aligned} & 99 \\ & \text { Esinsterium } \end{aligned}$ | $\begin{array}{\|c} 100 \\ \text { Fm } \\ \text { Fermium } \end{array}$ | $\begin{gathered} 101 \\ \text { Md } \\ \text { Mendelevium } \end{gathered}$ | $\begin{gathered} 102 \\ \text { Noo } \\ \text { Nobelium } \end{gathered}$ | $\begin{gathered} 103 \\ \text { Lr } \\ \text { Lawrencium } \end{gathered}$ |

## Chemistry: Periodically Puzzling

The Chemistry classroom is pretty spare - just desks and an enormous poster of the periodic table. Our informant, Molly Denim, says the VILE operative circled some of the elements and then erased the marks. If you can figure out which elements were circled, step right up and let us know what she was scrambling to find!

Molly left us a voicemail with these pieces of information about the VILE agent:
(-) (3)
She used to have three dozen antique doilies but apparently she lost a trio of them over the years. She has some kind of obsession with aged lace and other things.
("arsenic and old lace")
36-3 = 33 (atomic \# of arsenic)
(2x)
(20)
(cubic zirconium)
She doubled the high score of an arcade game and chose a ring as her prize.
$2 \times 20=40$ (atomic \# of zirconium)
(14 days)
(+)
(1)

Her vacation was originally a fortnight but she extended it by an extra day. The travel agent's face glowed with rage when they realized how much rescheduling they needed to do!
(emits light)
$14+1$ = 15 (atomic \# of phosphorus)
(144) (-) (32 ounces)

She used to complain that it was gross to remove two pounds of muck from her horse's stable (it might have been more - she's not very good at conversions). Anyway, that horse was the center of her universe.
(convert pounds to ounces)
(heliocentric theory of the universe)
144-32 = 112 (atomic \# of copernicium)

$$
\text { (14 pounds) (+) ((.5x) (6)) } \quad \text { (chlorinated water) }
$$

Her garden is really pretentious - all stone and with half a half dozen reflecting pools.

$$
14+(.5 \times 6)=17 \text { (atomic \# of chlorine) }
$$



Anagram the Atomic Symbols: V O S Ne TI = SOLVENT

