Electron Configurations and Periodic Trends

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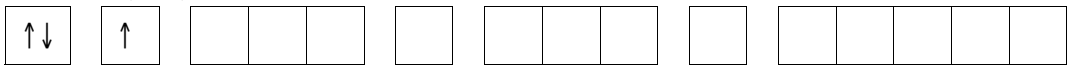
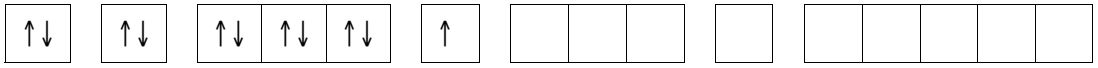
**_n_ increases as you go down a group/column**

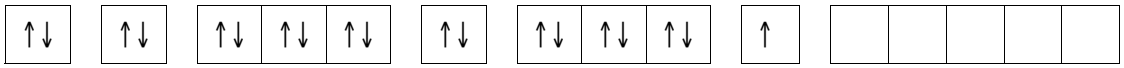
Lithium (Z=3)




Sodium (Z=11)




Potassium (Z=19)

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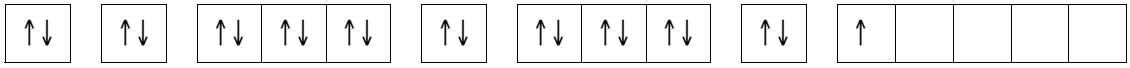
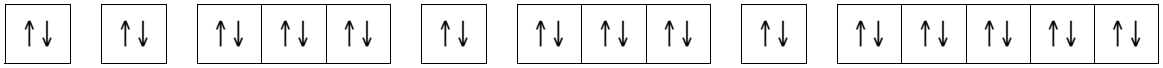
**Blocks of the periodic table are based on the orbital type that the highest energy electrons are in**

Scandium (Z=21)




Zinc (Z=30)

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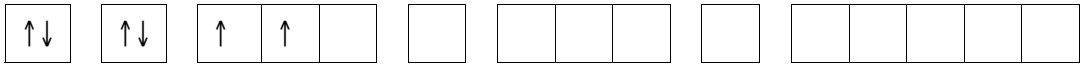
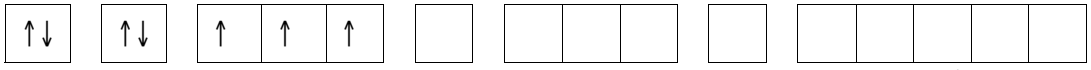
**Hund's Rule and the _p_-block**

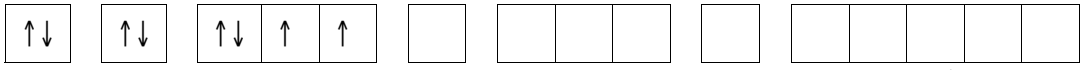
Carbon (Z=6)




Nitrogen (Z=7)




Oxygen (Z=8)



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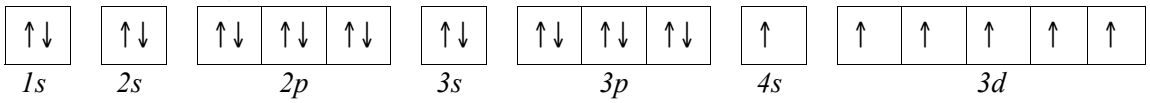
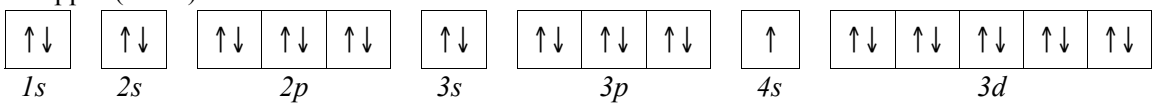
**Copper and Chromium aren't what you'd expect**

Chromium (Z=24)




Copper (Z=29)

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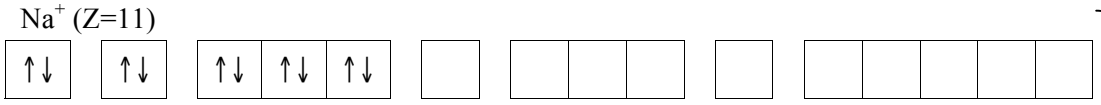
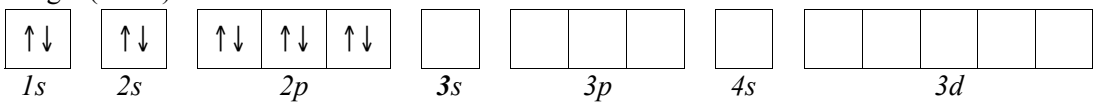
**Electron configurations of ions**

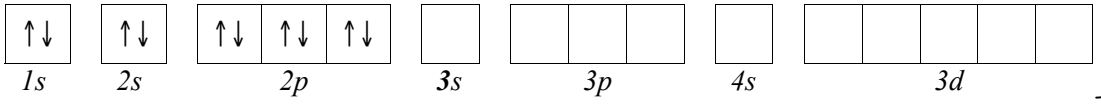
$Na^+$ (Z=11)




$Mg^{2+}$ (Z=12)

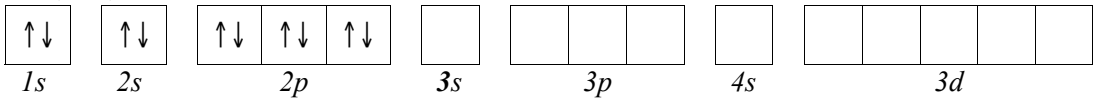



$Al^{3+}$ (Z=13)

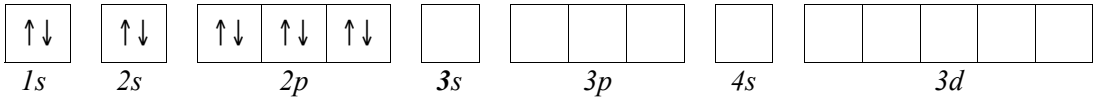



Lost $e^-$

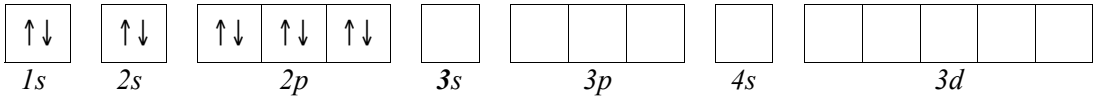
$F^-$ (Z=9)




$O^{2-}$ (Z=8)




$N^{3-}$ (Z=7)




Gained $e^-$